Why Rural Matters 2015-2016

Understanding the Changing Landscape

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THE RURAL SCHOOL AND COMMUNITY TRUST

A Report of the Rural School and Community Trust

June 2017

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A Report by The Rural School and Community Trust and Our Partners: Institute for Child Success and Save the Children

June 2017

The **Rural School and Community Trust** is a national nonprofit organization addressing the crucial relationship between good schools and thriving communities. Our mission is to help rural schools and communities grow better together. Working in some of the poorest, most challenging places, the Rural Trust involves young people in learning linked to their communities, improves the quality of teaching and school leadership, and advocates in a variety of ways for appropriate state and federal educational policies, including efforts to ensure equitable and adequate resources for rural schools.

Why Rural Matters 2015-2016:
Understanding the Changing Landscape

Layout, cover and graphics were designed by Josie Leonard.

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Executive Summary

Many children and their families in rural America need better and more equitable educational opportunities. This is the main theme of *Why Rural Matters 2015-16: Understanding the Changing Landscape*, the eighth biennial report by the Rural School and Community Trust and its partners on the condition of rural education in the 50 states. As the new federal Every Student Succeeds Act (ESSA) restores more control of education policy to states and local school districts—and as the new president was elected with substantial support from rural and small-town voters across the country—the pressure is rising for policymakers to address rural education issues at the state and federal levels.

More than 8.9 million students attend rural schools—more than the enrollments of New York City, Los Angeles, Chicago, and incredibly, the next 75 largest school districts combined.

The challenges students face in many rural places are staggering. Lack of adequate resources, struggles with teacher recruitment and retention, a shortage of early childhood services, and other challenges continue to daunt many rural communities. In 23 states, a majority of rural students are from low-income families. In *Why Rural Matters 2013-2014*, it was only 16 states.

More than one in four of America's public schools are rural, and nearly one in six of the nation's students are in rural areas. Despite higher costs for some services in rural and smaller schools, only 17 percent of state education funding goes to rural districts. On average, 3.5 percent of rural students are considered English language learners, but many districts have much higher percentages.

Why do policymakers sometimes overlook rural schools? In part, it's because many urban leaders—and Americans—simply aren't very familiar with rural communities and the issues they face. Many rural communities are quite small: Half of rural school districts in 23 states are smaller than the national median enrollment for rural districts of just 484.5 students. In three states (**Montana, Vermont, and North Dakota**), more than 90 percent of rural districts are that small.

Early childhood is a special focus of this edition of *Why Rural Matters*, just as it was three years ago. Many rural communities still lack the high-quality pre-K, childcare, and Head Start programs that families badly need. Addressing early childhood learning and health can help taxpayers avoid tremendous costs in the long run. The Rural Trust is partnering for this report with two respected organizations—the Institute for Child Success (ICS) and Save the Children—to bring greater attention to rural education issues for young children and their families.

Rural Education in the United States

While 18.7 percent of all students attend rural public schools (the nearly 8.9 million cited above) nearly 7.1 million, or just under 15 percent of all students, are enrolled in rural school *districts*. Nearly half of rural students are from low-income families, more than one in four is a child of color, and one in nine has changed residence in the previous year.[i]

Even with their many challenges, rural student achievement fares well overall. These levels of achievement speak to the talent and rich backgrounds—and possibly to the advantages of smaller schools and classes—of many rural students. How might rural students from

low-income families, for instance, do with access to programs and services provided in many schools in wealthier communities? Rural students performed similarly to suburban students on the National Assessment of Educational Progress, or NAEP, in math, reading, and science. In 2013, rural fourth-graders scored an average of 243 in math compared with average scores of 244 for suburban students, 240 for students in areas labeled "town," and 236 for urban students.

The same pattern held for reading for rural fourth-graders, who scored an average of 221, compared to suburban (221), town (220), and city (218) students. In eighth-grade math, the national averages were rural, 286; suburb, 288; town, 281; and city, 278. Rural students did even better in science: In 2009, the latest data available for our comparisons, rural fourth-graders scored slightly higher on average than suburban, town and city students. They also bested their peers in their 2011 eighth-grade science average scores.

In each *Why Rural Matters* report in the past decade, the number of students in rural school districts has climbed steadily. But the number dropped for this report from more than 9.7 million to nearly 7.1 million. While there was a slight actual decline in rural districts' enrollment, the change mostly stems from a reclassification of districts in the wake of the 2010 Census. Once the Census "locale boundaries" were adjusted for suburban sprawl and other population changes from 2000 to 2010, fewer districts were located in areas defined as rural. These changes affect some states more than others: rural students in North Dakota grew from 36.6 percent to 37.5 percent, but South Carolina's dropped from 40.6 percent to just 15.9 percent.

Rural Education Progress and Challenges in the 50 States

This report uses five "gauges" to describe the condition of rural education in each state: (1) *Importance* of rural education in the state, (2) *Diversity* of rural students and their families, (3) *Educational Policy Context* impacting rural schools, (4) *Educational Outcomes* of rural students, and (5) *College Readiness* of students in rural schools. Each gauge includes five equally weighted "indicators," for a total of 25. The higher a state's ranking on each gauge, the more important or urgent the issue for rural schools (see individual state profiles in the main report). We used the total of each state's five gauge rankings to determine their overall **Priority** ranking.

The top four overall priority states this year were among the top five in the previous report. (Some indicators have changed from previous editions, so direct comparisons may not be useful.)

For the first time, *Why Rural Matters* includes a *College Readiness* gauge. As the economy changes and more students consider college, the average rural high school graduation rate remains well above those for all students and for most groups. Eighty-seven percent of high school students in rural areas graduate within four years, but only 77 percent of rural students of color do. College preparation remains a major issue:

The 10 Highest Priority States in Rural Education, 2017

1. MISSISSIPPI: The highest priority state in this year's report is near the top on all five gauges. More than half the state's schools are rural, and only two other states serve a higher percentage of rural students. Rural enrollments include high rates of students of color and the nation's second-highest rate from low-income families (70.9 percent). At less than $4,700 per student, instructional spending remains below all but three other states, and the state has the nation's 13th lowest spending for educator pay. The results of this continuing neglect are clear: Rural schools in the state perform poorly on NAEP in all grade levels and subjects—and lowest in the

nation in 8th grade science. The state also has one of the nation's lowest rural graduation rates. Rural ACT/SAT test-taking rates are high, however, because the state pays for exams for all interested students.

2. ARIZONA: Rural students are a fairly small proportion of the state's students, but a majority are children of color, nearly seven in 10 are from low-income families, and the percentage of ELL students is high. Spending on instruction is the nation's second lowest—nearly $1,500 per pupil below the national average. Outcomes are poor: Rural NAEP performance is lower than in almost every state. Arizona is among the nation's 10 lowest for its rural graduation rate, rural graduation rate among non-White students, and rural ACT/SAT participation.

3. ALABAMA: More than one in three Alabama students attend school in a rural district, one of the highest rates in the nation. And nearly six in 10 of the state's nearly 265,000 rural students live in low-income families. Rural schools and districts in the state are among the nation's largest, and instructional spending (about $4,800 per pupil) and educator salaries (an average of just under $50,000) are among the lowest. The state has the nation's lowest score for rural students in both 4th and 8th grade math. Rural high school and rural non-White graduation rates are below average, and rural participation in AP courses is among the nation's lowest at 11.2 percent.

4. SOUTH CAROLINA: More than any state in the past decade, South Carolina's rural areas have become more suburban. Although fewer than one in six students in South Carolina now attends school in a rural district, these 116,000 students face major challenges. Half of all rural are students of color, and 68.5 percent are from low-income families (one of the highest rates in the nation). Spending on instruction is low and rural educator pay is below the national average. Achievement and graduation rates for rural students are among the nation's lowest. For example, only 80.6 percent of all rural students and 72.2 percent of rural students of color graduated in 2014, compared to the national averages of 87.3 percent and 77.4 percent, respectively.

5. SOUTH DAKOTA: Three of every four schools in the state are rural—the nation's second-highest rate—and 78 percent of rural schools are in very small districts. Students are near national averages on measures of diversity and most education outcomes. But districts rely disproportionately on local revenue streams and teacher salaries are low. Fewer than one in five rural students enroll in an AP course, and the rural graduation rate is the nation's second lowest.

6. GEORGIA: Nearly 380,000 students attend rural schools in Georgia, the third-largest number in the nation. The rate of rural students in low-income families is among the highest, as are percentages of rural and rural students of color. Only three states have larger rural schools and districts. Rural NAEP performance is among the lowest in the nation (except 4th grade reading, near the national median). College readiness is poor, with the nation's fifth-lowest rural graduation rate and eighth-lowest for rural students from low-income families. The rural AP participation rate is higher than the national median.

7. NEVADA: One in six of Nevada's schools are rural. The percentage of rural students from low-income families is high, and the state has among the largest populations of students of color and ELL students. Rural teacher salaries and instructional spending are high, but funding is inequitable and transportation costs substantial. The state has the nation's highest mobility rate for rural students. Rural student outcomes are all below the national average.

Rural graduation rates are among the lowest, especially for students from low-income families. The state has nation's second-lowest rate of rural students taking AP courses.

8. FLORIDA: Florida's rural student population isn't very large in number or proportion, but rural students' needs are great. More than half of Florida's rural students are from low-income families, nearly 40 percent are children of color, and a very high 14 percent qualify for special education. Rural mobility is higher than in all but seven states. Rural schools and districts are the nation's largest, and rural instructional spending and salaries are low. Students perform at or above national medians in grade 4 on NAEP, but well below national medians in grade 8. College-readiness measures are among the lowest on four of the five indicators, including the nation's second-lowest rural graduation rate. Rural ACT/SAT participation is just above the national median.

9. OKLAHOMA: Half of Oklahoma's public schools are in rural areas, and 30 percent of the students attend school in a rural district. More than 60 percent of rural students are from low-income families and more than 40 percent are students of color. The percentage of students in special education is third-highest in the country. Compounding challenges are the nation's second-lowest spending on instruction per pupil and fifth-lowest salaries for rural districts. NAEP scores are relatively low, although graduation rates are on par with national averages for rural students.

10. ALASKA: Nearly 60 percent of Alaska's public schools are rural, and these schools serve high percentages of ELL students, Native Alaskan students, and families who moved in the previous year. Even with some of the nation's highest spending on instruction and educator salaries—mostly because of remote locations—Alaska is the highest-priority state in college readiness, with the nation's lowest graduation rates for rural students, rural students of color, and economically disadvantaged rural students. The graduation rate for rural students of color is less than half the national average.

Other Key Highlights and State Facts

(1) *Importance* of rural education in the state

- This gauge examines rural schools' and students' importance in each state and the need to address rural issues. The 10 highest-priority states on this gauge are: **Maine, Vermont, South Dakota, Montana, North Dakota, Mississippi, Oklahoma, North Carolina, New Hampshire, and Alabama.**
- Roughly half the nation's rural students live in just 10 states, listed from largest to smallest enrollment: **Texas, North Carolina, Georgia, Ohio, New York, Pennsylvania, Virginia, Alabama, Indiana, and Michigan.**
- At least half of public schools are rural in 13 states: **Montana, South Dakota, Vermont, North Dakota, Maine, Alaska, Nebraska, Wyoming, Oklahoma, Mississippi, West Virginia, New Hampshire, and Iowa.** At least one third of all schools are rural in 12 other states.
- Most states provide disproportionately more funding for rural districts, but 11 states provide disproportionately less for rural districts, including **Nebraska, Connecticut, Rhode Island, Michigan, and Iowa.**
- In only two states are a majority of students enrolled in rural districts: **Vermont** (54.7 percent) and **Maine** (51.4 percent). In six other states, more than one-third of students attend rural districts: **Mississippi, South Dakota, North Carolina, North Dakota, Alabama, and New Hampshire.**

(2) *Diversity* of rural students and their families

- The highest-priority states on this gauge, meaning they have the highest overall diversity

in rural areas, are **Nevada, Arizona, Oklahoma, Alaska, and South Carolina.**

- **New Mexico** has the highest rate of rural students of color (more than 85 percent), rural English-language learner students (25 percent are ELL students), and rural students from low-income families (more than 80 percent).
- Nationally, 25.2 percent of rural students are students of color, ranging from 3.7 percent in **Rhode Island** to 85.6 percent in **New Mexico**. The majority of students in rural districts identify as non-White in **New Mexico, Alaska, Arizona, and California.**
- Twelve states have ELL rates for rural students above 4 percent (**New Mexico** (with the nation's highest rate, 24.4 percent), **Alaska, California, Washington, Texas, Colorado, Delaware, Nevada, North Carolina, Idaho, Arizona, and Utah.**
- Except **California** and **Texas** at just under 9 percent, every state enrolls at least 10 percent of rural students in special education. The highest rates are in **Massachusetts, Pennsylvania, Oklahoma, and Rhode Island.**
- **Nevada** has the highest rural student-mobility rate at 17.3 percent, followed by **Oregon, Colorado, Wyoming, and Arizona. Florida** is the only non-western state among the 13 highest rates, at 12.9 percent.

(3) Educational Policy Context for rural schools

- The highest-priority states on this gauge are **Florida, Arizona, Alabama, Virginia, and Utah.**
- Rural instructional spending per student averages $6,067 nationally, ranging from $4,336 in **Idaho** and $4,392 in **Oklahoma** to $12,453 in **Alaska** and $11,585 in **New York**.
- High transportation costs often plague rural districts. **West Virginia** has the nation's highest transportation costs for rural schools.
- In many states, low salaries have a major impact on recruiting and keeping rural educators. The national average rural salary per full-time instructional position is $57,798, lower than those for town ($59,567), urban ($68,850), and suburban ($70,830) districts. The state average for rural educators is lowest in **Kansas**, followed by **Arkansas, South Dakota, and Oklahoma.** The highest rural average is $87,805, in **Alaska**, followed by **New York, Connecticut, and New Jersey.**

(4) Educational Outcomes of rural students

- The highest-priority states on this gauge are **New Mexico, Mississippi, Alabama, Hawaii, and Louisiana**, where rural students perform poorly on NAEP in reading and math in grades 4 and 8 and in grade 8 science.
- **New Mexico** was lowest nationally in grades 4 and 8 reading, contributing to its highest-priority ranking on this overall gauge.
- States with the highest overall NAEP scores for rural students: **Massachusetts, Connecticut, New Hampshire, Colorado, and Maryland.**

(5) College Readiness of students in rural schools

- The highest-priority states on this gauge are: **Alaska, Nevada, South Dakota, Washington, Florida, Louisiana, South Carolina, Arizona, Georgia, and Oregon.**
- Rural high school graduation rates range from 60.9 percent in **Alaska** to 94.3 percent in **Connecticut.** The rate for rural students of color is 77.4 percent. In eight states, the gap is more than 20 percentage points between all rural students and those from low-income families: **South Dakota, North Dakota, Montana, California, Arizona, Utah, Alaska, and Washington.**
- Nationwide, an estimated 80.9 percent of rural low-income students graduate, ranging from 52.1 percent in **Alaska** to 89.1 percent in **Indiana.**
- Rural AP course-enrollment rates range from 5.3 percent for juniors and seniors in **Louisiana** to more than 56 percent in **Ohio.**
- In 21 states, a majority of rural juniors and

seniors take the ACT or SAT, and only in **California and Oregon** do fewer than one in four.

Early Childhood in Rural Areas

Early education and childcare are drawing more attention from policymakers, with major funding increases under former President Obama and new federal quality standards for Head Start. Although childcare in rural areas is typically less expensive than in other areas, it's often a financial burden for families. More efforts to improve access to quality and affordable childcare in rural areas are badly needed.

Federal funding for early childhood in recent years has stressed competitive grants, which many rural districts don't have the capacity to pursue. ESSA allows Title I funds to continue to be used for early childhood programs, including teacher training and $250 million in preschool-development grants. While this support for is heartening, funding and implementation in rural areas remain uncertain.

Access to high-quality childcare and education is still too limited in most states. Less than one-third of 4 year olds and only 5 percent of 3 year olds were enrolled in state pre-K programs in 2014-2015. Of the top 10 priority states in this report, only three enroll a majority of 4 year olds in pre-K—and four of these states enroll less than 10 percent of 4 year olds. South Dakota provides no state pre-K. Head Start program standards and spending vary greatly. The federal program serves more than one million at-risk children, but only one-third of children enrolled in Head Start receive full-day services. Encouragingly, in 2016, Head Start released new performance standards, which will increase the duration of services provided to at least 1,020 annual hours of service by 2021, with at least 50% of programs meeting that standard by 2019. Head Start serves 9 percent of all 4 year olds and 8 percent of 3 year olds nationally.[ii]

The nation's early childhood workforce faces low wages, few benefits, and high turnover rates—and rural areas struggle to attract and retain teachers. Even in public schools, preschool teachers are often paid less than kindergarten teachers. States and districts should consider loan repayment, housing stipends, and tax credits to address the issue, and nourish grow-your-own programs to attract more early childhood teachers and aides. Home visiting programs are growing as an important early intervention for children with special needs, to prevent child maltreatment, and to promote healthy parenting. "Pay for Success" financing is one possible solution for expanding early childhood and home visiting services. For instance, South Carolina is expanding the Nurse-Family Partnership home visiting program across the state using Pay for Success financing.

The Bottom Line

Rural schools and communities continue to face substantial challenges with high rates of poverty, diversity, and students with special needs. These challenges, while widespread, are most intense in the Southeast, Southwest, and Appalachia. Every data point in Why Rural Matters represents actual students with their own stories, struggles, and dreams. They should matter to our country.

Priority State	Percent of 4-year-olds State Funded Pre-K
Florida	76%
Oklahoma	75%
Georgia	59%
South Carolina	47%
Alabama	12%
Arizona	6%
Mississippi	4%
Alaska	3%
Nevada	3%
South Dakota	0%

Introduction

Why Rural Matters 2015-16: Understanding the Changing Landscape is the eighth in a series of biennial reports analyzing the contexts and conditions of rural education in each of the 50 states and calling attention to the need for policymakers to address rural education issues in their respective states.

We release this report roughly a year after the U.S. Federal Every Student Succeeds Act (ESSA), the bill that replaces and significantly rewrites the No Child Left Behind Act of the previous decades. The importance of this legislation and the changes it will bring (these will take time to be fully realized) are reflected in a special section. Further, the political context surrounding the 2016 presidential elections once again made clear that issues such as immigration reform, migrant rights, and education funding are "hot button topics." The analyses and data presented in *Why Rural Matters 2015-16* can help to inform policy discussions on these issues as they relate to rural education, as in the case of English language learners (ELL) and early childhood education (ECE) initiatives. This report also includes special analyses of science, technology, engineering, and mathematics (STEM) education as they relate to educating America's rural youth.

We have deliberately altered the statistical indicators and gauges in this report to call attention to the variability and complexity of rural education. Our intent is not to draw comparisons between states in terms of their differing rates of progress toward an arbitrary goal, nor to compare individual states with their rankings in previous reports. Rather, our intent is to provide information and analyses that highlight the priority policy needs of rural public schools and the communities they serve, and to describe the complexity of rural contexts in ways that can help policymakers better understand the challenges and formulate policies that are responsive to those challenges.

In 2013-14 (the school year corresponding to the data used in this report), 7,093,246 public school students were enrolled in rural school districts (the unit of analysis for nearly all of the indicators used in the report). That is just under 15% of the nation's total public school enrollment. However, this number does not include students who attend a rural school in a district that is designated as non-rural. In the same school year, a total of 8,959,843 students (18.7%) attended a rural school (i.e., a school designated as rural, whether in a rural or non-rural district).[iii] Meeting the needs of nearly nine million children is a challenge and an obligation that demands and deserves the nation's attention. Meeting that challenge and fulfilling that obligation require that we examine issues from multiple perspectives to develop informed understandings that move beyond simplistic notions about rural schools and their communities.

The Data

The data used for *Why Rural Matters 2015-16* were compiled from information collected and maintained by the National Center for Education Statistics (NCES), the U.S. Department of Education, and the U.S. Census Bureau. All data used here are available to the general public and may be downloaded in tabular formats.[iv]

Rural is defined using the 12-item, urban-centric NCES locale code system released in 2006. Rural schools and districts used in this report are those designated with locale codes 41 (rural fringe), 42 (rural distant), or 43 (rural remote). Earlier versions of *Why Rural Matters* (i.e., those preceding the 2009 version) used a combination of school-level and district-level

data. Improvements in the urban-centric locale code system (specifically, assigning district-level locale based upon the locale where the plurality of students in the district attend school) make it possible for us to be consistent and use districts as the unit of analysis for the indicators derived from NCES data. This is particularly important because policy decisions impacting rural education (e.g., REAP funding) are made using district-level designations of rural status. Moreover, local policies to address many of the issues discussed in this report tend to be crafted at the district level.

Why Rural Matters 2015-16 includes for the first time a College Readiness gauge.

As economic markets shift and an increasing percentage of rural students and their parents consider college as an option, it is important that the state education systems be aware of the challenges facing rural districts in adequately preparing students for this opportunity. Moreover, the phrase "College Readiness" has become familiar enough in policy but also popular discourse, that it would be easy to overlook the complexities involved in understanding, measuring, and making decisions about the "readiness" of students for college.

Why Rural Matters 2015-16 includes four feature sections that investigate timely topics as they pertain to rural areas: the Every Student Succeeds Act (ESSA); science, technology, engineering, and mathematics (STEM) education; English language learners (ELL); and early childhood education (ECE). The early childhood education section updates that of the 2013-14 *Why Rural Matters* report and its reappearance reflects its continuing importance. It highlights the early childhood education context as one important lens through which to view the challenges and opportunities characterizing rural America. The other three topics have not been included in any previous versions of *Why Rural Matters*, and have been carefully selected to address some of the most pressing issues facing rural education today.

Why Rural Matters 2015-16 uses data only for regular public education agencies (local school districts and local school district components of supervisory unions). We exclude charter school-only districts and specialized state- and federally-directed education agencies focused primarily on vocational, special, or alternative education.

Gauging Rural Education in the 50 States

The report offers five gauges to describe the condition of rural education in each state: (1) the *Importance* of rural education, (2) the *Diversity* of rural students and their families, (3) the *Educational Policy Context* impacting rural schools across the nation, (4) the *Educational Outcomes* of rural students, and (5) the *College Readiness* of students in rural districts in each state. Each gauge includes five equally weighted indicators, for a total of 25 indicators. Instances where data were not available are denoted with "NA."

The higher the ranking on a gauge, the more important or the more urgent rural education matters are in a state. The gauges and their component indicators are:

Importance Gauge

- **Percent rural schools**
- **Percent small rural school districts**
- **Percent rural students**
- **Number of rural students**
- **Percent of state education funds to rural districts**

Student and Family Diversity Gauge

- **Percent rural minority students**
- **Percent rural IEP (Individualized Education Plan) students**
- **Percent rural ELL (English Language**

Learner) students
- **Percent rural students eligible for free or reduced meals**
- **Percent rural household mobility**

Education Policy Context Gauge

- **Rural instructional expenditures per pupil**
- **Ratio of instructional to transportation expenditures**
- **Median organizational scale**
- **State revenue to schools per local dollar**
- **Salary expenditures per instructional FTE (Full Time Equivalent)**

Educational Outcomes Gauge

- **Rural grade 4 NAEP scores (math)**
- **Rural grade 4 NAEP scores (reading)**
- **Rural grade 8 NAEP scores (math)**
- **Rural grade 8 NAEP scores (reading)**
- **Rural grade 8 NAEP scores (science)**

College Readiness Gauge

- **Overall graduation rate in rural districts**
- **Graduation rate for rural minority students**
- **Graduation rate for rural students eligible for free or reduced meal programs**
- **Percent rural juniors and seniors taking at least one AP course**
- **Percent rural juniors and seniors taking the ACT or SAT**

Some of the indicators used in this report are the same as in previous versions but several are not. Therefore, year-by-year comparisons of state rankings are not advisable because of their potential to mislead. The possibilities for assembling indicators to describe the context, conditions, and outcomes of rural schools and communities are virtually unlimited. We acknowledge the complexity of rural America generally and of 50 individual state systems of public education, and we recognize that perspectives offered by the indicators used here represent only one of many good ways of understanding rural education in the U.S.

For each of the five gauges, we added the state rankings on each indicator and then divided by the number of indicators to produce an average gauge ranking.[v] Using that gauge ranking, we organized the states into quartiles that describe their relative position with regard to other states on that particular gauge. For the *Importance* and *Educational Policy Context* gauges, the four quartiles are labeled "Notable," "Important," Very Important" and "Crucial." For the *Student and Family Diversity, College Readiness, and Educational Outcomes* gauges, the four quartiles are labeled "Fair," "Serious," "Critical" and "Urgent." To help identify and quantify relationships between and among indicators, we also conducted bivariate correlation analyses for the indicators within each gauge (results are reported later in this section).

Finally, we combined the five average gauge rankings to determine an overall average ranking[vi], which we term the **Rural Education Priority** ranking.

Certain states have retained a high rural education priority ranking from year to year despite the fact that we use different indicators and gauges. For these states, rural education is apparently both important and in urgent need of attention no matter the gauges used.

One final caution from earlier reports is worth repeating. Because we report state-level data for most indicators, our analyses do not reveal the substantial variation in rural contexts and conditions within many states. Thus, while an indicator represents the average for a particular state, in reality there may be rural regions within the state that differ considerably from the state average. This is especially true for indicators like ELL and poverty status, since demographic characteristics such as these tend to be distributed unevenly across a state, concentrated variously in specific communities within the state. In the case of such indicators,

the statewide average may not reflect the reality in any one specific place, with far higher rates in some places and far lower rates in others. Consider Michigan, for instance. With English language learners comprising 1.3% of the rural student population, the state ranked several spots below the national median. However, 57.6% of the students in rural Michigan's Nottawa Community School District were English language learners. Take Montana, which ranked 28th in terms of percent of rural students eligible for free or reduced priced lunches. Although the state average is only 43.8%, the rural district of Browning High School has a free and reduced meal eligibility rate of 99.4% — well over twice the state average. It is our hope in such cases that the presentation of state-averaged indicators will prompt more refined discussions and lead to better understandings of all rural areas. Moreover, we hope that the indicators and gauges used here can serve as a model for states, districts, and policy-makers to examine the publicly available data themselves and at a grain-size that allows for a more finely-tuned understanding and approach to addressing the true needs of all students in the state.

Changes to the Gauges in This Edition

We made some changes from previous reports in the selection and configuration of indicators and gauges in an effort to refine and reflect better our thinking about the contexts and characteristics of rural education. Why Rural Matters 2013-14 included 24 indicators organized into five gauges: *Importance* (five indicators), *Student and Family Diversity* (five), *Educational Policy Context* (five), *Educational Outcomes* (four), and *Socioeconomic Challenges* (five). The current report includes 25 indicators organized into five gauges. The major differences from the previous report to this one are the replacement of the *Socioeconomic Challenges* gauge with the *College Readiness* gauge.

The *Student and Family Diversity* gauge contains one minor adjustment: "Number of rural minority students" has been replaced with "percent of rural students eligible for free or reduced meals," which is a proxy for the percent of students from households living near or below the poverty line. This same measure of student poverty was located within this gauge in earlier reports in the series; moving it back here makes sense in that it groups together socio-demographic characteristics typically associated with achievement gaps, and it allowed us to focus our final gauge entirely on issues directly related to college readiness.

The *Educational Outcomes* gauge contains a new indicator to round out the disciplines that are represented by the NAEP assessments. "Rural grade 8 NAEP performance in science" has been added alongside the mathematics and English assessment outcomes. This indicator provides data to complement the STEM education feature article in the report. It also fills the void left by the graduation rate indicator, which is expanded upon in the College Readiness gauge for this report.

The *College Readiness* gauge appears for the first time in a *Why Rural Matters* report. Due to a lack of data, it was not possible in the previous report to provide an indicator for rural high school graduation rate. Upon realizing that the NCES data we had historically used for this indicator would be missing again for this report, we searched for alternative data sources. We identified as U.S. Department of Education initiative called *EDFacts*, which has provided graduation rates for every school in the country. Although many of the rates are released as a range rather than an exact percentage, we were able to estimate average graduation rates for the rural districts in 48 states. Because of the detailed way in which data were presented, we were also able to estimate graduation rates among minority students and students of poverty within rural

districts—the first time ever that such figures have been published (to the best of our knowledge). To round out the gauge, we analyzed data from another new dataset, the *Civil Rights Data Collection*. We used these data to estimate the percent of juniors and seniors in rural districts (1) who enrolled in Advanced Placement (AP) coursework, and (2) who took the ACT or SAT. There are obvious limitations with these indicators. For example, many rural students may opt for dual enrollment or early college entrance rather than AP coursework; the AP indicator would not include them unless they also took an AP course. And simply taking the ACT or SAT does not guarantee that a student is ready for college, especially in districts where all students take the test. Still, the indicators in this new gauge provide a rough sense of how well each state is preparing its students for access to, and success in, postsecondary education.

Notes on Methodology

Readers of *Why Rural Matters* should consider the following points when reviewing this report. First, the quartile categories used to describe a state's position on the continuum from 1-50 are arbitrary, and are used merely as a convenient way to group states into smaller units to facilitate discussion of patterns in the results. Thus, there is very little difference between the "Crucial" label assigned to South Carolina based on its ranking of 12th on the *Educational Policy Context* gauge and the "Very Important" label assigned to Nevada based on its ranking of 13th on the same gauge.[vii]

Second, again in this report we use regional terms loosely. The intent is to recognize nuances in regional identities and to represent more clearly the contexts within which we discuss specific relationships between individual states and shared geographic and cultural characteristics. With this intent, a state like Oklahoma may be referred to as a Southern Plains state in some contexts and as a Southwestern state in others. That is because Oklahoma is part of regional patterns that include Southern Plains states like Kansas and Colorado, but it is also part of regional patterns that include Southwestern states like New Mexico.

Third, the ranking system should not be interpreted to suggest that rural education in low priority states does not deserve attention from policymakers. Indeed, every state faces challenges in providing a high quality educational experience for all children. The highest priority states are presented as such because they are states where key factors that impact the schooling process converge to present the most extreme challenges to rural schooling, and so suggest the most urgent and most comprehensive need for policymakers' attention.

Where Did "Rural" Go?

Over the past decade, we've seen the number of students in rural school districts steadily climb in each *Why Rural Matters* report. It is quite surprising, then, to see the total number drop from 9,765,385 students in *Why Rural Matters 2013-14* to 7,093,246 students in this current report.

That's a drop of 2,672,139 students. Where did they go? There was a slight decline in enrollment within school districts that were, and still are, classified as rural. However, this decline only accounts for 4% of the drop. Most of the other 96% stems from district locale updates as a result of the 2010 Census.[viii]

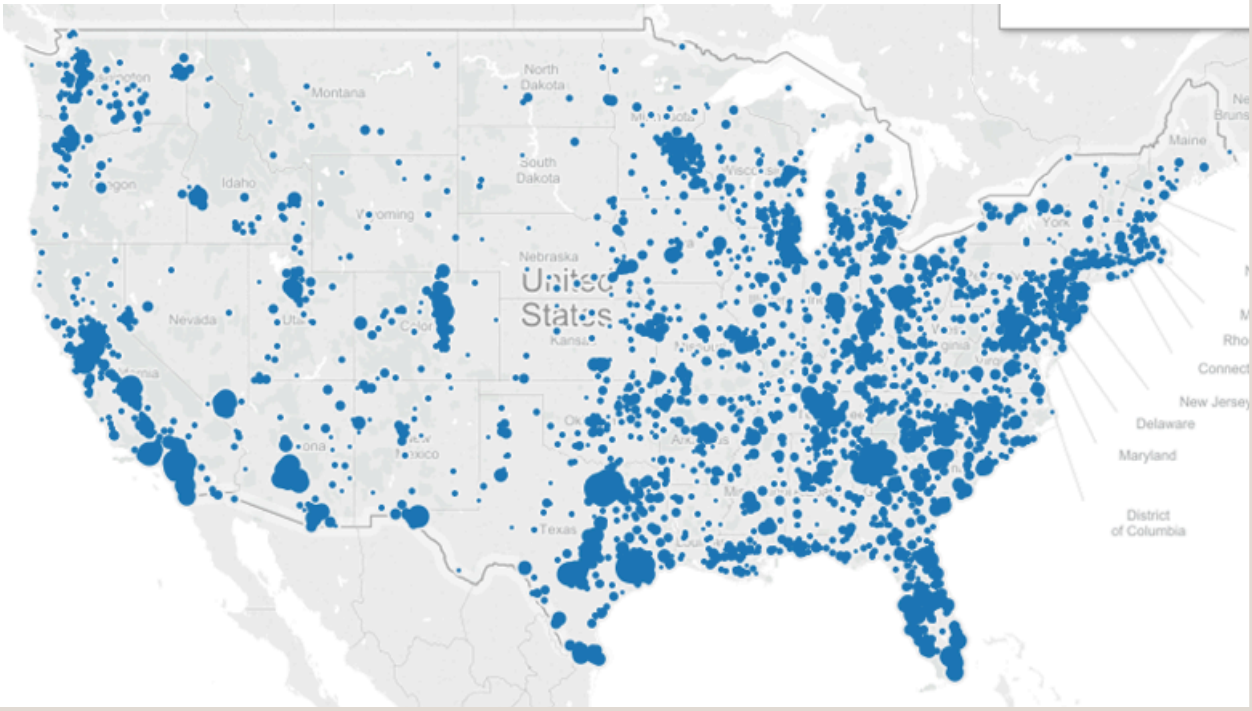
What changed? There are about 3.3 million students in districts that were classified rural but are no longer. We analyzed a series of maps, including the one shown in **Figure 1**, determining that most of the "de-ruralization" resulted from suburban sprawl occurring between 2000 and 2010. Further, about 720,000 students enrolled in districts that were not classified as rural in previous *Why Rural Matters* reports are now considered rural for the current report. In some cases, this may be because the rural schools within a district grew faster than non-rural schools until they achieved a plurality of students in the district and the district was reclassified as rural. In other cases, it may be due to an address update (e.g., school districts whose locations were previously identified by a P.O Box in a town, and thus classified as "town", are now identified by their actual physical address in a rural location, and thus classified as "rural").

Why are we just seeing the updates now in 2016? After the Census was taken, it took a couple of years for the data on urban boundaries to be organized, assessed and published. It then took the National Center for Education Statistics (the source we use for most of our data) another year to process the new boundaries and classify each school district in the country. Hence, the 2013-14 *Why Rural Matters* report uses for the first

time the new district classifications as they are now applied to the extant data from the National Center for Education Statistics.

What do these updates mean for rural education? First, the data provided in this report more accurately represent the current importance, diversity, policy contexts, and educational outcomes of rural districts. In some cases, the changes are minimal. For example, in the data used for *Why Rural Matters 2013-14*, North Dakota enrolled 36.6% of students in a rural school district, whereas in the current data, this percentage has increased just slightly to 37.5%. At the other extreme, South Carolina's rural student population has decreased from 40.6% to 15.9%. It is crucial for educators and policymakers to examine closely the data and conclusions of this updated report to understand how the condition of education in rural areas may have changed. Second, changes in recoding of schools' locales may have significant funding implications, such as whether a district is eligible to apply for REAP grants. We will be able to report on impacts such as these much more accurately after an actual funding cycle plays out.

Figure 1. Map of districts that were classified as rural in the data used for *Why Rural Matters 2013-14* but are no longer classified as rural after adjustments due to the most recent Census. The size of a given dot is proportional to the number of students in the district at the center of that dot. Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, Public School Universe, 2010-11 and 2013-14.



Results

The data for each state and state rankings for each indicator are presented in the charts and figures on pages 105-154. The results for each indicator are summarized and discussed below. To provide some context and to aid in making comparisons, national level results are presented in Table 1.

Table 1. National Rural Statistics

Importance Gauge	
Percent rural schools	28.5%
Percent small rural districts (fewer than 485 students)	49.9%
Percent rural students	14.7%
Number of rural students (median = 141,632)	7,093,246
Percent state education funds to rural districts	16.9%

Student and Family Diversity Gauge	
Percent rural minority students	25.2%
Percent rural ELL students	3.5%
Percent rural IEP students	13.4%
Percent rural students eligible for subsidized meals	48.2%
Percent rural mobility	10.6%

College Readiness Gauge	
Overall graduation rate in rural districts	87.3%
Graduation rate for rural minority students	77.4%
Graduation rate for rural students of poverty	80.9%
Percent rural juniors and seniors taking AP coursework	28.0%
Percent rural juniors and seniors who took ACT or SAT	45.6%

Educational Policy Context Gauge	
Rural instructional expenditures per pupil	$6,067
Ratio of instructional to transportation expenditures	$10.36
Median organizational scale (divided by 100)	2,834
Ratio of state revenue to local revenue	$1.24
Salary expenditures per instructional FTE	$57,798

Educational Outcomes Gauge	
Rural Grade 4 NAEP scores (math)	243.24
Rural Grade 4 NAEP scores (reading)	223.04
Rural Grade 8 NAEP scores (math)	281.74
Rural Grade 8 NAEP scores (reading)	267.95
Rural Grade 8 NAEP scores (science)	155.84

Importance Gauge

Importance Gauge Indicators

We used both absolute and relative measures of the size and scope of rural education to characterize its importance to the well-being of the state's public education system. In the following, we have defined each of the indicators in the *Importance* gauge and summarized state and regional patterns observed in the data.[ix]

- **Percent rural schools** is the percent of regular elementary and secondary public schools designated as rural by NCES. The higher the percent of schools, the higher the state ranks on the *Importance* gauge.

The national average for the percent of rural schools across the states is 28.5%, but states vary considerably from a low of 5.5% in Massachusetts to a high of 74.0% in Montana. Half or more of all public schools are rural in 13 states (in descending order, Montana, South Dakota, Vermont, North Dakota, Maine, Alaska, Nebraska, Wyoming, Oklahoma, Mississippi, West Virginia, New Hampshire, and Iowa) and at least one third of all schools is rural in 12 other states. In general, states with a high percent of rural schools are those where sparse populations or challenging terrain make it difficult to transport students to consolidated regional schools in non-rural areas, and those where there

has been less consolidation. Predominantly urban states on the east and west coasts and in the Great Lakes region have the smallest percentages of rural schools.

- **Percent small rural school districts** is the percent of rural school districts that are below the median enrollment size for all rural school districts in the U.S. (median = 484.5 students). The higher the percent of districts with enrollments below 485, the higher the state ranks on the *Importance* gauge.

At least half of all rural districts are smaller than the national rural median in 23 states. In three states (Montana, Vermont, and North Dakota), over 90% of the rural districts have fewer than 485 students. States with few or no small rural districts are located primarily in the Southeast and Mid-Atlantic, regions that are characterized by consolidated county-wide districts. West Virginia, where more than half of all public schools are in rural communities, does not have a single small rural school district because all 55 of the state's school districts are countywide systems. Six other states (Florida, Maryland, Delaware, Louisiana, North Carolina, and Alabama) also have no small rural school districts.

- **Percent rural students** is a measure of the relative size of the rural student population, and is calculated as the number of public school students enrolled in rural districts, whether they attend rural schools or not, divided by the total number of public school students in the state. It excludes students attending rural schools that are not located in districts that NCES designates as rural. The higher the percent of rural students, the higher the state ranks on the *Importance* gauge.

Just under 15% of all public school students were enrolled in districts classified as rural in the 2013-14 school year. In only two states were more than half of all students enrolled in rural districts: Vermont (54.7%) and Maine (51.4%). In six other states (Mississippi, South Dakota, North Carolina, North Dakota, Alabama, and New Hampshire), over one third of the students are enrolled in a rural district. This contrasts sharply with the distribution of students in *Why Rural Matters 2013-14*, in which twice as many (16) states had at least one third of their students enrolled in a rural district. In 13 states, rural districts make up less than 10% of the students in the state. This is up from seven such states in the previous report. However, these shifts do not mean that rural districts are experiencing sharp declines in enrollment; they are simply a result of district locale classification updates based on the most recent Census (see "Where did rural go?" (p. 12-13) for more information).

- **Number of rural students** is an absolute, as opposed to relative, measure of the size of the rural student population. The figure given for each state represents the total number of students enrolled in public school districts designated as rural by NCES. The higher the enrollment number, the higher the state ranks on the *Importance* gauge.

Roughly half of all rural students in the U.S. attend school in just 10 states, including some of the nation's most populous and urban states (in order of rural enrollment size: Texas, North Carolina, Georgia, Ohio, New York, Pennsylvania, Virginia, Alabama, Indiana, and Michigan). With the updates based on the recent Census, Texas now has 285,000 fewer students in districts classified as rural than it did three years prior. However, it still has more rural students than the combined total of the 16 states with the fewest rural students.

- **Percent state education funds going to rural schools** represents the proportion of state PK-12 funding that goes to school districts designated by NCES as rural. State funding as defined here includes all state-derived revenues that are used for the day-to-day operations of schools. Thus, capital construction, debt service, and other long-term outlays are excluded. The

higher the percent of state funds going to rural education, the higher the state ranks on the *Importance* gauge.

It is no surprise that states ranking high on percent rural schools and percent rural students also rank high on this indicator (i.e., the larger the proportion of rural schools and rural students, the larger the proportion of funding that goes to them). Most states give a disproportionately higher amount of funding to rural districts to account for challenges such as teacher recruitment and retention, among other needs. However, the following 11 states give disproportionately less funding to rural districts: Nebraska, Connecticut, Rhode Island, Michigan, Iowa, Delaware, Vermont, Indiana, Maryland, New Jersey, and California.

Importance Gauge Rankings
To gauge the importance of rural education to the overall educational system in each state, we averaged each state's ranking on the individual indicators, giving equal weight to each (see Table 2).

Table 2. Importance Gauge Rankings

How important is it to the state's overall public education system to address the needs of schools serving rural communities? These rankings represent the average of each state's score on five indicators. The higher the average ranking (i.e., the closer to ranking number 1), the more important it is for policymakers to address rural education issues in their state.

Crucial		Very Important		Important		Notable	
ME	9.0	NE	17.2	WI	24.4	CO	31.8
VT	9.4	KY	18.4	ID	25.4	LA	33.0
SD	10.2	AR	19.6	TX	25.6	CA	33.4
MT	12.0	KS	19.6	PA	25.6	AZ	33.4
ND	12.2	WV	20.2	WY	25.8	CT	35.0
MS	12.6	TN	21.2	MI	26.6	NJ	36.0
OK	12.6	IN	21.6	MN	26.6	DE	38.4
NC	14.6	GA	21.6	NY	27.2	MD	39.6
NH	15.4	OH	22.0	SC	29.2	FL	40.4
AL	16.4	NM	23.4	IL	30.0	UT	40.4
AK	16.6	VA	23.8	OR	31.6	NV	41.0
IA	17.0			WA	31.6	MA	41.4
MO	17.0					RI	42.8
						HI	NA

Note: Numbers are rounded to the nearest tenth.

Except for Alaska, all states classified as either Crucial or Very Important on this gauge are located in one of two contiguous blocks: Northern New England (Vermont, New Hampshire, and Maine) or a large chain of 20 states beginning with Montana and stretching southeast through the Dakotas, the Midwest, and ending with the Carolinas and the southern states of Alabama, Mississippi, and Georgia (see the *Importance* gauge map on p. 74 for a visualization of these regional patterns).

The seven Northern New England and Prairie/Plains states located within the top nine positions generally score high on all of the indicators except *number of rural students*, on which none of them ranks higher than 15th (OK). Three rank in the bottom quartile. All are states with smaller student enrollments overall, so the total number of rural students is smaller even though the percent of rural students is high. Over half of all rural students (3.9 million, or 56%) are in states ranked in the top quartile for the *number of rural students* indicator but only three of those states (North Carolina, Mississippi, and Alabama) are among the top quartile in the overall *Importance* gauge; five others (Tennessee, Indiana, Virginia, Ohio, and Georgia) are in the second quartile.

Four of the 13 states with the largest rural student populations rank below the median on the overall *Importance* gauge. These four states – Texas, New York, Pennsylvania, and Michigan – have large urban populations that dwarf even a relatively sizable rural population. They rank low on the *Importance* gauge despite ranking high on the *number of rural students* indicator

simply because they rank low on almost every other indicator in the gauge. For example, they average a ranking of 32nd on the *percent rural students* indicator and none of them ranks higher than 28th on that indicator (Pennsylvania).

Student and Family Diversity Gauge

Student and Family Diversity Gauge Indicators

Each *Why Rural Matters* edition has examined the role of student diversity in rural education. Achievement gaps associated with economic status, race and ethnicity, resource allocation, English language learner (ELL) status, special education (IEP, or Individualized Education Plan) status and transience (i.e., residential stability) are widely discussed in the research literature and acknowledged in educational policy. In the S*tudent and Family Diversity* gauge, we compared rural student and family characteristics across the 50 states on terms that policy makers often define as relevant to state and national education goals. In this section, we define each of the indicators in the *Student and Family Diversity* gauge and summarize state and regional patterns observed in the data.

- **Percent rural minority students** represents the number of rural minority students (per NCES categories: American Indian/Alaskan Native, Asian/Pacific Islander, African-American, Hispanic, and Two or More Races) divided by the total number of rural students in the state. The higher the percent of rural minority students, the higher the ranking on the *Student and Family Diversity* gauge.

This indicator tells us about the relative size of the rural minority student population in each state (i.e., the percent of rural students who self-identify as non-White). Educational research and state and federal accountability systems have disaggregated data that disclose notable gaps in the academic opportunities and outcomes of minority students[x] as compared to White students, but efforts to address these gaps are often inadequate or non-existent. Identifying the states with the largest relative rural minority student populations calls attention to where the need is greatest for policy action to close these gaps.

Nationally, 25.2% of rural students identify with a race other than White. The range among states is very large--from 3.7% in Rhode Island to 85.6% in New Mexico, where even the term "minority" is a misnomer. In fact, in four states, the majority of students in rural districts identify as non-White: New Mexico (85.6%), Alaska (63.9%), Arizona (58.5%), and California (57.5%).

States vary considerably with regard to the racial and ethnic composition of their rural minority student populations. One of the states with the largest percentages of rural minority students (Alaska) has a rural population made up primarily of Alaska Natives. Others, like New Mexico, Arizona, and Oklahoma, rank high because of combinations of Hispanic and American Indian populations. In the South, states rank high primarily on the basis of their sizable African-American populations (Louisiana, South Carolina, Mississippi, North Carolina and Florida). California's rural minority student population is predominantly Hispanic.

- **Percent rural ELL students** represents the number of rural students who qualify for English language learner (ELL) services, expressed as a percent of all rural students in the state. The higher the percent of rural ELL students, the higher the state ranks on the *Student and Family Diversity* gauge.

Nationally, 3.5% of rural students are English language learners with state percentages ranging from 0% in Vermont to 24.4% in New Mexico. The twelve states in the top quartile have ELL rates above 4% (in descending order: New Mexico, Alaska, California, Washington, Texas, Colorado, Delaware, Nevada, North Carolina, Idaho, Arizona, and Utah). States ranking high on this indicator have large Hispanic and American Indian/Alaskan Native populations living in rural areas. The majority of the

highest-ranking states are in the West, with only two states in the top quartile (North Carolina and Delaware) located east of the Mississippi River.

- **Percent rural IEP students** represents the percent of rural students who have an Individualized Education Plan (IEP) indicating that they qualify for special education services. The higher the percent of IEP students, the higher the state ranks on the *Student and Family Diversity* gauge.

Students with Individualized Education Plans require additional services only partly supported by supplemental federal funds, placing additional responsibilities on state and local funds. Except for California (8.8%) and Texas (8.9%), every state offers individualized education plans for at least one in ten of their rural students. Four states offer special education services for more than one in six rural students: Massachusetts (17.8%), Pennsylvania (17.5%), Oklahoma (17.3%), and Rhode Island (16.8%).

- **Percent rural students eligible for free or reduced meals** represents the percent of students in rural elementary or secondary schools who are eligible to participate in federal free or reduced-price meal programs. The higher the subsidized meal eligibility rate, the higher the state ranks on the *Student and Family Diversity* gauge.

Subsidized meal rate is one of the most common measures of student poverty used by education researchers, despite its limitations. Participation rates in subsidized meal programs are subject to conditions that are unrelated to poverty levels, including the willingness of families to apply for assistance and the aggressiveness with which school officials secure applications. Eligibility is based on household income. Children from a family earning less than 130% of the poverty line are eligible for free meals, and children from a family earning between 130% and 185% of the poverty line can receive meals at a discounted rate.[xi] Because these cutoffs are above the national poverty line, this indicator is more a measure of the breadth of mild poverty within a state rather than the intensity of severe poverty. Moreover, statewide averages tend to mask concentrations of poverty within regions of the state and in specific communities. Just because one state has a lower rural poverty rate than another does not mean that the school districts in the first state all have lower poverty rates than those located in the second state. For example, The Gilbert School, despite being in the state with the least rural poverty (CT, 14.9%), has a subsidized meal eligibility rate of about 45%, well above that of House Municipal Schools, which is located in the state with the highest rural poverty rate (NM, 84.7%).

In 23 states, more than half of all rural students are eligible for free or reduced meals; this number has increased sharply over the last two reports. In *Why Rural Matters 2013-14*, there were only 16 such states and in *Why Rural Matters 2011-12*, just nine states. Nearly half (48.2%) of the students in rural districts nationwide are eligible for subsidized meals—representing a total of 3,417,587 rural students. Rates of participation in free and reduced meal programs are lowest among rural students in predominantly urban Northeast states.

- **Percent rural student mobility** represents the percent of households with school-age children who changed residences within the previous 12 months, per U.S. census figures. Mobility disrupts consistency in teaching and learning and has been associated with lower academic achievement in the research literature. The higher the mobility rate, the higher the state ranks on the *Student and Family Diversity* gauge.

Nationally, just under one in nine rural students has changed residence in the past 12 months, ranging from a low of 5.6% in New Jersey to a high of 17.3% in Nevada. Western states rank highest on this indicator, with Nevada, Oregon, Colorado, Wyoming, and Arizona making up the

top five. In all, 12 of 13 of the highest-mobility states are west of the Mississippi River (the exception is Florida, with a rural mobility rate of 12.9%). States with the lowest mobility and the most stable rural households are in the Northeast, including New England, and Pennsylvania, New Jersey, and Maryland in the Mid-Atlantic. Among the continental states in the least-mobile quartile, only Wisconsin (7.9%) is west of the Mississippi (and Minnesota (8.7%) is bisected by it). Hawaii also has one of the lowest mobility rates in the U.S. at 8.6%.

Student and Family Diversity Gauge Rankings
To gauge the diversity of rural students and families in each state, we averaged each state's ranking on the individual indicators, giving equal weight to each indicator (see Table 3).

Table 3. Student and Family Diversity Rankings

How important is it to the overall public education system of the state to address the needs of diverse populations in schools serving rural communities? These rankings represent the average of each state's score on five indicators. The higher the average ranking (i.e., the closer to ranking number 1), the more important it is for policymakers to address diversity issues in rural communities in their state.

Urgent		Critical		Serious		Fair	
NV	9.4	OR	18.2	SD	24.6	ND	32.8
AZ	10.2	GA	18.2	VA	25.6	NJ	32.8
OK	11.4	MS	19.0	IN	25.6	MD	34.2
AK	12.6	AR	19.8	LA	25.8	WI	34.2
SC	12.6	KY	21.2	MO	27.0	OH	34.4
NM	13.8	KS	21.2	MN	28.4	NY	34.4
CO	14.0	UT	21.2	NE	29.0	IA	36.6
FL	14.4	ID	21.8	ME	29.8	VT	37.2
CA	15.4	WY	22.2	MI	30.8	NH	38.4
WA	15.6	MT	22.6	WV	31.6	RI	39.6
NC	17.4	DE	22.6	IL	32.6	CT	40.2
TX	18.0	TN	23.4	PA	32.6	HI	NA
		AL	23.4	MA	32.6		

Note: Numbers are rounded to the nearest tenth.

States in the top quartile (i.e., the highest priority quartile, labeled *urgent*) on the *Student and Family Diversity* gauge are clustered in the Southeast, the Southwest, and the West Coast. Among the indicators, *percent rural ELL students* most closely parallels the overall gauge ranking, with ten of the 13 top-quartile states for the gauge also scoring in the top quartile for that indicator. *Percent rural minority students* was also closely related to the overall gauge ranking with nine of the 13 states in the top quartile for the gauge also in the top quartile for that indicator. By contrast, only two of the states in the highest priority quartile also placed in the top quartile in terms of the percent of rural students who qualify for special education services (i.e., students with IEPs). See p. 75 for a map showing regional patterns.

To investigate the relationships among the different indicators, we ran bivariate correlation analyses among the rankings for these five indicators and found that special education rates were negatively correlated to all the other indicators. All other correlations between indicators on this gauge were positive and strong ($r > .50$ for all). We also investigated the relationship between *percent rural IEP* indicator and indicators in the other gauges. We found that states with the highest percent of rural students with IEPs tended to spend more on instruction per pupil, have higher teacher salaries, and have better outcomes on all of the *Educational Outcomes and College Readiness* indicators. These patterns, combined with the negative correlations with percent rural ELL, geographic mobility, percent rural minority, and percent rural free and reduced lunches further confirmed suspicions introduced in earlier reports that high-poverty schools are, on average, less able to provide adequately for their students who require specialized education services.

Educational Policy Context Gauge

Educational Policy Context Gauge Indicators

For this gauge, we used indicators that describe characteristics of the public schooling system that are the result of policy decisions. We focused attention on policy decisions that are highlighted in educational research as influencing student achievement and other measures of student well-being. Illustrating variations in state policy contexts thus can be interpreted to suggest, in relative terms, the extent to which current policies are helping or hindering rural schools and students. In this section, we define each of the indicators in the *Educational Policy Context* gauge and summarize state and regional patterns observed in the data. Hawaii is excluded from this gauge because its organization as a statewide district makes analysis impossible. On each indicator, the higher the ranking (closer to 1), the greater the concern that the policy context is not optimal for rural education.

- **Rural instructional expenditures per pupil** represents the state's total current expenditures for instruction in rural public school districts divided by the total number of students enrolled in those same districts. The lower the rural per pupil expenditures, the higher the state ranks on the *Educational Policy Context* gauge and the greater the concern about rural education policy.

This indicator allows us to make comparisons among states with regard to the amount of money, per pupil, that is spent on teaching and learning in rural schools. The national average of $6,067 per rural pupil is much closer to the low end of the range ($4,336 in Idaho and $4,392 in Oklahoma) than to the high end ($12,453 in Alaska and $11,585 in New York).[xii] In addition to Idaho and Oklahoma, 25 other states spend less than half of the amount that Alaska spends per pupil for instruction in its rural school districts.

The highest spending states are either states with very small rural districts (Alaska, Wyoming, Vermont, New Hampshire, and Nebraska), or Northeastern and Mid-Atlantic urban states with a relatively small population of rural students (New York, Connecticut, New Jersey, Rhode Island, Delaware, Maryland and Massachusetts). There is a moderately strong correlation between the instructional spending per pupil and each of the *Educational Outcomes* indicators (ranging from $r = .40$ to $r = .51$). This seems logical to have states that spend more money on instruction demonstrating better educational outcomes. What is much less logical is that instructional spending has a weak or even negative correlation with all five of the *College Readiness* indicators (ranging from $r = -.25$ to $r = .09$). This does not imply that spending more money on students has no (or a negative) effect on their college readiness; it might simply indicate the presence of funding that is already being directed to areas where students historically have been underprepared for college.

- **Ratio of instructional expenditures to transportation expenditures** is a measure of how many dollars are spent on teaching and learning for every one dollar spent on transporting pupils. The lower the ratio, the more money that is being channeled toward transportation and away from teaching and learning, and the higher the ranking on this indicator.

Variations in pupil transportation costs are affected by unavoidable issues related to geography and terrain, but they also result from policies and practices related to the size and location of schools and school districts, personnel, and the length of students' bus rides. This indicator is an important factor in the educational policy context because extraordinary transportation costs are a burden that shifts money away from programs and resources that directly impact student learning.

On average, rural school districts nationally spend about $10.36 on instruction for every dollar spent on transportation, but there is

considerable variation among states. At the low end, West Virginia spends only $6.54 on instruction for every transportation dollar spent; at the other end of the spectrum, seven states spend more than double that—Alaska ($25.81); Vermont ($17.39); Nebraska ($16.21); Texas ($15.74); North Carolina ($14.91); Oklahoma ($14.79); and Tennessee ($13.83).

Regional patterns are not immediately apparent for this indicator, and comparisons of states with similar geographies and terrains reveal substantial differences. South Dakota, for example, spends over $3 more on instruction per transportation dollar than its neighbor North Dakota; Vermont spends more than twice as much on instruction per transportation dollar ($17.39) as its neighbor New York ($8.66).

The most likely factor influencing the ratio of instructional spending to transportation spending is school size. A small catchment area means lower transportation spending, even in geographically large districts. The state with the lowest ratio (West Virginia) has only countywide districts, many serving isolated mountain communities. Transporting students who are dispersed across many isolated communities to a single school has doubtless been a factor in the state's having the nation's lowest ratio of instruction to transportation spending per pupil.

- **Median organization scale** is a measure that is intended to capture the combined effects of school and district size. We computed the organizational scale for each rural school by multiplying the total school enrollment by the total district enrollment. For simplification in reporting, we then divided the result by 100. The figure reported for each state is the median for the organizational scale figure for every rural school in the state. The larger the organizational scale, the higher the state scores (the greater the level of concern) on the *Educational Policy Context* gauge.

School and district size exert influence over schooling and schooling outcomes both individually and in combination with one another. Specifically, larger school and district size has been linked with undesirable schooling outcomes—particularly among impoverished and minority students. Further, larger districts exacerbate the negative influence of large school size and vice versa. By including this indicator, we are seeking to provide a relative measure of the scale of operations for rural education in each state.

Large organizational scale is concentrated in the Southeast and contiguous areas in the Mid-Atlantic and Central Appalachia where countywide districts and regional high schools are the norm (Florida, North Carolina, Georgia, South Carolina, Louisiana, Alabama, Virginia, Tennessee, Mississippi and Kentucky). Every state in the top quartile on this indicator is located east of the Mississippi River. The lowest ranking states are mostly in the Great Plains and the West, where the norm is small independent districts serving distinct communities.

- **Ratio of state revenue to local revenue** in rural districts is a measure of dependence on local fiscal capacity and an indirect measure of the extent to which state revenue is a significant factor in equalizing revenue per pupil across communities of varying levels of wealth and poverty. A low ratio means a relatively small amount of state aid and an increased likelihood of inequitable funding. The lower the ratio, the higher the state scores on the indicator.

This indicator needs to be read with a great deal of caution because it does not take into account whether either state or local revenue is adequate to support schools. A high ratio of state to local revenue may mean the funding system is equitable only in that it provides inadequate funding levels everywhere. A low ratio is a clearer signal that the school funding system relies too much on local fiscal capacity and, whether minimally adequate or not, is very likely

inequitable. The reader should also recall that these data relate only to the proportion of revenue from state versus local sources in the rural districts of a state. Including the non-rural districts would likely alter the numbers considerably, in part because the industrial and commercial property tax base per pupil is usually lower in rural areas. In addition, much of the agricultural or forest land values in rural areas are withheld from the school tax base or their revenue yields are reduced by various forms of abatements and preferential assessments.

The national average ratio of state to local revenue in rural school districts is 1.24, meaning state government supplies $1.24 in funding to rural districts for every $1.00 allocated from local tax revenues. Rhode Island has the lowest ratio with rural districts receiving only $0.29 of state funding for every dollar of local revenue they receive. There are only a few rural districts in Rhode Island; however, they are mostly high-wealth districts. Nebraska has the second lowest state/local revenue ratio at $0.30, which is more than a 25% decrease from our last reporting for Nebraska of this indicator in *Why Rural Matters 2013-14*. Among the states with a large rural education population, Nebraska's rural districts get the lowest level of state aid relative to local tax revenue. Vermont gets the most state-level support with a ratio of $12.47.[xiii] This is almost three times the funding ratio of the next highest state, New Mexico ($4.44). However, North Carolina has experienced the greatest increase in state funding per local dollar since the past report ($3.00, compared to $1.61 in *Why Rural Matters 2013-14*).

The highest ranking states on this indicator (specifically, the states with the lowest level of state aid relative to local revenue) fall into two distinct groups: Northeastern states with relatively low levels of rural poverty and high levels of rural property valuation (Rhode Island, Connecticut, New Hampshire, New Jersey, Maine, and Massachusetts); and Midwestern/Great Plains states with low to moderate levels of rural poverty and a largely agricultural property tax base in rural areas (Nebraska, Wisconsin, Missouri, Illinois, South Dakota and Iowa). The first group includes many states that spend relatively high levels per pupil in their rural schools. All but Maine are among the top quartile for the *rural instructional expenditure per pupil* indicator. The second group spends, on average, $3,000 less per pupil in their rural schools (about $6,000 compared to around $9,000 for the first group).

- **Salary expenditures per instructional FTE** in rural districts is the total dollar amount spent on instructional salaries divided by the total number of full-time (or the equivalent) instructional staff members, and is used here as a proxy for average teacher salaries. The lower the rural salary expenditure per FTE (or full-time equivalent, a measure that accounts for staff who only work part-time or who are assigned to more than one school), the higher the state's ranking on the *Educational Policy Context* gauge and the more urgent the concern for the condition of rural education.

In many states, rural school districts are simply at a competitive disadvantage in the market for teachers. There are many factors in this challenge, but lower teacher salaries is certainly among them. Average salary expenditure per instructional FTE in rural districts ranges from $40,897 in Kansas to $87,805 in Alaska, with a national average in rural districts of $57,798. Compare this to the average salary expenditure per instructional FTE in town districts ($59,567), urban districts ($68,850), and suburban districts ($70,830).

States with the lowest rural salary expenditures according to this indicator are primarily in the Southeast, the Southwest, and the Midwest/Great Plains (in order from lowest salary: Kansas, Missouri, Arkansas, South Dakota, Oklahoma, Idaho, North Dakota, Florida, Tennessee, Alabama, Colorado, and Arizona).

States with the highest rural salary expenditures are located primarily in the Northeast, the West, and the Mid-Atlantic (in ascending order from lowest salary in the group: Rhode Island, New Hampshire, Washington, Nevada, California, Delaware, Massachusetts, Maryland, New Jersey, Connecticut, New York, and Alaska). Nine of these (all but Washington, New Hampshire, and Alaska) are among the 12 states with the lowest percent of students attending rural districts and in the bottom quartile on the Importance gauge. Rural teachers seem to be paid better in states where they represent a small portion of a largely urban teaching force.

Educational Policy Context Gauge Rankings

To gauge the extent to which the educational policy context is favorable or unfavorable for rural schools, we averaged each state's ranking on the individual indicators, giving equal weight to each (see Table 4).

Table 4. Educational Policy Context Gauge Rankings

How crucial is it for policymakers to address the policy context of their state as it relates to the specific needs of schools serving rural communities? These rankings represent the average of each state's score on five indicators. The higher the average ranking (i.e., the closer to ranking number 1), the more important it is for policymakers to address rural educational issues within that state.

Crucial		Very Important		Important		Notable	
FL	11.4	NV	21.0	ND	23.8	KS	29.6
AZ	13.6	ID	21.4	NC	23.8	MI	30.4
AL	15.6	OR	21.6	CO	24.0	NY	30.4
VA	16.2	TN	21.8	RI	24.0	DE	30.6
UT	17.0	SD	22.0	NJ	24.0	NH	30.8
MO	18.0	KY	22.4	WI	24.2	CA	31.0
MS	18.4	PA	22.4	OK	25.6	MN	31.4
WV	18.6	ME	22.6	MD	26.2	NE	31.8
IN	19.2	TX	22.8	IA	27.4	NM	32.4
IL	19.4	GA	22.8	MT	28.4	WA	33.8
OH	20.2	AR	23.4	MA	28.6	WY	35.2
SC	20.6	LA	23.6	CT	28.8	VT	43.6
						AK	47.2
						HI	NA

Note: Numbers are rounded to the nearest tenth.

The indicators that contribute most to the crucial ranking of the states in the top quartile for this gauge are *rural instructional expenditures per pupil* (seven of 13 are in the top quartile on this indicator); *ratio of instructional to transportation expenditure* (five of 13); and *median organizational scale* (six of 13). The 12 *Crucial* states vary most in their ranking on the *ratio of instructional to transportation expenditures* indicator, ranging from number one West Virginia to number 41 South Carolina, with an average ranking of 17. Only two states in the top quartile for the gauge (Missouri and Illinois) rank within the most crucial quartile on the indicator *state dollars per local dollars*. These are states where school funding systems depend relatively more on local tax bases than state revenue.

At the bottom of this gauge are three Great Plains states (Wyoming, Kansas, and Nebraska); two Midwestern states (Minnesota and Michigan); three Northeastern states (Vermont, New Hampshire, and New York); two Western states (Washington and California); and one Southwestern state (New Mexico).

Their low ranking collectively is most attributable to their high per pupil instructional expenditures and relatively high proportions of revenue coming from state sources. Seven of the 12 are in the bottom quartile on each of those indicators. Ten of the 12 are also in the bottom half on the organizational scale indicator; in fact, Delaware (5th) is the only one of the 12 that is among the 20 states with the largest-sized schools and districts. In general, these are states with relatively small schools and districts and stronger investments in public education overall.

See p. 76 for a map showing regional patterns.

Educational Outcomes Gauge

Educational Outcomes Gauge Indicators

This gauge includes indicators describing student academic performance on national assessments. As noted earlier, we included a new indicator in this gauge this year: "Rural Grade 8 Science Performance." In this section, we define the indicators in the *Educational Outcomes* gauge and summarize state and regional patterns observed in the data.

- **Rural NAEP scores.** The National Assessment of Educational Progress (NAEP) is administered and compiled by the U.S. Department of Education and offers assessment data for state-by-state comparisons, including comparisons of rural school districts as a sub-group within states. We considered student academic outcomes as measured by average rural district reading and math scores at the 4th and 8th grade levels on the NAEP, as well as the average rural district science scores at the 8th grade level. The lower the average score on each of these five indicators, the higher the ranking (the greater the concern) on the *Educational Outcomes* gauge.

The results vary so little among the five NAEP indicators that we discuss them here as a unit. Seven states rank in the highest priority quartile (i.e., the quartile with the lowest rural NAEP scores) on all five NAEP indicators: New Mexico, Mississippi, Alabama, Hawaii, Louisiana, West Virginia, and Arizona. Rural students in these states consistently performed poorly on NAEP at both grade levels and in both subject areas.

Eleven of the states in the top quartile on this gauge also scored in the top quartile of the percent rural free and reduced meals indicator. The twelfth state, West Virginia, had a lower than normal reporting rate this year on the poverty indicator (i.e., it's likely that the poverty rate in West Virginia is higher than this year's report suggests). The thirteenth state (Hawaii) could not be ranked on that gauge because its organization as a single statewide district does not permit us to calculate the necessary indicators. The complete overlap of the top quartiles on poverty and educational outcomes is suggestive of positive correlation between inadequate funding and poor academic performance.

There is a similar homogeneity in the states whose rural students score highest on NAEP assessments. Five states rank in the bottom quartile (i.e., highest scores, least cause for concern) on all five indicators: Ohio, Colorado, New Hampshire, Massachusetts, and Connecticut. Except for Colorado, these states rank very low on the *Student and Family Diversity* gauge (these states have high education outcomes and low measures for diversity). Pennsylvania, New Jersey, Rhode Island, and Maryland score in the bottom quartile on four of the five indicators; Minnesota on three; and Indiana and Kansas on two. Of the 12 states in the bottom quartile on this gauge, all but Ohio rank among the lowest half (i.e., least poverty) of the nation in free and reduced meal rates; Ohio is a near miss at 23rd on that indicator.

Educational Outcomes Gauge Rankings

To gauge the educational outcomes associated with rural schools in each state, we averaged each state's ranking on the five indicators, giving equal weight to each (see Table 6).

As described in the preceding narrative, patterns in rural performance on the NAEP assessments are remarkably consistent across the assessed grade levels and subject areas. The result is a very clear demarcation of higher and lower-performing states in the gauge rankings, with obvious regional patterns (i.e., lower performing states are clustered in the Southeast, Southwest, Central Appalachia, and Mid-South Delta; higher performing states are clustered in the Northeast, Mid-Atlantic, and Great Lakes region. See p. 77 for a map showing regional patterns.

College Readiness Gauge

College Readiness Gauge Indicators

This gauge includes indicators related to how

Table 5. Educational Outcomes Gauge Rankings

Given the educational outcomes in each state, how urgent is it that policymakers take steps to address the specific needs of schools serving rural communities? These rankings represent the average of each state's score on five indicators. The higher the average ranking (i.e., the closer to ranking number 1), the more important it is for policymakers to address rural educational issues within that state.

Urgent		Critical		Serious		Fair	
NM	1.8	NV	15.0	WY	25.8	IN	33.8
MS	3.8	OR	15.0	VA	26.0	KS	37.0
AL	4.6	NC	16.2	ND	27.0	PA	38.2
HI	5.4	ID	17.4	MO	27.2	MN	39.2
LA	5.8	SD	21.4	TX	27.2	OH	39.8
WV	6.4	MI	23.0	DE	28.4	NJ	40.8
AZ	7.2	FL	23.6	WA	29.0	RI	40.8
CA	8.8	KY	23.6	MT	29.2	MD	41.0
SC	9.2	NY	25.4	WI	30.2	CO	42.6
AR	11.0	IL	25.6	IA	32.0	NH	43.4
OK	12.6	ME	25.6	UT	33.0	CT	46.6
GA	14.4			NE	33.4	MA	46.8
TN	14.4					AK	NA
						VT	NA

Note: Numbers are rounded to the nearest tenth.

well high schools in rural districts are preparing students for entrance to and success in college. In this section, we define the indicators in the *College Readiness* gauge and summarize state and regional patterns observed in the data.

- **Overall graduation rate in rural districts.** Rural high school graduation rate is measured using the Regulatory Four-Year Adjusted Cohort Graduation Rates (ACGR). The lower the rural graduation rate, the higher the state ranks on the *College Readiness* gauge and the more serious the concern for the policy environment.

The ACGR is defined by the U.S. Department of Education as "the number of students who graduate in four years with a regular high school diploma divided by the number of students who form the adjusted cohort for the graduating class." This recently-implemented measure improves upon the measure used in previous *Why Rural Matters* reports because it adjusts for students who transfer in and out of a district. All school districts are now required to report data in a way so that the ACGR can be calculated. However, to protect the confidentiality of students at small schools, some graduation rates are reported as ranges instead of a single value. We used single values where available and used statistical techniques[xiv] where only a range was reported to estimate the graduation rates for every state except New Mexico and Hawaii on the three graduation rate indicators in the *College Readiness* gauge.

On average nationwide, the estimated rural high school graduation rate is 87.3%. Although this is several percentage points above the published national average for all locales, it is not unreasonable, because the rural graduation rate has traditionally been on par with the suburban graduation rate and well above the graduation rate for urban school districts. Rural Alaska is a statistical outlier with a graduation rate of 60.9%. Rural graduation rates in other states range from 74.3% (Florida) to 94.3% (Connecticut). The most urgent quartile on this indicator includes mostly states from the Southeast, Southwest, and the West Coast. Two Rocky Mountain states (Colorado and Wyoming) as well as Alaska also break the top 12. Among these, only Mississippi and Alaska rank in the top quartile on the *Importance* gauge, but seven rank in the top quartile on the Student Diversity Gauge (Alaska, Arizona, Colorado, Florida, Nevada, South Carolina, and Washington). States with the highest rural graduation rates are primarily those whose rural students score well on the NAEP tests. Six of the states in the highest quartile for graduation rate are also in the highest-scoring quartile on the *Educational Outcomes* gauge. Rural Tennessee is an

interesting exception; it is in the lowest-scoring quartile on the NAEP tests but the highest quartile for graduation rate.

- **Graduation rate for rural minority students.** The graduation rate (ACGR) for rural minority students was calculated in the same way as the overall graduation rate, but only among students who self-reported as non-White. The lower the graduation rate among rural minority students, the higher the state ranks on the *College Readiness* gauge and the more serious the concern for the policy environment.

Whereas the overall graduation rate in rural school districts is 87.3%, the graduation rate among rural minority students is about 10 percentage points lower at 77.4%. As one might expect, the graduation rate among rural minority students is highly correlated with the graduation rate among rural students in general ($r = .76$). However, there are eight states for which the gap between White and non-White graduation rates is more than 20 percentage points—over twice the average gap: in decreasing order by the percentage point gap between overall and minority graduation rate in rural districts, South Dakota (38.4), North Dakota (36.4), Montana (33.2), California (25.5), Arizona (24.3), Utah (23.7), Alaska (22.9), and Washington (21.8). All eight of these states are Western states with higher than average proportions of students from Hispanic or Alaska Native/Native American backgrounds. On the other end of the continuum, the gap is less than 5% in 21 states, with the rural minority graduation rate even higher than the overall rural graduation rate in six states: West Virginia, Delaware, Kentucky, Rhode Island, Iowa, and Connecticut. This may be due to the error rate inherent in the estimation process of these rates, especially in rural districts with few minority students.

Five of the states in the top quartile in terms of the percent of rural students who self-report as being from a minority background are also in the lowest quartile of rural minority graduation rate: Alaska, Arizona, California, Florida, and Mississippi. On the other hand, two states have relatively high graduation rates among their large minority populations—Texas (44.7% minority, 89.2% minority graduation rate) and Delaware (40.3% minority, 90.3% minority graduation rate).

- **Graduation rate for rural students eligible for free or reduced meal programs.** The graduation rate (ACGR) for rural students who were eligible for subsidized meals was calculated in the same way as the overall graduation rate, but only among students who were eligible for free or reduced meal program. The lower the graduation rate among students eligible for subsidized meals, the higher the state ranks on the *College Readiness* gauge and the more serious the concern for the policy environment.

Nationwide, we estimate that 80.9% of the low-income students who begin high school in a rural school district graduate within four years. If this is accurate, it would be quite impressive, given that the overall graduation rate—among students of all socioeconomic statuses and all locales—for the same years was only slightly higher at 82.3%.[xv] Or, compare this to the 74.6% national graduation rate of low-income students across all locales.[xvi] In other words, the 80.9% graduation rate would mean that a rural student in poverty would have roughly the same expectation of graduating as the average urban student from any socioeconomic status. As always, the national average does not tell the story of the range of rural poverty graduation rates ranging from a low of 52.1% in Alaska to 89.1% in Indiana.

Research tells us that large pockets of poverty can have a compounding effect on academic outcomes. We wondered if states with higher rates of rural poverty have lower graduation rates among the students who qualify for subsidized meal plans. This does not seem to be the case, however. Only two states (Georgia and

Mississippi) are in the highest quartile for percent of students eligible for subsidized meals and also in the quartile with the lowest rural poverty graduation rates.

The rural poverty graduation rate is closely associated with the overall rural graduation rate ($r = .75$), and even more closely associated with the rural minority graduation rate ($r = .80$). In fact, six states were in the lowest-graduating quartile on all three graduation rate indicators (Alaska, Colorado, Florida, Mississippi, Washington, and Wyoming) and six more states were in the lowest-graduating quartile on two of the three indicators (Arizona, Georgia, North Dakota, Nevada, South Dakota, and Oregon). Seven states were in the highest-graduating quartile on all three indicators: Iowa, Kentucky, Maryland, New Hampshire, Tennessee, Texas, and Wisconsin.

- **Percent of rural juniors and seniors taking at least one AP course** represents the total number of students from rural district who had enrolled in at least one Advanced Placement course, divided by the total number of juniors and seniors in rural districts.[xvii] A higher rate of rural students taking AP coursework suggests a higher level of preparedness for college. The lower the state's percentage, the higher the state scores on the indicator.

Although merely taking AP courses does not necessarily prepare a student better for college, this indicator serves as a proxy for college readiness for two reasons. First, the AP syllabus provides a de facto curriculum standard designed to be at the college level, and research has found that exposure to this material while in high school is associated with a higher first-year GPA in college.[xviii] Second, students who are able to pass an AP exam enter college with some existing credit, thus shortening their time to graduation. It is worth noting that this indicator does not account for other pathways to college readiness, such as dual enrollment or early college entrance. States vary substantially on this indicator with only about 1 in 20 (5.3%) rural Juniors and Seniors in Louisiana taking AP coursework compared to more than half (56%) of the rural Juniors and Seniors in Ohio. Ohio is a clear outlier, however, with the next two highest states at 43.2% (Maryland) and 40.4% (Oregon). Only 11 states have fewer than 20% of their rural Juniors and Seniors enrolled in AP coursework. Four of these 11 states are in the quartile with highest rate of rural student poverty (Louisiana, Alabama, Tennessee, and South Carolina). Of all the other indicators, AP enrollment rates were most closely associated with the NAEP assessment scores, and particularly the Grade 4 Mathematics scores ($r = .36$).

- **Percent of rural juniors and seniors who took the ACT or SAT** represents the total number of students from rural districts who took either the ACT or the SAT, divided by the total number of juniors and seniors in rural districts.[xix] A higher rate of rural students taking the ACT or SAT suggests a higher level of preparedness for college. The lower the state's percentage, the higher the state scores on the indicator.

The ACT and the SAT are the two most commonly-used tests across the U.S. for admissions into college, and particularly 4-year colleges.[xx] Historically, students in the Coastal states and Texas have tended to have a preference for the SAT and students in the Midwest and Great Plains states have been more likely to take the ACT, although this geographic division grows weaker every year. Some districts, and the entire state of Kentucky, require all students to take one of these two tests. Because it is still voluntary in most places, however, it serves as a marker of the portion of a state's rural students who have interest in attending a 4-year college. In 21 states, over half of the rural Juniors and Seniors have taken the ACT or SAT, and in only two states (California and Oregon) did fewer than one in four rural Juniors and Seniors take one of the two tests (the other Pacific Coast state, Washington,

had the third lowest rate). The low rates among the Pacific Coast states may, in part, be connected to the large numbers of English language learners in California and Washington; percent of English language learners is the most closely-linked indicator with ACT and SAT test-taking ($r = -.34$). Incidentally, the correlation between ACT/SAT test-taking rates and AP coursework rates is extremely weak ($r = .06$), suggesting that the two indicators are measuring distinct aspects of college readiness.

College Readiness Gauge Rankings

To gauge the college readiness of the students attending rural districts in each state, we averaged each state's ranking on the five indicators, giving equal weight to each (see Table 6).

Table 6. College Readiness Gauge Rankings

Given the levels of college readiness among rural students in each state, how urgent is it that policymakers take steps to address the specific needs of schools serving rural communities? These rankings represent the average of each state's score on five indicators. The higher the average ranking (i.e., the closer to ranking number 1), the more important it is for policymakers to address rural educational issues within that state.

Urgent		Critical		Serious		Fair	
AK	3.2	MS	17.4	MA	26.0	MO	32.4
NV	6.0	MT	18.4	NC	26.6	TN	33.4
SD	10.0	ND	20.6	NE	26.6	NJ	33.8
WA	10.2	VA	20.6	ID	28.2	MD	34.0
FL	12.2	CA	20.8	IL	28.2	NH	34.2
LA	12.4	WY	21.2	OK	28.8	TX	36.4
SC	12.4	KS	21.8	PA	29.2	DE	37.0
AZ	13.0	AL	22.2	NY	30.0	IN	37.2
GA	15.2	MI	23.0	RI	30.6	AR	37.4
OR	15.2	WV	23.0	WI	31.4	OH	38.0
UT	15.8	VT	23.8	ME	31.8	CT	43.4
CO	16.8			IA	32.2	KY	44.6
MN	17.0					HI	NA
						NM	NA

Note: Numbers are rounded to the nearest tenth.

Based on the five indicators used in this gauge, the states where rural students appear to be least prepared for college are clustered in the Southeast, the Southwest, the West Coast, and the Northern Plains. As one might expect, the *College Readiness* gauge is linked with the *Educational Outcomes* gauge (four of the states that score in the least-prepared quartile of the *College Readiness* gauge also show up in the lowest-scoring quartile of the *Educational Outcomes* gauge). However, it is much more closely linked with the *Student and Family Diversity* gauge. Seven states appear in the highest-priority quartile of both gauges (Nevada, Alaska, Washington, Florida, South Carolina, Colorado, and Arizona).

Rural Education Priority Gauge

Finally, we averaged the cumulative rankings on the five gauges (*Importance, Student and Family Diversity, Educational Policy Context, Educational Outcomes,* and *College Readiness*) to create priority rankings that reflect the overall status of rural education in each state. The rankings for the *Rural Education Priority* gauge are presented in Table 7.

Although just over one fourth (6 out of 25) of our indicators in *Why Rural Matters 2015-16* were not included in *Why Rural Matters 2013-14*, and five have not appeared in any previous *Why Rural Matters report*, most of the same states continue to appear in the highest priority ("Leading") quartile. In fact, the top four states (Mississippi, Arizona, Alabama, and South Carolina) were all among the top five highest priority states in *Why Rural Matters 2013-14*.

Nevada, Alaska, and South Dakota all climbed more than 10 places in terms of priority ranking from the previous report to this one. In the other direction, Kentucky, Tennessee, and Indiana were the three

Table 7. Rural Education Priority Gauge Rankings

Rankings here represent the combined average ranking for each state on the five gauges (*Importance, Student and Family Diversity, Educational Policy Context, Educational Outcomes,* and *College Readiness*). The higher the average ranking (i.e., the closer to ranking number 1), the greater the need for policymakers to address rural education issues within that state.

Leading		Major		Significant		Notable	
MS	8.8	WV	17.8	CA	23.2	NE	30.4
AZ	11.6	NM	18.8	KY	23.6	MN	31.4
AL	12.2	VA	19.4	WA	25.2	IA	32.0
SC	12.8	LA	20.4	CO	25.6	OH	32.6
SD	13.4	ID	21.0	KS	25.6	WI	32.6
GA	15.0	MT	21.4	TX	26.0	NY	33.4
NV	15.4	TN	21.8	IL	26.2	DE	35.6
FL	15.8	AR	22.0	IN	27.4	NH	36.8
OK	16.2	ME	22.4	WY	28.2	NJ	37.8
AK	16.3	ND	22.4	MI	28.6	MA	38.4
NC	17.2	MO	22.6	VT	30.0	RI	39.8
OR	17.2	UT	22.6	PA	30.2	MD	40.2
						CT	44.0
						HI	NA

Note: Numbers are rounded to the nearest tenth.

biggest drops in priority. We reiterate, however, that this report is not designed to be a scoreboard where an increase in priority means that something bad must have happened in the rural areas of that state over the past two years (and vice versa).

Half of the 12 states in the Leading quartile of overall rural education priority are located in a continuous region in the Southeast; this block is bordered by a chain of six other states that all fall into the second-highest ("Major") priority quartile. Such a clearly demarcated geographical block of high priority states suggests regional challenges that transcend state lines; these challenges may be different than those facing the block of six states west of the Rocky Mountains that are in the Leading or Major quartiles. The only three states in the Major quartile that do not share a border with states in the Leading quartile are West Virginia, Maine, and Missouri.

None of the highest-ranking states on the *Rural Education Priority* gauge rank in the top quartile on all five underlying gauges. Two of the highest-ranking states (Arizona and South Carolina) rank in the top quartile on four of the five underlying gauges, six (Mississippi, Alabama, Georgia, Florida, Oklahoma, and Arkansas) rank in the top quartile on three gauges, and the remaining four (South Dakota, Nevada, Oregon, and North Carolina) rank in the top quartile on only two gauges. The *Student and Family Diversity* gauge most closely parallels the rankings on the *Rural Education Priority* gauge, with nine of the states (all but Mississippi, Alabama, and South Dakota) in the Leading quartile on the *Rural Education Priority* gauge also placing in the top quartile on the *Student and Family Diversity* gauge. Eight of the Leading quartile states on the *Rural Education Priority* gauge placed in the top quartile on the *College Readiness* gauge; six placed in the top quartile on the *Importance* gauge; six on the *Educational Outcomes* gauge; and five on the *Educational Policy Context* gauge.

On the *Rural Education Priority* gauge, no state ranked in the bottom (Notable) quartile on all five underlying gauges of the *Rural Education Priority* gauge; only four states (New Hampshire, New Jersey, Connecticut, and Maryland) ranked in the bottom on four of the five gauges. This underscores the point that every state has rural education issues that need to be addressed. Here, too, the *Student and Family Diversity* gauge most closely parallels rankings on the *Rural Education Priority* gauge. Nine states ranking in the Notable Quartile on the *Rural Education Priority* gauge also ranked in the bottom quartile on the *Student and Family Diversity* gauge. The message here is unmistakable: states that have the greatest need

for attention from policymakers—based upon the five gauges as a whole—serve a substantially more diverse student population than lower priority states. It is worth noting that these five gauges represent both demographic *givens* and contexts created and maintained through policy decisions. Clearly, these states (and others) must look closely at issues related to diversity and must find better ways to meet the needs of a diverse rural student population.

As in past reports, there were a few cases where states ranked very high or very low on one gauge but consistently the opposite on other gauges. Two examples: Alaska ranked last (49th) on *Educational Policy Context* but fourth on *Student and Family Diversity*, 11th on *Importance*, and first on *College Readiness*. New Hampshire, on the other hand, ranked ninth on the *Importance* gauge and no higher than 41st on any other gauge. Alaska's public schools are more heavily subsidized and located close to the communities they serve, thus positioning them well in terms of educational policy, although they serve a large Alaskan Native population that has a different set of values beyond schooling. In New Hampshire, rural education is important but schools and communities, in general, are not stressed or distressed.

Conclusions and Implications

Over 7 million students are enrolled in rural school districts, just under 15 percent of all public school students in the United States. Nearly half of those rural students live on or near the poverty line, more than one in four is a child of color, and one in nine has changed residence in the previous 12 months.

The reclassification of district locales in the wake of the last Census has given us a much more accurate picture of rural education across the country (See "Where did rural go?" on p. 12-13). Although the number of students attending school in a district classified as rural has dropped substantially—from 9.7 million to 7.1 million—this is much more indicative of suburban sprawl encroaching on rural areas than of declining enrollment in rural districts.

One side effect of this data update is that it obscures some of the demographic changes in rural areas between the previous report and the current one. For example, in the data used for *Why Rural Matters 2013-14*, 46.6% of the students in rural districts were eligible for subsidized meal plans. In this current report, that percentage is now 48.2%. However, if we narrow our focus only to the districts that are currently classified as rural, slightly over 50% of the students were eligible for subsidized meal plans. In other words, within the "truly rural" districts (as defined by the most recent Census), the poverty rate has actually decreased slightly instead of increasing.

The results published in this report should make it increasingly difficult for policy makers to ignore the challenges faced by rural schools and the students they serve, or what those challenges mean to state and national goals of improving achievement and narrowing achievement gaps between advantaged and disadvantaged groups. Still, the invisibility of rural education persists in many states. Many rural students are largely invisible to state policy makers because they live in states where education policy is dominated by highly visible urban problems. Consider that in 15 states, one-fourth or more of all public school students are enrolled in rural school districts. On the other hand, more than half of all rural students live in just 11 states. Only two states (Alabama and North Carolina) are in both of these categories, however (i.e., in a state with large proportional and absolute rural student enrollments). The majority of rural students attend school in a state where they constitute less than 20% of the public school enrollment, and more than one in four are in states where they constitute less than 10%.

The Bottom Line

Rural schools and communities continue to face substantial challenges with high rates of poverty, diversity, and students with special needs. As job markets shift, local districts must reevaluate what it means to prepare students for post-secondary opportunities. These challenges, while widespread, are most intense in the Southeast, Southwest, and parts of Appalachia. Moreover, they are trends that have proven consistent throughout the report series and irrespective of changes in the specific indicators used.

The definition of rural has always varied widely depending on the purpose or scope of the people using the definition. This has been made clear by the locale classification updates present in this report's data. What can we say of the 2.6 million students who, as of a couple of years ago, were living in a "rural" district and are now living in a town, suburban, or even urban district even though they haven't changed residences? Many of them may never have even considered their district rural to begin with; others may still be living in a "rural" district from a subjective standpoint. As we process the big picture trends and relationships present in the data used for this report, we must not lose sight of the fact that every number represents a collection of actual students, each with their own story, struggles, dreams, and potential.

The *Every Student Succeeds Act* and Rural Education

The *Every Student Succeeds Act* (ESSA) was signed into law by President Obama on December 10, 2015, reauthorizing the 50-year-old Elementary and Secondary Education Act (ESEA) and replacing the *No Child Left Behind* (NCLB) Act that was enacted in 2002. The U.S. Department of Education[xxi] describes the Act as a bipartisan bill that

- maintains elements of NCLB viewed as positive by the administration (e.g., annual statewide assessments of all students' learning, competitive programs to evaluate and reward effective educators in high-need schools);

- substantially alters other elements of NCLB viewed by the administration as negative (e.g., unrealistic student performance targets and school ratings based entirely on test results; one-size-fits-all accountability, interventions, and supports for struggling schools developed at the federal level);

- and adds several new elements (e.g., college and career readiness standards, innovative local assessment pilots, teacher and leader evaluation and support systems that include observations and student learning, inclusion of pre-Kindergarten education, competitive programs for innovation and evidence-building, replication of high-quality charter schools, and wrap-around support systems for vulnerable communities).

As part of our effort to capture the salient policy contexts in which rural education operates in the U.S., we reviewed ESSA with an eye toward describing its attempts to influence rural education and understanding the likely implications of the Act for rural schools and communities. The review is organized into two parts: first, we consider a host of general (i.e., non-rural-specific) programs for which there is language specifying some focus on or attention to schooling in rural settings; and second, we consider changes made to the Rural Education Achievement Program (REAP), a group of programs enacted as part of NCLB that represent the federal government's single largest funding effort directly targeting rural schools.

General Programs

References to rural schools and communities within the context of policies governing general programs fall into five categories: (1) *involvement provisions* designed to ensure participation of rural stakeholders in policy development and prioritization/decision-making, (2) *diversity provisions* designed to encourage equitable allocations of resources and opportunities among varied geographic designations, including rurality, (3) the inclusion of rural as a factor in *defining need* for the purposes of prioritization, (4) *set-aside provisions* designed to ensure that a quantifiable proportion of resources are directed to rural areas, and (5) *waiver/specialized consideration provisions* intended to enhance the ability of rural entities to pursue resources in competition with non-rural counterparts.

Involvement provisions. In all, ESSA includes three specific provisions ensuring that rural stakeholders are involved in decision-making related to planning and the intra-state distribution of federal funds. Two are related to Title I—specifically, (1) states are required to include rural local education agencies (LEAs) in consultation to decide whether to reserve Title I Part A Subpart 2 funds (up to 3% allowed) for direct student services; and (2) states are required to involve rural LEAs in consultation as part of developing state plans/filing for grants. A third

is related to Title V—specifically, the provision requires that, as part of a review of the U.S. Department of Education's organization, structure, and process/procedures (to occur within 18 months of ESSA passage), the Secretary is required to determine actions that could increase the consideration and participation of rural schools and LEAs in the development and execution of policy and policy-driven activities.

Geographic diversity. There are seven instances within ESSA where provisions specify that the execution of policy should consider rurality in distributing grants among geographically diverse areas. Importantly, the specific language in these provisions does not include set-aside proportions or amounts (i.e., a guaranteed quantifiable prioritization); rather, the Secretary is simply called upon to ensure equitable geographic distributions (including rural as a geographic category) *to the extent practicable*. This provision is applied separately to several programs:

- Teacher and School Leader Incentive Fund Grants (Title II Section 2212)
- National Activities (Title II Section 2233)
- Supporting Effective Educator Development (Title II Section 2242)
- School Leader Recruitment and Support (Title II Section 2243)
- Within-State ELL Sub-grants (Title III Section 3102)
- Local Competitive Sub-grants (Title IV Section 4204)
- Grants to Support High Quality Charter Schools (Title IV Section 4303)

Definitions of need. Rurality is included as part of an operational definition of need with respect to identifying target audiences and specifying prioritization for eight different programs and grants. In some instances, rurality is part of a multi-factored definition of need; in others, it is used to define a subset of schools and LEAs within a previously defined priority group. Following are programs and grants that utilize rurality as part of defining need:

- STEM Master Teacher Corps (Title II Section 2245)
- Digital Learning (Title IV Section 4402, Section 4104)
- Activities to Support the Effective Use of Technology (Title IV Section 4109)
- Grants to Support High Quality Charter Schools (Title IV Section 4303)
- Statewide Family Engagement Centers (Title IV Section 4503)
- Community Support for School Success (Title IV Section 4621)
- Alaska Native (Title VI Section 6004)
- Preschool Development Grants (Title IX Section 9212)

Rural set-asides. In contrast with those grants and programs for which the Secretary is required to ensure equitable distributions to the extent practicable, there are two instances where provisions specify a proportion that must be allocated to rural schools and LEAs (with exceptions allowed if no proposals of sufficient quality are received). Specifically, at least 25% of funds made available (annually) through *Grants for Education Innovation and Research* must be awarded to a rural LEA, consortia of rural LEAs, or another entity partnering with a rural LEA, with the majority of schools to be served designated as rural. At least 15% of funds made available (annually) for *Community Support for School Success* must be awarded to applicants who propose to carry out their planned work in rural areas.

Waivers/specialized provisions. ESSA also includes provisions attached to a few competitive programs that waive certain requirements and/or provide support and assistance to increase the likelihood of awards to rural entities. Specifically, for *Grants for Education Innovation and*

Research, the Secretary may waive the matching funds requirements (on a case-by-case basis) for applicants who can demonstrate difficulty in raising funds for a program to support rural areas. Similarly, with *Community Support for School Success*, the Secretary may adjust the matching funds requirement for Promise Neighborhood applicants with a demonstrated high need (including applicants from rural areas). Under *Outreach and Technical Assistance to Rural LEAs* (Title VIII Section 8031), the Secretary is required to engage in outreach to encourage rural LEAs in submitting applications for competitive programs; additionally, the Secretary is required to provide technical assistance to rural applicants.

Rural Education Achievement Program (REAP)

Some background and clarification of REAP and stated purposes would be instructive before turning to changes enacted under ESSA. The REAP was established under Title VI Part B of NCLB as a pair of initiatives to help rural districts more effectively pursue competitive federal funds. The two initiatives are the Small, Rural School Achievement (SRSA) program and the Rural and Low-Income Schools (RLIS) program.

The SRSA program includes two distinct sub-initiatives. The first (SRSA) awards state grants by formula, to be distributed as sub-grants to eligible school districts, also by formula (i.e., the state grant amount is based upon the determination of eligible districts and the number of students enrolled in those eligible districts, and states must distribute the funds according to the number of students enrolled in those eligible districts). Generally, SRSA funds may be used to support activities authorized under any of the following programs:

- Title I Part A (Academic Achievement, Title II Part A (Improving Teacher Quality);
- Title II Part D (Educational Technology), Title III (English Language Acquisition);
- Title IV Part A (Safe and Drug-Free Schools);
- Title IV Part B (21st Century Community Learning Centers); and
- Title V Part A (Innovative Programs).

The second SRSA sub-initiative (REAP-flex) provides eligible local school districts with greater flexibility in using funds from formula grants that they receive under certain federal programs administered by the state:

- Subpart 2 of Title II Part A (Improving Teacher Quality State Grants);
- Title II Part D (Educational Technology State Grants);
- Title IV Part A (Safe and Drug-Free Schools and Communities); and
- Title V Part A (State Grants for Innovative Programs). Eligibility for participation in REAP-flex and SRSA is the same. To qualify for flexibility or grant funds, *school districts* must

1. have a total average daily attendance (ADA) of fewer than 600 students, or serve only schools that are located in counties that have a population density of fewer than 10 persons per square mile; and
2. serve only schools that have an NCES school locale code[xxii] of 7 or 8, or are in an area of the State defined as rural by a governmental agency of the State (in instances in which a State agency defines the area in which an LEA is located as rural, the U.S. Department of Education must agree to the rural designation before the LEA may participate in either REAP-Flex or the SRSA grant program).

The second REAP initiative (the RLIS grant program) awards state grants by formula to be distributed as sub-grants to eligible school districts, either by formula or through competition (as determined by the state). District eligibility requirements are:

1. 20 percent or more of the children ages 5 to 17 served by the LEA must come from families with incomes below the poverty line;
2. all schools served by the LEA must have a school locale code of 6, 7, or 8 (assigned by the National Center for Education Statistics); and
3. the LEA must not be eligible to participate in the SRSA program.

Of note, not every RLIS-eligible district will necessarily receive an award, particularly those in states that opt for competitive awards over formula-based awards. Funds awarded as part of the RLIS program may be used for the following activities:

1. Teacher recruitment and retention, including the use of signing bonuses and other financial incentives;
2. Teacher professional development, including programs that train teachers to use technology to improve teaching and to train teachers of students with special needs;
3. Educational technology, including software and hardware, that meets the requirements of Part D of Title II;
4. Parental involvement activities;
5. Activities authorized under the Safe and Drug-Free Schools and Communities State Grants program;
6. Activities authorized under Part A of Title I (Improving the Academic Achievement of the Disadvantaged); and
7. Activities authorized under Title III (Language Instruction for Limited English Proficient and Immigrant Students). (USDOE, 2003, p. 23).

ESSA includes changes to REAP that will impact both (1) eligibility for funding and (2) flexibility in how funds may be utilized. Specifically, changes in the locale designations used (changing from the previously metro-centric system to the more recently developed urban-centric system; see https://nces.ed.gov/ccd/rural_locales.asp) will impact which districts are eligible for funding. This, in conjunction with the reclassification of locales based on the 2010 Census, means that numerous schools and districts are no longer labeled "rural." This is not necessarily detrimental to rural education generally; in fact, the updated system may channel REAP funding more directly to schools that are, at least by NCES definitions, "more rural." However, substantial changes such as this one often have ripple effects across the country, so it is important to investigate the potential changes in more detail.

Although we can only speculate how these classification changes will affect REAP eligibility, several points are important to consider. Under the current REAP-eligibility guidelines, if a district has even one non-rural school, it is ineligible for SRSA funding. Of the 4,651 districts that are currently eligible for SRSA, 278 (roughly 6%) have at least one school that is between 11 and 33 on the urban-centric coding system (i.e., a "non-rural" school). Unless guidelines are adjusted, these districts would be ineligible for future SRSA funding. Some of these districts would still be eligible for the RLIS. However, 171 of the 278 automatically miss that, too, since 63 have at least one school that is between 11 and 23 on the urban-centric coding system (i.e., urban or suburban), and an additional 108 have a student population with less than 20% of the students in poverty. In other words, barring any eligibility changes, these 171 districts would not be eligible for either portion of the REAP initiative under ESSA.

It is more difficult to estimate how RLIS eligibility will be affected because of incompatibilities at the fine-grain level of detail between the old and new locale classification systems. Eleven schools that qualify for RLIS now have either an urban or a suburban school, so it *would seem* that they would lose eligibility. More complicated are the districts that include at least one school in a town locale (i.e., 31, 32, or 33). Of the districts that are RLIS eligible now, 53 have

a school coded 31 (town, fringe), 543 are coded 32 (town, distant), and 510 are coded 33 (town, remote). Under the old classification system, a district with a school coded 6 (small town) was still eligible for RLIS, but a district coded 5 (large town) was not.

As of FY 2015, there are 6676 total school districts eligible for one of the two REAP initiatives. Of these, 235 (3.5%) seems to be a lower bound on the percent that would lose REAP eligibility unless the criteria are changed. But there are another 500 or so that are in a gray area on the borderline depending on where boundary lines are drawn for districts with town schools.

In terms of flexibility in the use of REAP funds, two local activities that were previously approved for the use of REAP funds (Title II Part D [Educational Technology State Grants] and Title V Part A [State Grants for Innovative Programs] are no longer eligible.

In summary, ESSA has the potential to substantively impact rural schools and their communities. Whether that impact will be positive, negative, or mixed remains uncertain to a large extent. It will be important to monitor the implementation of the Act and to measure and describe the impacts resulting from its implementation.

Why STEM Matters: The Rural Case

The disciplines of science, technology, engineering and mathematics, or "STEM," hold a singular place in the nation's rhetoric around schooling. They are seen as key to the future of the national primacy, indicators of students' readiness for post-secondary opportunities, and socio-cultural markers for individual intelligence. These perceptions matter greatly to rural America in that they signal the relevance and contributory power of rural America's physical and human capital to that of the nation overall. Student performance in STEM subjects further contribute to a "sorting" process of rural K-12 students into "stayers" and "leavers" of those rural communities. Finally, when STEM careers and opportunities requiring STEM proficiency are located primarily in urban areas, rural students may face "backwater" stereotypes about their intelligence or capacity in STEM subjects.

This special section to *Why Rural Matters 2015-16* overviews research about rural students and teachers through the lens of STEM education. There is no evidence of a shortage of rural talent in the teaching, learning, and practice of STEM subjects. This section draws on recent research and extant data to assess the condition of STEM education in rural America, to counter myths where they occur, to identify areas of potential risk or concern, and to highlight examples of successful rural STEM teaching and learning. We follow convention of considering these four subjects together though we acknowledge in some cases that there may be differences between, as an example, the "S" and the "E" in terms of the research results. Indeed, there is far more research and data from mathematics education (the "M") than technology education or engineering education (the "T" and "E").

Teachers. Areas most relevant to understanding the condition of rural STEM teaching include: teacher recruitment and retention, access to professional development, and teacher preparation.

Students. Areas most relevant to understanding students' experiences in STEM education include issues of access, achievement, and opportunity. By "access," we mean the ways and extent to which students can participate in high-quality educational experiences in STEM subjects. We understand "achievement" to include indicators of the degree to which students succeed in demonstrating learning of STEM subjects. We use the term "opportunities" mostly to indicate post-secondary choices[xxiii] that result from prior STEM education, including higher education and careers.

Exemplars. We conclude this special section with exemplars of creative and successful approaches to preparing rural students in science, technology, engineering, and mathematics.

Teachers

A 2008 study of schools in the Great Plains identified "three critical areas of teacher shortages in rural locales- English as a second language, special education, and math and science."[xxiv] A review of the August 2016 United States Department of Education's nationwide teacher shortage list suggests that those areas remain shortage areas.[xxv] Moreover, some states report shortage areas according to counties, school districts, or other means of identifying locale, and rural communities are over-represented there. In other words, more STEM teachers are needed throughout the United States, and perhaps especially in rural communities.[xxvi] The *2011-12 Schools and Staffing Survey* (SASS) found that, nationally, 7.6% of rural public schools had staffing shortages in mathematics teaching.[xxvii] The similar figures for biology and life sciences

were 5.1% and for physical sciences, 6.9% and contrasts with English language arts and social studies (2.8% and 1.0%).

The shortage of qualified teachers has short-, medium-, and long-term effects. In the short term, building administrators must find a teacher of some kind to assign to the science and math classrooms. This establishes a trajectory of medium-term concerns about reported achievement scores in STEM areas (one measurable effect among many) and further to long-term diminishment of opportunities for students to reasonably pursue post-graduation opportunities relying on STEM knowledge. Worse, it places teachers in the uncomfortable position of teaching outside of the field of their preparation and only worsening teacher retention.

Retention and turnover may be a key indicator of the overall "health" and stability of STEM teaching. After analyzing 20 years' worth of the Schools and Staffing surveys, Ingersoll and Merrill reported that 45% of all teacher turnover occurred in just 25% of public schools.[xxviii] A large portion of these public schools were high-need urban and rural schools. They noted that most teachers had either three or fewer years of experience or a large number of years of experience, with few teachers in between. They also discovered a "shuffling" of teachers from poorer rural and urban schools to wealthier ones.

Decades of research in rural sociology and rural education confirm that, while there are stark differences between what "rural" looks like across the U.S., the unifying characteristic of rural communities is the strength of their residents' ties to kin, community, and place. This matters to the recruitment of qualified STEM teachers to rural schools. An "outsider" may lack the relationships with the community or area necessary to build trust and support. Moreover, the limited career opportunities and class resources in rural areas represents a further complication for prospective teachers with families with multiple wage earners.
Yet another adjustment that "outsider" teachers face when taking a teaching position is to the close-knittedness of rural communities. One study found that "STEM teachers play multiple roles in their communities, such as neighbors, fellow parents, church members, etc. … enabling teachers to form partnerships and develop a sense of trust. On the other hand, [participants] also indicated that because community members knew them outside of school, they were 'basically on call 24 hours a day, seven days a week,' leaving little separation between personal and professional life."[xxix]

Despite these difficulties, there are some promising examples of recruiting STEM teachers to rural areas. Purdue University's *STEM Goes Rural* project uses Woodrow Wilson Foundation support to recruit STEM professionals into teaching positions in rural areas. University of Nebraska-Lincoln's Math in the Middle offers an innovative approach to addressing rural STEM teacher shortages, recruitment, and retention by preparing math teachers explicitly for rural teaching in mathematics. The University of North Dakota's *Science, Engineering, Math and Teaching* program prepares rural teachers but focuses on ongoing relationships between higher education professionals and teachers long after they graduate UND's program, thus addressing the issue of professional connection, networking, and access to sustained, meaningful professional development.

Focusing on support networks and professional development may be key. The research on rural teachers' access to high-quality professional development is not uniform in its findings and may reflect recent advances in technology-mediated, distance learning platforms to offer professional development. Whereas some research suggests that rural teachers have less access to professional development,[xxx] the 2013-14 SASS does not bear this out. According to that survey, 98.7% of rural teachers reported

participating in some form of professional development over the past 12 months. Other strategies, including the *Grow Your Own* initiatives respond to findings that the overwhelming majority of recent teacher-preparation programs teach close to where they grew up.[xxxi]

Students

Rural students tend to perform similarly to, or just below, students from suburban areas on NAEP assessments in science and math. From the most recent 2013 data, fourth-graders in rural public schools scored an average of 243 on the math assessment, compared to suburban (244), town (240), and city (236). These same patterns hold for English language learners, among which rural fourth-graders scored an average of 221, compared to suburban (221), town (220), and city (218). On the eighth-grade NAEP math test, the national averages were rural (286), suburb (288), town (281), and city (278). But measuring math performances is not just about the averages; we might also be interested in how the talent is distributed. An analysis of national data found that math talent is more equitably distributed in rural areas than in other locales.[xxxii] In non-rural areas, distributions of NAEP math performance exhibit much greater variability, with a lot of high scores and a lot of low scores (this would be analogous in wealth terms to, say, a community with a lot of rich people and a lot of poor people). In rural areas, by contrast, scores are "clustered" around the average or center of the distribution. Instead of a lot of high and low scores, most scores are closer to average (building on the previous "wealth" analogy, this would be akin to a community where most people have about the same economic wealth).

Although rural students, on the whole, tend to perform well on math assessments, they have done even better on the science NAEP assessments. Science is not measured as frequently, but in the most recent 2009 data for the fourth-grade NAEP science test, the national averages were rural. 154; suburb, 153; town, 149; and city, 140. Rural students maintained their edge on the 2011 eighth-grade NAEP science test with a national average of 156 compared to suburb (155), town (152), and city (142).

The other two STEM areas – technology and engineering – are harder to get a nationwide picture of, due to lack of data. However, a Google-sponsored nationwide Gallup survey of 1,865 district superintendents on access and barriers in U.S. K-12 computer education uncovered some interesting differences in perceptions.[xxxiii] Over half (52%) of superintendents in city and suburb districts perceived that their school board believes that computer science is important to offer; this number was significantly lower (43%) among superintendents in town and rural districts. Similarly, 34% of the city/suburb superintendents reported that computer science education was currently a top priority for their district, whereas only 27% of their town/rural counterparts made this claim. The main reason cited for these relatively low percentages was a need to focus primarily on areas addressed by standardized testing.

Of course, STEM education can be viewed as more than a clever acronym that packages together four siloed areas of the curriculum. In its ideal form, STEM education engages students across two or more of the four areas. Though not necessarily the norm, rural school districts are positioned well, literally, to take advantage of this interdisciplinary approach. The rich connection with the local land, culture, and community has been leveraged by numerous rural districts, to varying degrees, in the form of place-based education. One study looked at seven exemplars of place-based education in mathematics.[xxxiv] The authors describe STEM projects such as an aquaculture program, forestry mathematics, wood instrument building, small racecars, and an environmental analysis of factors affecting a local clamming industry. Such efforts tended to involve more resources, and were more

difficult to sustain than traditional educational coursework. They were also perceived by students and educators as being more appropriate for non-college-bound students. The sense was that college-bound curriculum privileges the "abstract/conceptual" over the "concrete/computational." One student in the study, after confirming his belief that math 'was everywhere,' was asked if there was any calculus in his rural, Great Plains community. The student responded emphatically that you had to go to a big city to find calculus. Perceptions such as these come from somewhere, and represent the challenges that integrative curriculum and education that uses local physical and social resources face. However, these perceptions may be poised to change as interdisciplinary studies and project-based education show promising results in higher education research.[xxxv]

Perceptions of the importance of schooling generally, and STEM education in particular, constitute one area where rural and non-rural community members differ. A study of a three-state east-central region of the United States found that 22% of rural students versus 29% of urban students said that their school emphasized STEM subjects.[xxxvi] While both seem shockingly low, this translates to only about one of five rural students perceiving their schools as placing high value on STEM subjects. The same report found that parents weren't convinced of the utility of STEM education for the future happiness of their children: "While parents clearly and highly value problem-solving skills, critical thinking and collaboration for their children, they are not making the connection between STEM and these skills. More often, parents relate STEM education to advanced mathematics and science, which they want their children to have access to, but do not feel is necessary for all children to be successful in life. Rather, these rigorous types of courses are perceived to be for the college-bound students who intend to make a career in these areas."

Perceptions about STEM subjects and the opportunities that result from learning those subjects are influenced by schools, community members, and popular media. Rural students and their families may have less access to informal STEM education opportunities such as museums, math circles, and STEM summer camps– important venues for making clear the close connections between problem-solving strategies and STEM as well as confronting misperceptions about STEM fields. One report found that rural students, "are less likely than American students as a whole to have access to challenging math and science classes, qualified math and science teachers, STEM learning resources, role models in STEM fields, and community resources such as science museums. At a time when we should be leveling the playing field for rural children, low- participation in out-of-school programs is actually exacerbating the disparities."[xxxvii] This finding was confirmed by the *Work to Do* report, that "some rural districts report no opportunities to engage in after-school, museum, and extra-curricular STEM activities. Part of this may arise from the difficulty and expense of transporting students to informal STEM events in rural areas.

Some programs are attempting to address the performance of students from rural schools in STEM subjects and in access to STEM majors in post-secondary work. The *Rural Math Excel Partnership Project*[xxxviii] is an i3 grant in Virginia that uses "pre-AP and AP teacher training, student support, and student and teacher financial incentives" to improve achievement and graduation rates and also to support access for rural students to STEM majors in college." The STEM Master Teacher Corps Act of 2015[xxxix] supports the training of 10,000 STEM teachers in the 2016-2020 time frame and declares an explicit priority for rurally-located grant applications, with a further focus on high-needs rural schools. The Georgia Tech Research Institute, with support from a USDA grant, has approached this issue by partnering STEM

professionals with first-graders and high school students from five rural districts in Georgia.[xl] The first-graders have storytelling sessions with the STEM experts whereas the high school students connect to the same professionals to support the students' studies in STEM courses at their high schools.

Inasmuch as Science is about understanding the world empirically, and Engineering and Technology are about applying science and design to better our condition in that world; and inasmuch as Mathematical inquiry hones a critical approach to understanding structure and solving problems, STEM education matters greatly to us all. STEM subjects have been elevated to keystone importance among school subjects and been deemed an essential measure of the nation's place in the geopolitical landscape but also in our global economic and military competitiveness. State assessments/indicators therefore put these subjects under great scrutiny and may foster a sense that the goal is developing expertise rather than "appreciation," "enjoyment," or "competence" as might be true in other subjects like language or the arts. Since STEM experts are to be found in greater numbers outside of rural communities, we must be aware of the extent to which educational discourse around STEM subjects might contribute to the equating of "excellent student in STEM" with "will leave the community not to return." Programs such as those outlined above offer glimpses into alternative constructions of STEM education in which the ideas of "relevance," "beauty," and "connection" are celebrated. Moreover, they suggest that part of defining the future vitality of rural communities involves investing in a vision of STEM education for rural students that lays the groundwork for those students to marshal their STEM knowledge to benefit rural America.

English Language Learner Students in Rural School Districts

The definition of an English language learner (ELL) student is blurry. It is further complicated by terms such as dual language learner (DLL) student, culturally and linguistically diverse (CLD) student, and limited English proficiency (LEP) student, which are all sometimes used interchangeably with English language learner student. Teachers who serve ELL students are often referred to as English as a second language (ESL) teachers, though this terminology also continues to evolve and change.

According to federal guidelines from the United States Department of Education (ED), schools must conduct a home-language survey to determine if a child should be evaluated for ELL services. Based on classifications by the school systems, there are 251,000 ELL students in rural school districts, or 3.5% of all rural students. This figure is much lower than the number of students who speak a language other than English at home. For example, a child may grow up as a native English speaker, and yet speak to his mother in French. Or, a child born to Korean parents may learn English as her second language and yet be completely fluent in English by the second grade; this child would not be counted among the 251,000 rural ELL students but *would* be counted among the number of students who speak a language other than English at home. According to the U.S. Census Bureau,[xli] there are about 821,000 rural children between the ages of 5 and 17 who speak a language other than English at home. The vast majority of these rural children (76.5%) are reported to speak English "very well" and another 15.5% are reported to speak English "well." Less than 10% of rural children speak English "not well" or "not at all." Of the rural children who live in a home where English is not the primary language, Spanish is the most commonly spoken primary language (67%), followed by other Indo-European languages (23%) and Asian/Pacific Islander languages (5%).

If a child qualifies for ELL services, the school district is responsible for its own criteria for graduating an ELL student to English-speaking status. Half of ELL students who enter kindergarten with basic or intermediate English proficiency are reclassified as English-speaking in 4.4 years or less. Half of those who enter kindergarten with advanced English proficiency take 3.0 years or less.[xlii] In that same study, female ELL students tended to be reclassified about half of a year earlier than male ELL students. Half of the Chinese and Vietnamese speakers achieved English in less than 3 years, whereas half of the Spanish speakers were reclassified within 3.7 years.

As reported in *Why Rural Matters 2013-14*, the percentage of rural ELL has been growing steadily over the past decade. The data used for this report reflects this continuing trend. These increases are most evident in states such as New Mexico, Alaska, and California, where the percentages of rural ELL students are now 24.4%, 22.7%, and 20.9%, respectively. However, even in states that have much lower percentages, the increase of ELL students can present under-resourced rural districts with challenges. From another perspective, the presence of ELL students can mean a refreshing wave of cultural diversity for traditionally homogenous districts. Although published research on ELL students in rural areas is sparse, this section of the report summarizes extant studies as they pertain to the various stakeholders.

English Language Learner Students

ELL students in rural areas experience high levels

of poverty.[xliii] Increasing numbers of ELL students in rural areas are often attributed to low-paying employment opportunities (e.g., meatpacking and farm work).[xliv] Of concern, rural ELL students who experience high levels of poverty are less likely to perform well on state-mandated assessments and experience lower high school graduation rates than non-ELL students.[xlv]

ELL students, especially males, are also more likely to be identified as at-risk and to be disengaged in school pursuits. One study examined over 7,000 rural high school students, including ELL students, to determine how well they adapted to high school.[xlvi] Specifically, the study looked at students who were classified in one of three risk categories: multi-risk (aggressive, low-performing), disengaged (non-aggressive, low-performing), and tough (moderately aggressive, academically competent). Overall, 70% of female ELL students and 76% of male ELL students fell into one of the three at-risk categories; the same was true of only 50% of their English-speaking peers. Additionally, according to teacher reports, ELL students smiled and were friendly at the same level as their peers, but were slightly less popular and were more likely to internalize their emotions.

Mathematics has been reported as being easier for ELL students to adapt to than more language-intensive courses such as social studies or English and language arts.[xlvii] Some research suggests that, when working with ELL students, it is more effective to emphasize concepts rather than memorization.[xlviii] However, teachers of all subjects have cited students' lack of subject-specific vocabulary among their ELL students as a significant barrier to learning the central concepts.[xlix]

Parents of ELL Students

Inadequacies in communications between teachers and parents of ELL students are widely reported.[l,li] The lack of communication often exacerbates existing issues of trust or differences in value systems. When parents of ELL students don't respond to notes and feedback that are written in English, teachers may view parents as being uninterested in their children's education.[lii] Some parents of ELL students view the education system as a form of racism[liii] and a threat to their family stability. Some disapprove of the U.S. focus on competitive individualism and self-reliance.[liv] Others simply view school programs as an ineffective use of their children's time[lv] or are focused on surviving with their own jobs.[lvi]

A major frustration among parents of ELL students is simply a feeling of not having a voice in the public school system.[lvii] To make better contact with parents/families, some schools are adopting new ways of making connections between homes and schools. For example, some schools are piloting "Bilingual Nights" as a way to increase parent/family involvement and communication between home and schools.[lviii] Practices such as these represent meaningful ways for other rural districts to foster a sense of school belonging for rural ELL students and their families.

Teachers of ELL Students

Title III guidelines mandate that students receive daily ELL instruction;[lix] yet, many rural districts do not have funding for ELL teachers. Even when schools have funding for an ELL teacher, there is a critical shortage of qualified ELL teachers[lx,lxi] and limited access to professional development or training for working with ELL students.[lxii] In rural districts that have an ELL teacher, caseloads are often prohibitively high, preventing meaningful small group or one-on-one interaction between students and their ELL teacher.[lxiii] One of the largest ELL-related challenges facing rural school districts is that teachers have not been trained sufficiently to work with these populations.[lxiv] Rural ELL teachers experience high levels of professional isolation, complicating their abilities to

collaborate to improve student outcomes.[lxv] When an ELL teacher is not available, in many rural districts, language arts teachers are expected to meet the developing language needs of their district's ELL students.

In all content areas, teachers are presented with pedagogical challenges when working with English language learners. They also must be sensitive to multicultural issues that impact schooling. Across the spectrum, a survey of 159 K-12 teachers from rural Texas identified the greatest perceived challenges in working with ELL students as a lack of academic vocabulary, communication with both parents and students, and insufficient time.[lxvi] Challenges are compounded when ELL students have a disability such as visual impairment; many rural schools are unlikely to have teachers or staff members who are certified in such specialized areas.[lxvii] Needs for bilingual or adequately trained teachers are particularly pronounced in the early elementary grades where most ELL students enter the public education system.[lxviii]

But the needs involved in working with ELL students stretch far beyond the academic content. The level of multicultural awareness possessed by educators plays a role in how ELL students are perceived and treated. By better understanding the culture of ELL students, teachers are more able to see the cultural diversity as a strength that can be leveraged, rather than as a deficit;[lxix] these same proficiencies help teachers understand and navigate the culture of English-speaking students as well.

Despite the wide array of challenges facing rural teachers of ELL students, several promising solutions exist. Multiple studies suggest that teachers with ELL students are willing to attend professional development training on multiculturalism and English language learning strategies if given the opportunity.[lxx,lxxi] Because large numbers of rural teachers are facing these same issues at the same time, there are opportunities for collaboration within schools and across districts. Some school systems have found success in offering ESL classes for parents.[lxxii] Others have provided professional development related to ELL students, in the form of school-based seminars, graduate school credit, and fully or partially online hybrid training sessions.[lxxiii]

School Counselors of ELL Students

Teachers are not the only educators who work with ELL students. Groups such as counselors, paraprofessionals, coaches, and office staff each face a unique set of challenges and opportunities related to ELL students and their family members.

Lacking both ELL-specific training and professional support networks, rural school psychologists often face frustrating hurdles when attempting to assess and work with ELL students. A survey of 97 school psychologists in a rural Midwestern state reported difficulties in finding colleagues to consult with about ELL students. Less than 5% of the rural respondents reported having a bilingual psychologist with whom they could consult on ELL issues, as compared with nearly 50% of the urban respondents.

Assessing ELL students in their regular coursework poses difficulties for many rural districts. This is true informally, in the classroom, as teachers report ELL students being reluctant to ask or answer questions for fear of making a mistake.[lxxiv] It is even more of an issue when it comes to formal assessments where rural school counselors often have not had training specific to ELL populations; this results in widely-varied approaches to how and how much ELL students are provided assistance on standardized tests.[lxxv]

Rural Administrators' Outlook and Approach to ELL Students

Administrators of rural school districts play an

important role in the relationship between non-English-speaking communities and the public education systems. Their attitude and approach to ELL students send a message to teachers and staff. This may take the form of the explicit priorities set forth by administrators, how resources are allocated, or the initiatives taken proactively to support ELL students and their families.

When administrators focus only on the academic outcomes of ELL students without incorporating a supportive infrastructure, the situation has the potential to disintegrate into one of blaming others.[lxxvi] This can have ripple effects that cause teachers and staffs to view ELL students as a burden on the school system and foster mistrust of the school system among ELL students and their families. Federally funded initiatives for ELL students, such as supplemental educational services, lose their effectiveness when not embraced by local administrators. By contrast, ELL students may be welcomed when booming enrollments delay or stave off rural school consolidation plans.[lxxvii]

Other studies have shown the potential benefits of administrators embracing the presence of ELL students in their schools and attempting to reach out to their families. In one case study,[lxxviii] a principal in a Western state transformed a low-performing rural high school. While fostering a climate of trust among the overworked teachers, she created a time for structured collaboration once every two weeks. These collaborative meetings were then used to address topics such as the rise of ELL students. By the fifth year, 70% of the teachers were reportedly engaging ELL students with cooperative learning, inquiry-based instruction, and sheltered instructional techniques tailored to their specific needs. A separate case study on leadership in three high-performing, high-poverty rural schools also uncovered initiatives designed to support ELL students and their families.[lxxix] In all three schools, leaders reportedly prioritized relationships between Latino parents and the school. As examples, they cited the use of Latino staff members to help translate into Spanish all written and phone correspondences between the school and students' families. One school even used an English-Spanish interpreter for community meetings.

Accountability Measures and ELL Students

Standardized testing requirements for ELL student are an area of concern across rural areas. As professional development opportunities for teachers of ELL students are slim and rural schools desperately need additional trained teachers for ELL students,[lxxx] this creates unique and challenging testing conditions for rural schools. While some states do not count ELL students' test scores as part of a district's or teacher's results for the first two years that a student receives ELL services (score exemptions vary from state to state), eventually all ELL students' test scores are calculated as part of a district's and even teacher's aggregated results. Unsurprisingly, as compared to non-ELL students, ELL students score lower on standardized tests and have lower value-added scores.[lxxxi] Given the lack of funding and support for ELL teacher training and professional development[lxxxii] and the professional isolation experienced by ELL teachers,[lxxxiii] ELL students' test results are unlikely to improve. Since test scores are tied to both funding and teacher evaluations,[lxxxiv] this presents an issue of equity and accessibility that is unique to rural stakeholders and should be at the forefront of advocacy efforts for rural schools.

Summary

The percentage of students in rural districts who are English language learner students has been growing rapidly, and trends suggest that it will continue to grow. Educators in rural districts often lack the necessary training to handle this

influx of cultural and linguistic diversity. Additionally, rural ELL teachers have limited access to professional development and experience high levels of professional isolation. These inadequacies often lead to ELL students and their families feeling overlooked by, or even threatened by, the public education system. Under such conditions, ELL students can face substantial academic and behavioral issues. On a positive note, the research suggests that even small changes can improve this situation. Administrators who are creative in opening up communication channels and prioritizing resources to train teachers and staff can foster a community of understanding and improve the chances for success among ELL students. Teachers who receive even a modest amount of training in multicultural and English language learning strategies perceive ELL students and related opportunities more positively. Finally, all parties involved would be wise to leverage the valuable resource of bilingual educators or former ELL students who are now positioned well to bridge gaps between both languages and cultures.

Rural Early Childhood Development and Education: Issues and Opportunities

As shifts in American politics cause uncertainty for many, focus on the importance of educational access and equity for young children must remain at the forefront of the nation's education agenda. In recent years, early childhood education and early care initiatives received much needed attention in the national conversation about education. With former President Obama's Preschool for All initiative, new Head Start performance standards, and consideration for early childhood education in the *Every Student Succeeds Act* (ESSA), seeing attention focused on the importance of education in the early years is heartening. However, while children in rural areas will benefit from these new initiatives, many children, especially those in impoverished rural areas, face continued challenges that require ongoing advocacy. In particular, rising levels of rural poverty, parent heroin/opiate abuse, and food insecurity are impacting children in large swaths of midwestern, southeastern, southwestern, and rural Appalachian areas. Across rural locales, children in the primary grades encounter mounting accountability measures, with grade promotion sometimes tied to standardized testing scores. Given the challenge of recruiting and retaining qualified teachers in rural areas and coupled with ESSA's questionable support of alternative licensure programs for early childhood education teachers, the need for qualified and well-trained early childhood educators also remains a topic of concern. These challenges and others require immediate attention on both state and national levels and create important needs for rurally located parents/caregivers and other educational stakeholders.

Early Childhood Education (ECE) refers specifically to the time of rapid growth and development during the ages of 3 to 8.[lxxxv] Children in this age group are characterized by their curiosity about the world around them and desire to be actively engaged in learning experiences. Also of importance in the study of young children is infant/toddler development, which represents birth to age 2. In this portion of WRM, we highlight the positive changes in educational opportunities for young rurally located children and illuminate the new and continued challenges facing early childhood educational stakeholders in rural areas. Several current developments in rural early education and development impact children across the early childhood spectrum of birth-age 8, while others specifically relate to children birth-age 5 or school-aged children (ages 5–8).

Developments Across the Early Childhood Age Spectrum

Federal Policy - Every Student Succeeds Act

In most incarnations of the *Elementary and Secondary Education Act* (ESEA) that have existed, early childhood education initiatives have not been a major focus or concern for policy makers. With *No Child Left Behind* (NCLB), the majority of federal incentives were aimed primarily at grades three and above, so that essentially most federally supported programs left early childhood educators and children underserved.[lxxxvi] Encouragingly, the importance of early years education is better recognized in ESSA and allows funding of Title 1 programing before kindergarten, funding to train early childhood teachers, and $250 million in funding for Preschool Development Grants (for low-income families). Additionally, ESSA gives the means of assessing students on standardized tests to individual states, abolishes Adequate Yearly Progress (AYP) reports, and allows teachers to create their own assessments that cater to the

needs of their students and perhaps even individualize the tests in the case of rural schools.[lxxxvii] ESSA also requires states to explicitly address K-3 programs and how funds will be allocated to meet local needs.[lxxxviii] However, although this option is available, ESSA does not require states to allocate Title I funds to early childhood. ESSA expands available programs that focus on underserved populations (some of them rural), such as those in Alaska and among Native American populations. The fact that report cards from states will need to include preschool and other early childhood initiatives in ESSA shows that early childhood and K-3 programs seem poised to experience more growth and support in the future. Finally, although recognition of the importance of early years education seems to be making headway with policy makers, the majority of ESSA funding went to K-12 initiatives, and uncertainty about funding of initiatives in rural early childhood education remains.

Additional caution must also be observed in the proposals ESSA makes regarding early childhood teacher preparation. The Bureau of Labor Statistics currently predicts that early childhood preschool career opportunities will grow at expected measures of 7% between 2014-2024,[lxxxix] highlighting the need to promote quality early childhood teacher preparation programs. Under Title II funding, ESSA allows states to establish independent teacher-preparation academies, which will allow attendees to obtain a teaching certificate equivalent to a master's degree.[xc] As teacher academies have the option to lower standards found in traditional teacher preparation programs around the United States, teacher academies have the potential to weaken the quality of newly licensed early childhood educators. Rural schools struggle to attract and retain quality teachers,[xci] so while a bigger pool of available early childhood teachers may seem like a winning situation for rural areas, young children in rural schools need well-prepared teachers, not teachers who obtained quick and easy licensure. In a reaction to the allocation of Title II funding, it has been suggested that teacher educators should work to develop partnerships that foster collaboration between teacher educators, schools, professional associations, and community members that support the development of teachers who have the content, pedagogical, and cultural knowledge necessary to meet the needs of a community's young children.[xcii] Within the close-knit confines of a rural community, this message of collaboration and cultural understanding is particularly relevant and meaningful. Consequently, in regards to ESSA's implications, stakeholders in rural areas need to continue advocating for the importance of providing quality educational experiences for young children and for rigorous educational systems that prepare well trained early childhood teachers.

Economic and Social Disparity

Poverty. Due to scarcity of jobs, physical isolation, and accessibility issues related to lack of transportation services, rural areas are particularly susceptible to high levels of poverty.[xciii] In 2016, young child poverty rates in rural areas remained concerningly high, with 28.7 percent of rurally located children under the age of six living in poverty as compared to 23.1 percent of young children in urban areas. Child poverty is persistently concentrated in rural southern coastal regions (North Carolina, South Carolina, and Georgia), the rural south (Mississippi, Alabama, and Arkansas), throughout rural midwestern Appalachia (in particular Ohio, West Virginia, and Kentucky), in the rural southwest (Arizona and New Mexico), and in rural areas of Alaska.[xciv] Especially worrisome, deep poverty (defined as having cash income that is below half of a person's poverty threshold) is highest among rurally located children.[xcv] Children who grow up in persistent poverty experience a host of risk factors, including developmental and

health concerns, circumstances that accessibility barriers in rural areas often exacerbate.[xcvi] High levels of poverty put children at greater risk of child maltreatment[xcvii] and increased chance of experiencing food insecurity,[xcviii] while also creating limitations in accessing both health and educational intervention services.[xcix,c] These issues should continue to shape policy conversations and decisions about the development and education of young children in rural areas.

Immigrant and Undocumented Children. Plyler v. Doe[ci] requires that all children, immigrant and/or undocumented, have the right to a publicly funded education in the United States, yet, research suggests that immigrant and undocumented children face unique challenges that directly impact their educational outcomes.[cii] Specific challenges relate to effective and timely school enrollment and anxiety caused by fears of deportation or loss of family members due to deportation. Although the exact number of undocumented children living in the United States is difficult to discern, the number is estimated to be close to 770,000.[ciii] The number of unauthorized adults is estimated to be approximately 12 million, of which 50% live with children under the age of 18.[civ] As undocumented immigrants make up a large percentage of the workforce in some rurally located industries, such as farms and meat packing plants, immigrant and unauthorized children are attending rural schools in significant numbers in some rural areas.[cv] Barriers to enrollment in school for undocumented young children include: 1) Being required to provide particular paperwork, such as proof of residence and guardianship; 2) Schools failing to enroll undocumented children who are homeless; 3) Reluctance to enroll children during state testing windows; and, 4) Communication challenges related to language barriers.[cvi] Immigrant and undocumented children in rural areas also face a lack of community resources to aid in addressing educational challenges such as language.[cvii] Finally, research reveals undocumented children live with debilitating fear of their own deportation, and, even for children who are US citizens, the fear that an undocumented adult family member may be deported is a real and constant source of anxiety.[cviii] In light of the current political climate related to both immigrants and undocumented people living in the United States, child advocates in rural settings must work to help overcome enrollment barriers and strive to ensure that the needs of all young children, no matter their citizenship status, have access to quality educational experiences.

Adverse Early Experiences

Opiate/Heroin Abuse. The number of adults in rural areas who are impacted by heroin and/or prescription drug abuse continues to rise, creating alarming circumstances for young children.[cix] Of particular concern, a 2016 study reveals that the incidence of infants born with opioid drug withdrawal symptoms in rural areas continues to increase.[cx] While increases were evident in all locales, between 2003 and 2013, the rate of infants born with opioid withdrawal symptoms grew 80% faster in rural versus non-rural settings. With this increase comes an immediate need to address the development and well-being of young children who experience the consequences of parent/caregiver substance abuse.

There is a vast body of research that suggests that if parental substance abuse or addiction exists in the home, child maltreatment and poorer child outcomes are likely.[cxi,cxii,cxiii] Heroin, which creates a stronger feeling of euphoria than prescription opiates (e.g. OxyContin), is also cheaper and easier to obtain in rural areas than prescription opiates.[cxiv,cxv] While causation is unclear, it is widely known that drug abuse and poverty often exist in tandem, and that fewer economic opportunities, social isolation, mistrust of outsiders, and cultural attitudes of self-reliance contribute to cyclical poverty in many rural regions.[cxvi] A lack of drug abuse treatment infrastructure further exacerbates the traditional lack of access that exists in many rural areas.[cxvii]

As the number of parents/caregivers who struggle with drug addiction grows in rural areas, so, too, does the number of children who come to the attention of juvenile court systems due to allegations of child maltreatment,[cxviii] causing several issues related to both children's short- and long-term outcomes. Of primary concern, a plethora of research suggests that childhood trauma and maltreatment cause negative effects on a child's brain development and may hinder learning.[cxix,cxx,cxxi,cxxii,cxxiii] Specifically, children who experience childhood trauma are at greater risk for cognitive,social-emotional, and behavioral challenges.[cxxiv,cxxv] Children whose parents/caregivers have substance abuse issues are also more likely to experience substance abuse problems as adolescents and/or adults.[cxxvi] Meeting the educational needs of children born in these circumstances creates another set of challenges for rurally located educators, heightening the need for ready access to services that address the educational needs of children born with opioid dependence. Finally, of immediate concern, the increase of children in the juvenile court system is leading to a critical shortage of both foster homes and Court Appointed Special Advocates (CASAs)/Guardian Ad Litems (GALs) in rural areas, both of which are support systems designed to mitigate the effects of childhood trauma.[cxxvii,cxxviii]

Ideally, each child who enters the juvenile court system is assigned a CASA/GAL. The CASA/GAL is tasked with completing an independent investigation of the assigned case and reporting back to the Court with recommendations for continued intervention and is also responsible for ensuring that the Court's orders are followed. CASA/GALs create resiliency factors, protective measures that help to overcome risk factors that young children who experience maltreatment desperately need.[cxxix] Children who are assigned a CASA/GAL experience better outcomes and decreased risk factors associated with their parents' substance abuse.[cxxx,cxxxi] Given the current shortage of CASA/GALs in many rural communities, this is a significant concern.

For adult caregivers of young children, rural areas offer specific challenges in regards to drug treatment options that have the possibility of improving child outcomes. Slightly less than ten percent of all drug treatment facilities exist in rural communities and similar to dealing with issues of food scarcity, finding a location that offers treatment or assistance may not be within reach.[cxxxiii] Historically, research revealed that utilization of mental health services is lower in rural areas than in other locales.[cxxxiv,cxxxv] Stigma associated with drug abuse, coupled with cultural attitudes not found in urban or suburban environments, often obstructs families and their children from receiving the help they need. For example, rural populations place high value on self-reliance and may have a distrust of mental health services,[cxxxvi,cxxxvii] which prevents utilization of the few treatment options that may exist. One positive development, Family Drug Treatment Courts (FDTC) are positively impacting child outcomes in rural areas.[cxxxviii] FDTCs provide mental health and drug abuse counseling through the court system and have the ultimate goal of family reunification.[cxxxix] Additionally, although removing a child from the home where maltreatment from drug abuse is occurring is common, rural FDTCs are working to keep children connected to their families while their parents receive treatment, thereby lessening trauma associated with a home removal. With drug treatment options scarce or far away in rural areas, FDTCs serve as an additional treatment option and are resulting in successful reunification of children with their parents/caregivers. With continued concerns about opiate abuse in rural areas, treatment programs that facilitate resiliency and result in reuniting children with parents/caregivers in safe environments should be of utmost importance to rural stakeholders who care about young children's well-being.

Food Insecurity. Food insecurity, or uncertainty about the source of one's next meal, is a major concern in many rural areas.[cxl] Rural areas represent 62% of American counties with the

highest rates of child food insecurity.[cxli] With the increase of the poverty rate, the unequal and inefficient distribution of food exacerbates the already high level of food insecurity that rural families experience. Discussion of food insecurity in rural communities is underrepresented in health communication and political reform forums,[cxlii] creating a substantial challenge for rurally located young children who are food insecure.

Rural residents experience particular inconvenience related to food deserts, areas where there simply is not enough available nutritious food for individuals to live healthy lives or where access to food is limited.[cxliii] Those who experience food insecurity in urban environments struggle far less than rural environments with food deserts. In rural areas, traveling to other areas to find food is often impossible due to accessibility issues related to economics and distance. Additionally, in rural areas, healthy food options were found to be more expensive than in urban areas,[cxliv] creating significant challenges for providing adequate nutrition for young children's growth and development and also for preparing young children to learn in healthy conditions.

It is widely agreed that the solution to rural hunger lies in community ties and building social capital that creates accessibility to social networks that are sometimes lacking in rural areas.[cxlv] Schools, as essential community gathering spaces, are leading the way in combatting rural food insecurity. School feeding programs have existed for decades and, thankfully, now often include breakfast as well as lunch. What is new is the concerted effort that extended school communities (PTOs and local organizations) are making to provide food for children over weekends, holidays, and summer breaks. Particularly exciting, school-located food pantries are becoming more prevalent in rural schools.[cxlvi,cxlvii] School-based food pantries increase rural families' access to healthy food options for young children and capitalize on close community relationships to make sure the children most in need are served. Community and school gardens are another growing and promising option for rural communities to combat food insecurity and address food deserts.[cxlviii] Of particular importance, school-based food pantries and gardens that act in tandem have the opportunity to increase young children's access to healthy food while also modeling sustainable food growing practices. Programs such as these are needed in additional rural locations that face challenges related to food insecurity.

Update on Young Children (Birth – Age 5)

Breastfeeding

With its many known benefits for mothers and children, breastfeeding numbers continue to rise while public support also grows. Nationally, in the latest Breastfeeding Report Card, seventy-nine percent of mothers reported that their infants started to breastfeed, although the number who continued to breastfeed dropped to forty-nine percent at six months and declined further to twenty-seven percent at twelve months.[cxlix] Although these numbers are heartening, breastfeeding rates have been historically lowest in rural areas.[cl] The Breastfeeding Report Card also reveals that the highest rates of breastfeeding occurred in areas where mothers had access to International Board Certified Lactation Consultants (IBCLCs) and/or Certified Lactation Counselors (CLCs), suggesting that increased numbers of IBCLCs and/or CLCs have the potential to increase breastfeeding numbers in rural areas. As lactation services may be difficult to find in rural areas, efforts have been made to reach rurally located breastfeeding mothers via remote lactation consultations.[cli] However, with unreliable internet access in many rural areas, in-person lactation services are still needed to provide support to mothers in remote areas.[clii] Given the health benefits for both mother and child, increased breastfeeding support systems for mothers in

rural areas represent an important mechanism for increasing rural breastfeeding rates.

Teen Pregnancy

Teenage pregnancy rates continue to decline in the United States, and in 2014, general populace births among teenagers reached a national low 6.3% of all births.[cliii] While the declining numbers are encouraging, teen pregnancies in rural areas continue to be higher as compared to suburban and urban locations.[cliv] Also, rural areas are experiencing the slowest rates of decline (32%) as compared to teen pregnancy rates in urban (49%) and suburban (40%) locales.[clv] Within industrialized nations, the United States has higher pregnancy rates than other countries.[clvi] The reason for higher teen pregnancy levels in the United States should not be presented as a debate between abstinence education versus promoting contraception use, but rather as a symptom of the higher levels of income inequality that are found in the United States, particularly in rural areas. With this in mind, measures to lower the rates of teenage pregnancy in the United States should not focus solely on a debate between abstinence and contraceptives but should continue to address income inequality, an issue which is inextricably linked to access to quality education, affordable childcare options, and accessible and affordable healthcare providers. Recent societal trends create new challenges for teenagers' access to reproductive healthcare.[clvii] While community health centers in rural areas strive to offer quality care to young women, rurally located women face significant barriers to reproductive and contraceptive care.[clviii] With the defunding of Planned Parenthood facilities (10 states at last count) and conservative lawmakers' promise to continue cutting funding to Planned Parenthood facilities that provide contraceptive and maternity health care to teenagers, rural teenagers' access to contraceptive planning becomes more limited and strains on community health centers rise. These changes in accessibility create risks for increases in unplanned teenage pregnancies and poor maternity care. To illustrate this, the removal of Planned Parenthood from the Texas Women's Health Program was recently linked to an increase of unplanned pregnancies.[clix] Unless funding is reinstated or guaranteed at these facilities, alternative reproductive care options will be important for rurally located teenagers and their young children.

Research has shown that there is a possible link between teen pregnancy and the cognitive development of a child born to a teen mother; however, the actual cause of this negative effect on cognitive development is unclear. "Debate continues as to whether this is mediated through other factors such as perinatal morbidity, socioeconomic inequality, maternal mental health or parenting behaviors."[clx] Teenage mothers tend to have higher levels of postnatal depression, which increases the chances of decreased maternal verbal interactions. Additionally, teen mothers are both more likely to live in poverty and to cease educational pursuits.[clxi] These concerns highlight the need to provide services that increase young parents' access to educational and financial resources. In rural areas, where access to support services is often limited, concerted effort must be made to provide enhanced support in the form of child care, food assistance, and support groups with other young parents and mentors.

Home and Child Care

Emphasis on early years development and learning is cropping up in multiple arenas, especially initiatives that focus on early care opportunities for young children. Specifically, home visiting programs have been recognized as effective ways to provide early identification and intervention services for children with special needs, prevent child maltreatment cases, and promote healthy parenting.[clxii] Of note, one of these home visiting programs, the Maternal, Infant, and Early Childhood Home Visiting program, received reauthorization funding that extends programming in its current format through 2017.[clxiii] This program, found in all 50 states, provides home visits from social workers,

early childhood educators, or nurses and gives support and guidance to at-risk pregnant women and families with children ages birth-5.

More than 11 million children under the age of five are in some form of child care across the United States.[clxiv] As the importance of meaningful early learning experiences is well established, providing quality child care is imperative for the long-term development and well-being of America's young children.[clxv] Although the federal Child Care and Development Block Grant was reauthorized in 2014 and represents positive news for child care funding across the nation,[clxvi] rural communities in particular are facing child care deserts. Child care deserts are places that have limited access to quality and reliable child care.[clxvii] Impoverished rural areas have fewer commercial daycares, and many families utilize in-home, family-run child care options. However, finding home-based child care is becoming more difficult in rural areas. Between 2013 and 2014, home-based childcare options decreased by 12%. Commercial child care centers decreased by 4% at the same time, making already limited choices for child care in rural areas even scarcer.

Child care in rural areas is typically less expensive than in suburban or urban locations, however, it is still a significant financial burden for families. In all regions of the United States, the average cost for full-time infant care in a center-based facility exceeded families' average monthly budget for food,[clxviii] a concern that is especially impactful for families living at or below the poverty threshold. Without concerted effort to fund and develop rurally located child care options, access to quality and reliable child care represents a rural early childhood issue that is likely to persist.

Preschool Initiatives

Frequent mention of preschool initiatives in national news is encouraging; yet, more work to reach the nation's most underserved rural populations must continue. During the 2014-15 school year, state-funded preschools noted an increase in spending per child, more programs meeting quality standards, and an overall increase in enrollment, though 13 states reported a drop in enrollment.[clxix] In 2013, former President Obama announced the Preschool for All initiative, which proposed significant funding for preschool offerings. Since the initiative was proposed, $250 million was allocated for Preschool Development Grants as part of the Every Student Succeeds Act (ESSA), and 38 states increased their funding for preschool programs. Head Start, which serves over one million at-risk children nationwide, released new performance standards in 2016. The new Head Start standards require that Head Start center-based programs increase the duration of services provided to at least 1,020 annual hours of service by 2021, with at least 50% of programs meeting that standard by 2019.[clxx] Although these changes reflect positive gains in meeting the needs of young children, providing easy accessibility and increasing preschool enrollments in rural areas remain important goals.

The Changing Face of Early Years Education

High-stakes testing that began with NCLB continues to have a spillover effect in curricular development and instructional practice in early years educational settings.[clxxi] For example, when rural school principals in Missouri and Maine were asked about their most pressing concerns, eighty-two percent of them expressed a strong need to raise test scores.[clxxii] A perhaps more disturbing find from this survey is that only twenty four percent[clxxiii] ranked children's success in future schooling as their first priority. Play has long been known to be an essential component of developmentally appropriate educational practice for children under the age of 5.[clxxiv] Despite this, across America, early years educators find themselves faced with increased pressure to introduce literacy and math skills during the preschool years, skills that were historically expected during kindergarten or first grade and ones that frequently come at the expense of play activities that encourage free-choice exploration

and tinkering. In a recent study,[clxxv] researchers reported that academic skill building has taken center stage in kindergarten classrooms and that classroom areas devoted specifically to play dropped from eighty-seven percent in 1998 to fifty-eight percent in 2010. Although time for play is essential for preschoolers, this phenomenon continues to impact preschool programming, with greater amounts of time devoted to academic skill development in favor of free-choice, open-ended play opportunities.[clxxvi,clxxvii]

Update on School Aged Young Children (Ages 5 – 8)

Common Core State Standards

Rural areas across America are now implementing the CCSS in kindergarten-third grade classrooms, providing much needed consistency across locales but also illuminating long-standing rural concerns of access and professional development. At the time of publication of this document, 43 states were utilizing the Common Core State Standards (CCSS). Four states (Alaska, Virginia, Nebraska and Texas) have never adopted the CCSS, and within the last 24 months, three additional states (Indiana, Oklahoma, and South Carolina) withdrew their adoption of the standards. Minnesota approved adoption of the CC English-Language Arts Standards but not the standards for math. With the adoption of the CCSS in 43 states, rural areas have worked to meet new pedagogical shifts.

Although the Common Core's Standards for Mathematical Content and Standards for Mathematical Practice are not new, because of their similarities with past reform efforts by the National Council of Teachers of Mathematics,[clxxviii] the widespread adoption of the standards supports a more coherent shift towards conceptual thinking, abstract thinking, and real-world problem-solving and a move away from emphasis on procedural and skill mastery.[clxxix] In rural areas, survey data indicate that implementing new curricular initiatives often causes considerable stress and challenges.[clxxx,clxxxi] For example, researchers in the northeast conducted a regional needs assessment of rurally located math teachers to determine implementation issues related to the CCSS.[clxxxii] They found that only 56% of rural teachers felt even somewhat prepared to incorporate math CCSS into their teaching practices. The study illuminated several challenges, including decreased availability of quality instructional materials, limited opportunities for collaboration, and increased need for accessible professional development. Additionally, while fourth grade used to be a major testing year, third grade is now a year of heightened scrutiny due to high-stakes testing measures, creating specific tensions in the early elementary grades and highlighting the need for direct access to CCSS preparatory materials in rural areas. As a consequence of ongoing changes in testing and pedagogical expectations associated with the CCSS, increased availability to early childhood professional development that addresses CCSS implementation should continue throughout rural areas.

High-Stakes Testing and Third Grade Retention

Accountability measures are the norm in today's early childhood classrooms, and all states require some form of testing in the early childhood years. Testing mandates, both in NCLB and the newly adopted ESSA, place early childhood testing emphasis on third grade children, in particular on reading proficiency. In many states (at last count 14), third grade reading proficiency is also linked to grade retention, and third graders who fail to meet benchmark reading goals on state mandated criterion-referenced tests are retained in third grade.[clxxxiii] To be clear, third grade retention policies are not a requirement of NCLB (or ESSA), are not a component of the CCSS, and are not tied to federal funding. However, third grade retention policies add another layer of complexity to the pedagogical choices early childhood educators make and continue to support an early childhood culture that focuses

less on developmentally appropriate practice and more on preparing children to meet state mandated literacy benchmarks.

Research reveals why third grade children are a focal point in the discussion of early literacy. Researchers have long reported that third grade reading competency and high school graduation rates are linked,[clxxxiv] revealing that children who are competent readers in third grade are much more likely to graduate on time from high school.[clxxxv] Furthermore, children who have lived in poverty and are not proficient third grade readers are three times more likely to not graduate from high school than children who have never experienced poverty. Researchers also report that high-stakes testing causes considerable anxiety for young test takers, who report sleeplessness, physical pain, nausea, and feelings of fear and powerlessness.[clxxxvi] However, while the importance of reading competency in the third grade is evident, the use of retention policies is very much in question. Research overwhelmingly supports that retention policies do more harm than good to a child's long-term educational outcomes, with one study reporting that children who are retained between kindergarten and fifth grade are 60% less likely to graduate from high school than children from similar backgrounds.[clxxxvii] Across the elementary years, children rank a fear of grade retention on par with the death of a parent and going blind, illuminating extreme impacts on social and emotional health.[clxxxviii] So, while the need to focus on reading proficiency in the early years is clear, the efficacy of retention policy remains in serious question. Even if one believes that literacy retention policies are appropriate for young children, there are rural considerations that further highlight the risks of such policies.

Rural communities are highly connected and schools are often a hub of activity and community engagement.[clxxxix,cxc] Families and school staff know each other and the lines between home life and school life are blurred. While children in urban or suburban schools may experience some anonymity after grade retention (changing elementary schools or even attending a new district), this is unlikely for children attending rural schools. With small enrollments and few opportunities to change schools, grade retention introduces a heightened level of stigma for young children who attend rural schools. The extreme social and emotional stress that retention causes,[cxci] coupled with the interconnected nature of rural schools/communities, creates additional stressors for young children who are retained in rural schools. The impact of these policies in rural areas remains relatively unreported, but the relevance of such issues should not be underestimated or ignored by policy makers. Retention, which creates risk factors for children in all locales, carries a particularly heavy burden for young children and their teachers in rural schools.

The Value of an Integrated Curriculum

In preparation for the high-stakes tests that schools face in the early years and beyond, reading skills have become the driving focus of early childhood curricular practices. In particular, since the issuance of NCLB, time for social studies and science instruction has declined dramatically.[cxcii] One study[cxciii] found that in grades K-3, average instructional time for social studies dropped from 18 to 8 minutes/day. In another study[cxciv] 80% of K-5 teachers who were responsible for teaching science actually reported spending 60 minutes or less on science each week, and 16% reported spending no time at all on science. While math is a close second to reading in terms of dedicated instructional time, some researchers even feel that math instruction is taking too much of a backseat to literacy initiatives.[cxcv] Without question, these statistics point to major changes in the way early childhood classrooms operate and to the nature of experiences that young children receive. Additionally, these content areas are often subjects with which elementary teachers are less comfortable from the start, creating a deficit in instruction and learning that may carry on in the years after elementary school.[cxcvi]

In rural areas, this paradigm is exacerbated by limited access to places of informal learning that have the potential to support classroom learning in meaningful ways.[cxcvii,cxcviii] For example, although children's museums have the ability to provide close alignment to early learning standards, only 12% of them are located within rural communities, making this type of collaboration challenging for rurally located schools.[cxcix] One may hope that with the elimination of AYP that ESSA initiates, a shift toward a more integrated curriculum may ensue, yet the chances of this are slim due to the continuation of high-stakes testing requirements in the early years. In the meantime, rural stakeholders should continue to advocate for the need to devote instructional time to multiple content areas, embrace an integrated approach to instruction, and, where possible, foster collaborative partnerships with rurally located places of informal learning.

Relevant Early Childhood Research Resources

In *Why Rural Matters 2013-14*, we highlighted centers and programs that support early childhood education initiatives and programming. Here we provide a list of relevant early childhood research and practitioner resources that are relevant to early childhood stakeholders.

Select Scholarly Journals

Journal Name	Description
Child Development Perspectives	A multidisciplinary journal from The Society for Research in Child Development that focuses on the psychological development of young children.
Contemporary Issues in Early Childhood	An international journal that focuses on issues for young children from birth through age eight and their families.
Child Welfare Journal	A bi-monthly journal from the Child Welfare League of America that focuses its research and findings on child maltreatment and on the best practices and methods for developing compassionate child welfare programs for professionals.
Dimensions of Early Childhood	A journal from the Southern Early Childhood Association with articles that aim to increase the knowledge base of early childhood educators and families with children from birth to age eight by engaging with relevant and current issues.

Early Childhood Education Journal	A journal that analyzes issues, trends, policies, and practices for early childhood education from birth through age eight.
Early Childhood Research & Practice	A bilingual journal in English and Spanish that focuses on early childhood care and education, with emphasis on classroom dynamics, curriculum, ethics and parent participation.
Early Childhood Research Quarterly	A journal that focuses on early childhood development and education (birth to eight years old) that offers analysis of educational policy, childcare, professional development for early childhood educators and children's psychological well-being.
Early Years: An International Journal of Research and Development	A multicultural and multidisciplinary journal from the Association for Professional Development in Early Years that brings together many perspectives on early childhood education and research dealing with pedagogy, family diversity and educational policy.
Early Education and Development	A journal created in order to bridge the gap between research and practice for preschool, daycare and those who offer specialized care for young children in early childhood programs and their families.
Infant Mental Health Journal	A publication from the World Association for Infant Mental Health that deals with the social, emotional and psychological development of infants and targets issues that place infants at risk for healthy development and overall family development.
Infants & Young Children	An interdisciplinary journal created in order to provide groundbreaking intervention strategies for children perceived to be at risk for developmental delay or disorders from birth to age five.
International Journal of Early Childhood Special Education	An international journal that focuses on children with special needs from birth to eight years of age.

International Journal of Early Years Education	A journal that serves as an international forum for comparative research studies and new initiatives that aim to further the knowledge base of those who work in early childhood education world-wide.
Journal of Early Childhood Research	A tri-annual journal that focuses on young children's health, pediatrics and psychological issues coupled with articles on teaching strategies and early childhood education.
Journal of Early Childhood Teacher Education	A journal produced by the National Association for Early Childhood Teacher Education that is for the dissemination of research and practice for early childhood education.
Journal of Research in Childhood Education	A publication of the Association for Childhood Education International, this journal features research driven articles about the education of children from infancy to early adolescence.
Topics in Early Childhood Special Education	A journal that focuses on intervention strategies for infants, toddlers and preschoolers who may develop disabilities or other disorders for special education.
Journal of Early Intervention	A journal that aims to offer intervention strategies for infants, toddlers and young children at risk for developmental disorders and disabilities and special needs.
Young Children	A practitioner journal produced by the National Association for the Education of Young Children that focuses on early childhood education, providing educators with the latest research to inform their teaching practices.
Young Exceptional Children	A quarterly journal that focuses on exceptionality topics, including children with special needs and gifted education, in early childhood for educators and parents.
Zero to Three Journal	A bimonthly publication from the National Center for Infants, Toddlers, and Families created to provide up-to-date best practices for those who work with children under preschool age.

Select Research Centers

Center Name	Description
Center on the Developing Child at Harvard University	The center supports research in three areas, including Science, Intervention Strategies, and Learning Communities. The Center supports scientific research with the goal of improving educational outcomes for young children.
Crane Center for Early Childhood Research and Policy	An Ohio State University research center that conducts empirical research focused on improving children's learning and development in the home, school, and community.
Eunice Kennedy Shriver National Institute of Child Health and Human Development	The Institute supports research focused on medical advances that improve health for children and their families.
Foundation for Child Development	The foundation supports early childhood research by providing research grants in three categories: PreK-3rd grade education, Young scholars program, and Child well-being index.
Frank Porter Graham Child Development Institute	A 50-year-old center located within the University of North Carolina at Chapel Hill that conducts interdisciplinary research with the mission of improving the lives and educational outcomes of children and their families.
Institute of Education Sciences (IES)	The research branch of the U.S. Department of Education, IES provides scientific evidence on education practice and policy and seeks to share this information in formats that are useful and accessible to education stakeholders.
National Institute for Early Education Research (NIEER)	Operated within Rutgers University, NIEER conducts and communicates early childhood education research that that supports high-quality, effective educational experiences for all young children.
The Center for Early Childhood Research	This center at the University of Chicago conducts research on cognition, action, and perception in the early years of life. Research focus includes space, number, and language development.

Select Longitudinal Studies

National Longitudinal Survey of Children and Young Adults – a longitudinal project that follows the biological children of women who were enrolled in the National Longitudinal Survey of 1979. Mothers of the original cohort were born between 1957 and 1964, and assessments of their children began in 1986. Children are assessed every two years. The Children and Young Adults portion of the study has interviewed 11,512 children who are the children of mothers in the original study. In addition to birth and demographic data, the assessments measure cognitive ability, temperament, motor and social development, behavioral concerns, and self-competence of the children as well as descriptors of their home environment.

Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 (ECLS-K) – Headed by the Department of Education's National Center for Education Statistics (NCES), this study follows approximately 22,000 children from kindergarten through fifth grade. The study hopes to shed light on the importance of providing quality early care and education experiences for developing school readiness.

Final Thoughts

There is reason to be encouraged about early childhood development and education in rural areas. With interconnected communities and access to beautiful natural environments, rural areas provide many assets that support the healthy development and education of young children. On a national level, support for early childhood education is evident through approval of new Head Start performance standards, inclusion of early childhood considerations in the Every Student Succeeds Act (ESSA), and in the 2014 reauthorization of the Child Care and Development Block Grant. Additionally, former President Obama's Preschool for All initiative represented considerable support for early years education. This commitment and recognition of the importance of early years education is positive. However, while these initiatives will benefit young children in rural areas, many rurally located children and their families face continued challenges. Of immediate concern, food insecurity, parent heroin/opiate abuse, and rising levels of rural poverty must be addressed. Across rural locales, preschool enrollments remain lower than desired levels, and children in the primary grades experience increasing pressure to perform on standardized testing measures, with grade promotion sometimes tied to test scores.

Early childhood programs are supposed to serve children in some of the most impoverished and rural areas of the nation, and expansions in services have the potential to make a positive difference in the health and educational outcomes of rurally located young children and their families. Yet, commitment is needed on both state and federal levels to ensure that funding for important programs continues. To emphasize this, in December 2016, the Child Care and Early Learning Coalition, representing more than 450 child advocacy organizations nationwide, including the National Association for the Education of Young Children (NAEYC) and American Academy of Pediatrics (AAP), sent a joint letter to then President-Elect Trump imploring him to continue funding for the Child Care and Development Block Grant. Reflecting this model, continued advocacy across early childhood programs in both preschool and school-aged settings is essential for improving educational outcomes for children in rural settings. Addressing the challenges and building upon the successes outlined in this report should remain at the forefront of conversations and decision-making related to early childhood development and education.

References

[i] Barnett, W. S., Friedman-Krauss, A. H., Gomez, R. E., Horowitz, M., Weisenfeld, G. G., Clarke Brown, K. & Squires, J. H. (2016). *The State of Preschool 2015: State Preschool Yearbook.* New Brunswick, NJ: National Institute for Early Education Research. http://nieer.org/wp-content/uploads/2016/05/Yearbook_2015_rev1.pdf

[ii] These data in *Why Rural Matters 2015-16* are mainly from the 2013-2014 school year from the National Center for Education Statistics (NCES) and the U.S. Census Bureau.

[iii] The locale codes for a school district and for a school (campus or building) may be very different despite being next door to each other physically. A district may not be designated "rural" even though the school (campus or building) is. The locale code for the district is determined by where a plurality of the district's students attend school, whereas the school locale code is based on the mailing address of the school building. For example, West Virginia has county-wide school districts. Hancock County Schools, located in the panhandle, is designated "City: Small (13)" and is located in New Cumberland, WV. Weir High School, located in Weirton, WV (just 23 miles from the Pittsburgh, PA airport) and in the Hancock County School district is also designated "City: Small (13)." Yet Oak Glen High School, in New Cumberland, WV is designated "Rural: Fringe (41)" and is approximately 29 miles from the Pittsburgh, PA airport.

[iv] The NAEP results shown in the *Educational Outcomes* gauge can be found on the Nation's Report Card site (http://nces.ed.gov/nationsreportcard/), Census data on rural areas can be found on the American Community Survey site (https://www.census.gov/programs-surveys/acs/), graduation data can be found on the Department of Education's EDFacts site (http://www2.ed.gov/about/inits/ed/edfacts/index.html), data on AP coursetaking and ACT/SAT test taking can be found on the Civil Rights Data Collection site (http://ocrdata.ed.gov/) and the rest of the data can be found on the Elementary/Secondary information system site (http://nces.ed.gov/ccd/elsi/default.aspx?agree=0). These links were stable as of February 2, 2017.

[v] Gauge rankings are not calculated for states that have fewer than three of the five indicator rankings present. These instances are denoted with an asterisk and a clarifying note.

[vi] Priority rankings are not calculated for states that have fewer than four of the five indicator rankings present. These instances are denoted with an asterisk and a clarifying note.

[vii] Due to limitations with the mapping software, a state that is on the borderline between two gauge ranking categories may appear in one category on the state pages and in the other category on the gauge maps.

[viii] Special thanks go to Doug Geverdt at the National Center for Education Statistics for helping us to more precisely understand the district locale reclassifications.

[ix] Hawaii is excluded from most of the indicators throughout this report because its organization as a single statewide district makes district-level data unavailable for rural communities.

[x] The authors acknowledge the limitations and implicit bias in the term "minority." Given the absence of an agreed-upon alternative and in keeping with the term's usage by the National Center for Education Statistics and the US Census Bureau (sources of data utilized in this report), as well as the American Psychological Association's Publication Manual (the primary arbiter of writing standards for social science), we use the term here to represent students and other individuals who self-report as a race other than White.

[xi] Some districts choose to offer meal subsidies to all students, regardless of their family income. In this report, the free or reduced lunch meal eligibility is based on federal guidelines, not whether the students actually receive subsidized meals.

[xii] This indicator is not adjusted for geographic cost, which in the case of Alaska is significant.

[xiii] Vermont's ratio of $12.47 is dramatically higher than all other states (New Mexico is second highest at $4.44). The extreme value is most possibly an artifact of the way data is reported relative to Vermont's state funding system, but other data and analyses suggest that state arguably has the most equitable system of school funding in the nation (thus, although the value might be exaggerated, the ranking is most likely correct).

[xiv] Whenever a range was provided, a point estimate was created by averaging graduation rates from every school that had a point estimate within that range. For example, if a school reported a graduation rate of 75–79%, we took the average rate for all schools in the U.S. that had provided an exact rate between 75% and 79%. Certainly, some of these point estimates were too high and others were too low, but our hypothesis was that these would roughly cancel each other out. We tested our hypothesis by using this method to calculate an average graduation rate for all locales for each state and comparing these averages with the known parameters released by the Department of Education. On average, our estimates were within one or two percentage points of the actual rates. In other words, there is still likely to be some error in our rates, but they appear to be the best possible estimates given the available data.

[xv] We once again caution the reader that our estimates involved statistical interpolation due to lack of available data.

[xvi] https://nces.ed.gov/ccd/tables/ACGR_RE_and_characteristics_2013-14.asp

[xvii] Districts who did not report AP coursework data were removed from the analysis; there were also rural districts who reported data but did not offer any AP courses—these districts were left in the analysis. The rates on this indicator may be inflated slightly by rural underclassmen taking AP coursework.

[xviii] Mattern, K.D., Shaw, E.J., & Xiong, X. (2009). *The relationship between AP® exam performance and college outcomes* (College Board Research Report 2009-4). New York: The College Board.

[xix] Districts who did not report data on taking the ACT/SAT were removed from the analysis; there were also rural districts who reported data but where no students took either test—these districts were left in the analysis. The rates on this indicator may be inflated slightly by rural underclassmen taking the ACT or SAT.

[xx] At the community college level, tests such as COMPASS and ACCUPLACER are also widely used. This indicator is a better proxy for 4-year college readiness.

[xxi] https://www.whitehouse.gov/the-press-office/2015/12/03/fact-sheet-congress-acts-fix-no-child-left-behind

[xxii] Note here that the requirements utilize the older metro-centric locale code system rather than the newer urban-centric locale code system. Further explanation/elaboration is provided later in this section of the report.

[xxiii] Our use of the term 'post-secondary choices' is not intended to be synonymous with 'post-secondary education.' Indeed, we would do well to recognize the many respectable choices that students make after completing secondary education. The vast majority of treatments of the idea of post-secondary decision-making are framed around higher education pursuits. A rarer and insightful case study of rural students who make positive choices not to pursue post-secondary education can be found in Burnell, B. A. (2003). The "real world" aspirations of work-bound rural students. *Journal of Research in Rural Education, 18*(2), 104–113. We would propose that STEM preparation informs students post-secondary pathways in important ways regardless of whether or not those pathways involve post-secondary education, a career, family life, farming, or other pursuits.

[xxiv] Z.A. Barley and N. Brigham, Preparing teachers to teach in rural schools (Issues & Answers Report, REL 2008–No. 045), Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Central, 2008.

[xxv] Cross, F. (2016). *Teacher shortage areas nationwide listing 1990-1991 through 2016-2017.* U.S. Department of Education Office of Postsecondary Education.

[xxvi] This is one of many examples of an issue shared by all locale types, but finding salience or "magnification" in rural locales.)

[xxvii] National Center for Education Statistics (2012). *2011-12 Schools and Staffing Survey.* Retrieved from https://nces.ed.gov/surveys/sass/

[xxviii] Ingersoll, R., & Merrill, L. (2010). Who's teaching our children? *Educational Leadership, 67*(8), 14–20.

[xxix] See p. 19 of Goodpaster, K. P., Adedokun, O. A., & Weaver, G. C. (2012). Teachers' Perceptions of Rural STEM Teaching: Implications for Rural Teacher Retention. *Rural Educator, 33*(3), 9-22.

[xxx] Monk, D.H. (2007). Recruiting and retaining high-quality teachers in rural areas. *Future of Children, 17*, 155-174. Retrieved from http://files.eric.ed.gov/fulltext/EJ795884.pdf

[xxxi] John W. Sipple and Brian O. Brent. (2015) "Challenges and strategies associated with rural school settings." pp. 607-622 in Helen F. Ladd and Margaret E. Goertz (Eds.) *Handbook of research in education finance and policy*, 2e. New York: Association for Education Finance and Policy (AEFP).

[xxxii] Howley, C. B., Showalter, D., Klein, R., Sturgill, D. J., & Smith, M. A. (2013). Rural math talent, now and then. *Roeper Review, 35*(2), 102–114.

[xxxiii] Google. (2015). Searching for computer science: Access and barriers in U.S. K-12 education. Retrieved from http://services.google.com/fh/files/misc/searching-for-computer-science_report.pdf

[xxxiv] Howley, A., Showalter, D., Howley, M. D., Howley, C. B., Klein, R., & Johnson, J. (2011). Challenges for place-based mathematics pedagogy in rural schools and communities in the United States. *Children, Youth and Environments, 21*(1), 101-127.

[xxxv] Gallup. *Great Jobs, Great Lives*: e 2014 Gallup-Purdue Index Report (2014).

[xxxvi] Carnegie Science Center. (2014). *Work to do: The role of STEM education in improving the Tristate region's workforce.* Retrieved from http://www.carnegiesciencecenter.org/csc_content/stemcenter/

[xxxvii] Change the Equation. (2016). *Vital signs: Reports on the condition of STEM learning in the U.S.* Retrieved from http://changetheequation.org/

[xxxviii] See http://www.rmepva.com/

[xxxix] See https://www.congress.gov/bill/114th-congress/senate-bill/402

[xl] See https://gtri.gatech.edu/casestudy/GTRI-stem-outreach-georgia-tech-next-generation-scientists

[xli] 2010–2014 American Community Survey 5-Year Estimates

[xlii] Greenberg Motamedi, J., Singh, M., & Thompson, K. D. (2016). *English learner student characteristics and time to reclassification: An example from Washington state (REL 2016– 128).* Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northwest. Retrieved from http://ies.ed.gov/ncee/edlabs

[xliii] Kreck, C. (2014). *English language learners in rural schools*. Education Commission of the States. Retrieved from http://www.ecs.org/clearinghouse/01/15/59/11559.pdf

[xliv] Field, R. (2016). *Keeping pace in suburbia and rural America: Teaching English language learners is a novel challenge to school districts in some unlikely places*. The School Superintendents Association. Retrieved from http://www.aasa.org/schooladministratorarticle.aspx?id=4142

[xlv] Farmer, T. W., Hall, C. M., Weiss, M. P., Petrin, R. A., Meece, J. L., & Moohr, M. (2011). The school adjustment of rural adolescents with and without disabilities: Variable and person-centered approaches. *Journal of Child and Family Studies, 20*, 78–88.

[xlvi] Farmer, T. W., Hall, C. M., Weiss, M. P., Petrin, R. A., Meece, J. L., & Moohr, M. (2011). The school adjustment of rural adolescents with and without disabilities: Variable and person-centered approaches. *Journal of Child and Family Studies, 20*, 78–88.

[xlvii] Hansen-Thomas, H., Richins, L. G., Kakkar, K., & Okeyo, C. (2016). I do not feel I am properly trained to help them! Rural teachers' perceptions of challenges and needs with English-language learners. *Professional Development in Education, 42*(2), 308–324.

[xlviii] Twyman, T., Ketterlin-Geller, L. R., McCoy, J. D., & Tindal, G. (2003). Effects of concept-based instruction on an English language learner in a rural school: A descriptive case study. *Bilingual Research Journal, 27*(2), 259–274.

[xlix] Hansen-Thomas, H., Richins, L. G., Kakkar, K., & Okeyo, C. (2016). I do not feel I am properly trained to help them! Rural teachers' perceptions of challenges and needs with English-language learners. *Professional Development in Education, 42*(2), 308–324.

[l] Barley, Z. A., & Wegner, S. (2010). An examination of the provision of supplemental educational services in nine rural schools. *Journal of Research in Rural Education, 25*(5).

[li] Good, M. E., Masewicz, S., & Vogel, L. (2010). Latino English language learners: Bridging achievement and cultural gaps between schools and families. *Journal of Latinos and Education, 9*(4), 321–339.

[lii] Hansen-Thomas, H., Richins, L. G., Kakkar, K., & Okeyo, C. (2016). I do not feel I am properly trained to help them! Rural teachers' perceptions of challenges and needs with English-language learners. *Professional Development in Education, 42*(2), 308–324.

[liii] Good, M. E., Masewicz, S., & Vogel, L. (2010). Latino English language learners: Bridging achievement and cultural gaps between schools and families. *Journal of Latinos and Education, 9*(4), 321–339.

[liv] Perea, S. (2004). *The New America: The America of the moo shoo burrito.* Denver, CO: HIS Ministries.

[lv] Barley, Z. A., & Wegner, S. (2010). An examination of the provision of supplemental educational services in nine rural schools. *Journal of Research in Rural Education, 25*(5).

[lvi] Good, M. E., Masewicz, S., & Vogel, L. (2010). Latino English language learners: Bridging achievement and cultural gaps between schools and families. *Journal of Latinos and Education, 9*(4), 321–339.

[lvii] Good, M. E., Masewicz, S., & Vogel, L. (2010). Latino English language learners: Bridging achievement and cultural gaps between schools and families. *Journal of Latinos and Education, 9*(4), 321–339.

[lviii] Robertson, K. (2014). *Bilingual family night for ELL families.* Color in Colorado. Retrieved from http://www.colorincolorado.org/article/bilingual-family-night-ell-families United States Department of Education. (2004). Title III — Language Instruction for Limited English Proficient and Immigrant Students. Retrieved from http://www2.ed.gov/policy/elsec/leg/esea02/pg39.html

[lix] ED (U.S. Department of Education). (2004). *Title III: English Language Acquisition, Language Enhancement, and Academic Achievement Act.*

[lx] Flynn, K. & Hill J. (2005). English language learners: A growing population. *Mid-Continent Research for Education and Learning*. Retrieved from http://www.inet-migrant.org/resources/2013/educational/policyBrief_ELL.pdf

[lxi] Kreck, C. (2014). *English language learners in rural schools.* Education Commission of the States. Retrieved from http://www.ecs.org/clearinghouse/01/15/59/11559.pdf

[lxii] Consentino de Cohen, C., Deterding, N., & Clewell, B.C. (2005). *Who's left behind? Immigrant children in high and low LEP schools.* Washington, D.C., The Urban Institute.

[lxiii] Edstam, T., Walker, C., & Stone, K. (2007). Educating English language learners in a rural district: A case in point. *Minnesota and Wisconsin Teachers of English to Speakers of Other Languages.* Retrieved from the University of Minnesota Digital Conservancy, http://purl.umn.edu/109976.

[lxiv] Consentino de Cohen, C., Deterding, N., & Clewell, B.C. (2005). *Who's left behind? Immigrant children in high and low LEP schools.* Washington, D.C., The Urban Institute.

[lxv] Edstam, T., Walker, C., & Stone, K. (2007). Educating English language learners in a rural district: A case in point. *Minnesota and Wisconsin Teachers of English to Speakers of Other Languages*. Retrieved from the University of Minnesota Digital Conservancy, http://purl.umn.edu/109976.

[lxvi] Hansen-Thomas, H., Richins, L. G., Kakkar, K., & Okeyo, C. (2016). I do not feel I am properly trained to help them! Rural teachers' perceptions of challenges and needs with English-language learners. *Professional Development in Education, 42*(2), 308–324.

[lxvii] Conroy, P. W., Rude, H., & Phillips, J. S. (2006). Rural challenges to educating English language learners with visual impairments. *Rural Special Education Quarterly, 2*5(4).

[lxviii] Good, M. E., Masewicz, S., & Vogel, L. (2010). Latino English language learners: Bridging achievement and cultural gaps between schools and families. *Journal of Latinos and education, 9*(4), 321–339.

[lxix] Hansen-Thomas, H., Richins, L. G., Kakkar, K., & Okeyo, C. (2016). I do not feel I am properly trained to help them! Rural teachers' perceptions of challenges and needs with English-language learners. *Professional Development in Education, 42*(2), 308–324.

[lxx] Farmer, T. W., Hall, C. M., Weiss, M. P., Petrin, R. A., Meece, J. L., & Moohr, M. (2011). The school adjustment of rural adolescents with and without disabilities: Variable and person-centered approaches. *Journal of Child and Family Studies, 20,* 78–88.

[lxxi] Hansen-Thomas, H., Richins, L. G., Kakkar, K., & Okeyo, C. (2016). I do not feel I am properly trained to help them! Rural teachers' perceptions of challenges and needs with English-language learners. *Professional Development in Education, 42*(2), 308–324.

[lxxii] Good, M. E., Masewicz, S., & Vogel, L. (2010). Latino English language learners: Bridging achievement and cultural gaps between schools and families. *Journal of Latinos and Education, 9*(4), 321–339.

[lxxiii] Rodriguez, D., Manner, J., & Darcy, S. (2010). Evolution of teacher perceptions regarding effective instruction for English language learners. *Journal of Hispanic Higher Education, 9*(2), 130–144.

[lxxiv] Hansen-Thomas, H., Richins, L. G., Kakkar, K., & Okeyo, C. (2016). I do not feel I am properly trained to help them! Rural teachers' perceptions of challenges and needs with English-language learners. *Professional Development in Education, 42*(2), 308–324.

[lxxv] Marrs, H., & Eccles, D. (2009). Assessment of limited English proficient students in a rural Midwestern state. *Rural Special Education Quarterly, 28*(2), 22–31.

[lxxvi] Barley, Z. A., & Wegner, S. (2010). An examination of the provision of supplemental educational services in nine rural schools. *Journal of Research in Rural Education, 25*(5).

[lxxvii] Kreck, C. (2014). English language learners in rural schools. Education Commission of the States. Retrieved from http://www.ecs.org/clearinghouse/01/15/59/11559.pdf

[lxxviii] Chance, P. L., & Segura. S. N. (2009). A rural high school's collaborative approach to school improvement. *Journal of Research in Rural Education, 24*(5).

[lxix] Masumoto, M., & Brown-Welty, S. (2009). Case study of leadership practices and school-community interrelationships in high-performing, high-poverty, rural California high schools. *Journal of Research in Rural Education, 24*(9).

[lxxx] Flynn, K. & Hill J. (2005). English language learners: A growing population. *Mid-Continent Research for Education and Learning*. Retrieved from http://www.inet-migrant.org/resources/2013/educational/policyBrief_ELL.pdf

[lxxxi] Baker, E. L., Barton, P. E., Darling-Hammond, L., Haertel, E., Ladd, H. F., Linn, R. L., & ... Economic Policy, I. (2010). Problems with the Use of Student Test Scores to Evaluate Teachers. EPI Briefing Paper #278. *Economic Policy Institute.*

[lxxxii] Good, M. E., Masewicz, S., & Vogel, L. (2010). Latino English language learners: Bridging achievement and cultural gaps between schools and families. *Journal of Latinos and Education, 9*(4), 321–339.

[lxxxiii] Edstam, T., Walker, C., & Stone, K. (2007). Educating English language learners in a rural district: A case in point. *Minnesota and Wisconsin Teachers of English to Speakers of Other Languages.* Retrieved from the University of Minnesota Digital Conservancy, http://purl.umn.edu/109976.

[lxxxiv] Baker, E. L., Barton, P. E., Darling-Hammond, L., Haertel, E., Ladd, H. F., Linn, R. L., & ... Economic Policy, I. (2010). Problems with the Use of Student Test Scores to Evaluate Teachers. EPI Briefing Paper #278. *Economic Policy Institute.*

[lxxxv] Morrison, G. (2015). *Early Childhood Education Today.* Boston: Pearson Higher Education.

[lxxxvi] Bornfreund, L. & Williams, C. P. (2015). Moving young learners forward: How to fix No Child Left Behind. *New American Foundation*, 1-24. Retrieved from http://files.eric.ed.gov/fulltext/ED558752.pdf

[lxxxvii] United States Department of Education. (2016). *Transitioning to the every student succeeds act (ESSA): Frequently asked questions*. Retrieved from http://www2.ed.gov/policy/elsec/leg/essa/faq/essa-faqs.pdf

[lxxxviii] First Five Years Fund. (2016). *Analysis: Early learning provisions of the every child succeeds act.* Retrieved from http://ffyf.org/resources/eceinessa2015/

[lxxxix] Bureau of Labor Statistics. (2015). *Occupational outlook handbook*. United States Department of Labor. Retrieved from http://www.bls.gov/ooh/education-training-and-library/preschool-teachers.htm

[xc] American Federation of Teachers. (n.d.). *Teacher prep in the every student succeeds act.* Retrieved from http://www.aft.org/sites/default/files/essa_teacher-prep.pdf

[xci] Monk, D. H. (2007). Recruiting and retaining high-quality teachers in rural areas. *Future of Children*, 17, 155-174. Retrieved from http://files.eric.ed.gov/fulltext/EJ795884.pdf

[xcii] Zeichner, K. (2016). Member voices: Bringing teacher educators to the ESSA implementation table. *EdPrepMatters.* Retrieved from http://edprepmatters.net/2016/01/member-voices-bringing-teacher-educators-to-the-essa-implementation-table/

[xciii] Farrigan, T. (2015). *Rural poverty & well-being*. United States Department of Agriculture. Retrieved from http://www.ers.usda.gov/topics/rural-economy-population/rural-poverty-well-being/child-poverty.aspx

[xciv] Appalachian Regional Commission. (2013). *Poverty rates in Appalachia.* Retrieved from http://www.arc.gov/research/MapsofAppalachia.asp?MAP_ID=114

[xcv] Farrigan, T. (2014). *Poverty and deep poverty increasing in rural America.* United States Department of Agriculture. Retrieved from https://www.ers.usda.gov/amber-waves/2014/march/poverty-and-deep-poverty-increasing-in-rural-america/

[xcvi] Farrigan, T. (2015). *Rural poverty & well-being.* United States Department of Agriculture. Retrieved from http://www.ers.usda.gov/topics/rural-economy-population/rural-poverty-well-being/child-poverty.aspx

[xcvii] Gustafsson, H. & Cox, M. (2016). Intimate partner violence in rural low-income families: Correlates and change in prevalence over the first 5 years of a child's life. *Journal of Family Violence, 31*, 49-60. doi:10.1007/s10896-015-9760-4

[xcviii] Feeding America (2016). *Rural hunger facts*. Retrieved from http://www.feedingamerica.org/hunger-in-america/impact-of-hunger/rural-hunger/rural-hunger-fact-sheet.html.

[xcix] Child Welfare Information Gateway. (2015). *Understanding the effects of maltreatment on brain development*. Washington, DC: U.S. Department of Health and Human Services, Children's Bureau. Retrieved from http://www.childwelfare.gov/pubs/issue-briefs/brain-development

[c] Macinko, J., Shi, L., Starfield, B., Wulu, JT. (2003). Income inequality and health: a critical review of the literature. *Medical Care Research Review, 60*, 407-452. doi: 10.1177/1077558703257169

[ci] Plyler v. Doe, 457 U.S. 202 (1982).

[cii] Booi, Z., Callahan, C., Fugere, G., Harris, M., Hughes, A., Kramarczuk, A., … Swaminathan, S. (2016). *Ensuring every undocumented student succeeds: A report on access to public education for undocumented children*. Retrieved from http://www.law.georgetown.edu/academics/centers-institutes/human-rights-institute/events/upload/2015-16-HRI-Fact-Finding-Report.PDF

[ciii] Passel, J., Cohn, D., Krogstad, J., & Gonzalez-Barrera. (2014). As growth stalls, unauthorized immigrant population becomes more settled. *Pew Research Center*. Retrieved from http://www.pewhispanic.org/2014/09/03/as-growth-stalls-unauthorized-immigrant-population-becomes-more-settled/

[civ] American Immigration Council. (2014). *Unauthorized immigrants today: A demographic profile*. Retrieved from https://americanimmigrationcouncil.org/research/unauthorized-immigrants-today

[cv] United States Department of Agriculture. (2016). *Immigration and the rural workforce.* Retrieved from https://www.ers.usda.gov/topics/in-the-news/immigration-and-the-rural-workforce.aspx

[cvi] Booi, Z., Callahan, C., Fugere, G., Harris, M., Hughes, A., Kramarczuk, A., … Swaminathan, S. (2016). *Ensuring every undocumented student succeeds: A report on access to public education for undocumented children*. Retrieved from http://www.law.georgetown.edu/academics/centers-institutes/human-rights-institute/events/upload/2015-16-HRI-Fact-Finding-Report.PDF

[cvii] Gonzalez, R. & Ruiz, A. (2014). Dreaming beyond the fields: Undocumented youth, rural realities and a constellation of disadvantage. *Latino Studies. 12*, 194-216. doi: 10.1057/lst.2014.23

[cviii] Dreby, J. (2012). The burden of deportation on children in Mexican immigrant families. *Journal of Marriage and Families. 74*, 829-845. doi: 10.1111/j.1741-3737.2012.00989.x

[cix] Cicero, T. J., & Kuehn, B. M. (2014). Driven by prescription drug abuse, heroin use increases among suburban and rural whites. *JAMA: Journal of the American Medical Association, 312*, 118-119. doi:10.1001/jama.2014.7404

[cx] Villapiano, N., Winkelman, T., Kozhimannil, K., Davis, M., & Patrick, S. (2016). Rural and urban differences in neonatal abstinence syndrome and maternal opioid use, 2004 to 2013. *JAMA Pediatrics*. Published online December 12, 2016. doi:10.1001/jamapediatrics.2016.3750

[cxi] Dubowitz, H., Kim, J., Black, M. M., Weisbart, C., Semiatin, J., & Magder, L. S. (2011). Identifying children at high risk for a child maltreatment report. *Child Abuse & Neglect, 35*, 96–104. doi: 10.1016/j.chiabu.2010.09.003

[cxii] Taplin, S., & Mattick, R. P. (2015). The nature and extent of child protection involvement among heroin-using mothers in treatment: High rates of reports, removals at birth and children in care. *Drug & Alcohol Review, 34*, 31-37. doi: 10.1111/dar.12165

[cxiii] Wells, K. (2009). Substance abuse and child maltreatment. *The Pediatric Clinics of North America, 56*, 345–362. doi: 10.1016/j.pcl.2009.01.006

[cxiv] Beattie-Moss, M. (2015). Probing question: What is behind America's heroin epidemic? *Penn State News*. Retrieved from http://news.psu.edu/story/375720/2015/10/19/research/probing-question-what-behind-americas-heroin-epidemic

[cxv] Cicero, T. J., & Kuehn, B. M. (2014). Driven by prescription drug abuse, heroin use increases among suburban and rural whites. *JAMA: Journal of the American Medical Association, 312*, 118-119. doi:10.1001/jama.2014.7404

[cxvi] Hall, M., Huebner, R., Sears, J., Posze, L., Willauer, T., Oliver, J., (2015). Sobriety treatment and recovery teams in rural Appalachia: Implementation and outcomes. *Child Welfare, 94*, 119-138. Retrieved from https://www.ebscohost.com

[cxvii] Lenardson, J., & Gale, J. A. (2008). Distribution of substance abuse treatment facilities across the rural–urban continuum. *Maine Rural Health Research Center*. Retrieved from http://muskie.usm.maine.edu/Publications/rural/wp35b.pdf

[cxviii] Kamp, J. & Campo-Flores, A. (2016). Parents' drug abuse strains child-welfare agencies. *The Wall Street Journal*. Retrieved from http://www.wsj.com/articles/parents-drug-abuse-strains-child-welfare-agencies-1452538476

[cxix] Child Welfare Information Gateway. (2015). *Understanding the effects of maltreatment on brain development.* Washington, DC: U.S. Department of Health and Human Services, Children's Bureau. Retrieved from http://www.childwelfare.gov/pubs/issue-briefs/brain-development

[cxx] Dubowitz, H., Kim, J., Black, M. M., Weisbart, C., Semiatin, J., & Magder, L. S. (2011). Identifying children at high risk for a child maltreatment report. *Child Abuse & Neglect, 35*, 96–104. doi: 10.1016/j.chiabu.2010.09.003

[cxxi] Ondersma, S. J. (2002). Predictors of neglect within low-SES families: The importance of substance abuse. *American Journal of Orthopsychiatry, 72*, 383–391. doi: 10.1037//0002- 9432.72.3.383

[cxxii] Taplin, S., & Mattick, R. P. (2015). The nature and extent of child protection involvement among heroin-using mothers in treatment: High rates of reports, removals at birth and children in care. *Drug & Alcohol Review, 34*, 31-37. doi: 10.1111/dar.12165

[cxxiii] Wells, K. (2009). Substance abuse and child maltreatment. *The Pediatric Clinics of North America, 56*, 345–362. doi: 10.1016/j.pcl.2009.01.006

[cxxiv] Center on the Developing Child. (2010). *The foundations of lifelong health are built in early childhood*. Retrieved from www.developingchild.harvard.edu

[cxxv] Hardin, B. J. (2015). *Services for Families of Infants and Toddlers Experiencing Trauma: A Research-to-Practice Brief.* Brief prepared for the Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services. Retrieved from https://www.acf.hhs.gov/sites/default/files/opre/opre_nitr_brief_v07_508_2.pdf

[cxxvi] American Academy of Experts in Traumatic Stress. (2014). *Effects of parental substance abuse on children and families.* Retrieved from http://www.aaets.org/article230.htm

[cxxvii] Davis, W. (2014). Strategies for Rural Drug Courts. National CASA: Seattle, WA. Retrieved from http://www.casaforchildren.org/site/c.mtJSJ7MPIsE/b.9167997/k.F769/JP8_Davis.htm

[cxxviii] Kamp, J. & Campo-Flores, A. (2016). Parents' drug abuse strains child-welfare agencies. *The Wall Street Journal*. Retrieved from http://www.wsj.com/articles/parents-drug-abuse-strains-child-welfare-agencies-1452538476

[cxxix] Waxman, H. C., Houston, W. R., Profilet, S. M., & Sanchez, B. (2009). The long-term effects of the Houston Child Advocates, Inc. program on children and family outcomes. *Child Welfare, 88*, 25-48. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/20695290

[cxxx] Hartman, S., Stotts, J., Ottley, J., & Miller, R. (2016). School-community partnerships in rural settings: Facilitating positive outcomes for young children who experience maltreatment. *Early Childhood Education Journal*. Online First. doi: 10.1007/s10643-016-0796-8

[cxxxi] Weisz, V., & Thai, N. (2003). The court-appointed special advocate (CASA) program: Bringing information to child abuse & neglect cases. *Child Maltreatment, 8*, 204-210. doi:10.1177/1077559503254140

[cxxxii] Lenardson, J., & Gale, J. A. (2008). Distribution of substance abuse treatment facilities across the rural–urban continuum. *Maine Rural Health Research Center.* Retrieved from http://muskie.usm.maine.edu/Publications/rural/wp35b.pdf

[cxxxiii] Pollock, M. & Green, S., (2015). Effects of a rural family drug treatment court collaborative on child welfare outcomes: Comparison using propensity score analysis. *Child Welfare, 94*, 139-159. Retrieved from https://www.ebscohost.com

[cxxxiv] Hoyt, D., Conger, R., Valde, J., Weihs. (1997) Psychological distress and help seeking in rural America. *American Journal of Community Psychology, 25*, 449-470. doi: 10.1023/A:1024655521619

[cxxxv] Rost, K., Fortney, J., Fischer, E., & Smith, J. (2002). Use, quality, and outcomes of care for mental health: The rural perspective. *Medical Care Research and Review, 59*, 231-265. doi: 10.1177/107755870205900301

[cxxxvi] Coward, R. T., DeWeaver, K. L., Schmidt, F. E., & Jackson, R. W. (1983). Distinctive features of rural environments: A frame of reference for mental health practice. *International Journal of Mental Health, 12*, 3-24. doi:10.1080/00207411.1983.11448933

[cxxxvii] Hoyt, D., Conger, R., Valde, J., Weihs. (1997) Psychological distress and help seeking in rural America. *American Journal of Community Psychology, 25*, 449-470. doi: 10.1023/A:1024655521619

[cxxxviii] Davis, W. (2014). Strategies for Rural Drug Courts. National CASA: Seattle, WA. Retrieved from http://www.casaforchildren.org/site/c.mtJSJ7MPIsE/b.9167997/k.F769/JP8_Davis.htm

[cxxxix] Marlowe, D. & Carey, S. (2012). *Research update on family drug courts*. National Association of Drug Court Professionals. Retrieved from http://www.nadcp.org/sites/default/files/nadcp/Reseach%20Update%20on%20Family%20Drug%20Courts%20-%20NADCP.pdf

[cxl] Whitley, S. (2013). Changing times in rural America: Food assistance and food insecurity in food deserts. *Journal of Family Social Work, 16*, 36-52. doi:10.1080/10522158.2012.736080

[cxli] Feeding America (2016). *Rural hunger facts*. Retrieved from http://www.feedingamerica.org/hunger-in-america/impact-of-hunger/rural-hunger/rural-hunger-fact-sheet.html.

[cxlii] Ramadurai, V., Sharf, B. F., & Sharkey, J. R. (2012). Rural food insecurity in the United States as an overlooked site of struggle in health communication. *Health Communication, 27*, 794-805. doi: 10.1080/10410236.2011.647620

[cxliii] Mader, E., & Busse, H. (2011). Hungry in the heartland: Using community food systems as a strategy to reduce rural food deserts. *Journal of Hunger & Environmental Nutrition, 6*, 45-53. doi:10.1080/19320248.2011.549377

[cxliv] Hardin-Fanning, F., & Rayens, M. K. (2015). Food cost disparities in rural communities. *Health Promotion Practice, 16*, 383-391. doi:10.1177/1524839914554454

[cxlv] Ramadurai, V., Sharf, B. F., & Sharkey, J. R. (2012). Rural food insecurity in the United States as an overlooked site of struggle in health communication. *Health Communication, 27*, 794-805. doi: 10.1080/10410236.2011.647620

[cxlvi] Feeding America. (2016). *School pantry program*. Retrieved from http://www.feedingamerica.org/about-us/helping-families-in-need/school-pantry-program/

[cxlvii] Guinn, S. (2015). East elementary to donate thousands of food items to new pantry. *The Athens Messenger.* Retrieved from http://www.athensmessenger.com/news/east-elementary-to-donate-thousands-of-food-items-to-new/article_32ba8071-1d50-57f6-b73a-5d0d94c84d91.html

[cxlviii] Smith, C. & Morton, L. (2009). Rural food deserts: Low-income perspectives on food access in Minnesota and Iowa. *Journal of Nutrition Education and Behavior, 41*, 176-187. Retrieved from http://www.sciencedirect.com/science/article/pii/S1499404608007562

[cxlix] Center for Disease Control and Prevention. (2014). *Breastfeeding Report Card*. Atlanta, GA. Retrieved from http://www.cdc.gov/breastfeeding/pdf/2014breastfeedingreportcard.pdf

[cl] Flower, K.B., Willoughby, M., Cadigan, R.J., & Perrin, G.R. (2008). Understanding breastfeeding initiation and continuation rates in rural communities: A combined qualitative/quantitative approach. *Maternal and Child Health Journal, 12*, 402-414. doi: 10.1007/s10995-007-0248-6

[cli] Habibi MF, Nicklas JC, Spence M, Hedberg S, Magnuson E, Kavanagh KF. (2010). Remote lactation consultation: A qualitative study of maternal response to experience and recommendations for survey development. *Journal of Human Lactation, 28*, 212-218. doi: 10.1177/0890334411432716

[clii] Habibi MF, Nicklas JC, Spence M, Hedberg S, Magnuson E, Kavanagh KF. (2010). Remote lactation consultation: A qualitative study of maternal response to experience and recommendations for survey development. *Journal of Human Lactation, 28*, 212-218. doi: 10.1177/0890334411432716

[cliii] Solomon-Fears, C. (2016). Teenage pregnancy prevention: statistics and programs. *Congressional Research Service Report*. Retrieved from https://www.fas.org/sgp/crs/misc/RS20301.pdf

[cliv] Centers for Disease Control and Prevention. (2015). *Reproductive health: Teen pregnancy.* Retrieved from http://www.cdc.gov/teenpregnancy/prevent-teen-pregnancy/social-determinants-disparities-teen-pregnancy.htm

[clv] The National Campaign to Prevent Teen and Unplanned Pregnancy. (2013). Teen childbearing in rural America. *Science Says, 47*, 1-6. Retrieved from https://thenationalcampaign.org/sites/default/files/resource-primary-download/ss47_teenchildbearinginruralamerica.pdf

[clvi] Kearney, M. S., & Levine, P. B. (2012). Why is the teen birth rate in the United States so high and why does it matter? *Journal of Economic Perspectives, 26*, 141-163. doi: 10.3386/w17965

[clvii] Mollburn, S. (2016). Teenage mothers today: What we know and how it matters. *Child Development Perspectives, 11*, 63-69. doi: 10.1111/cdep.12205

[clviii] American College of Obstetricians and Gynecologists. (2014). *Health disparities in rural women.* Committee Opinion No. 586. Retrieved from http://www.acog.org/Resources-And-Publications/Committee-Opinions/Committee-on-Health-Care-for-Underserved-Women/Health-Disparities-in-Rural-Women

[clix] Stevenson, A., Flores-Vazquez, I., Allgeyer, R., Schenkkan, J.D., & Potter, J. (2016). Effect of removal of Planned Parenthood from the Texas Women's Health Progam. *The New England Journal of Medicine, 374*, 853-860. doi: 10.1056/NEJMsa1511902

[clx] Morinis, J., Carson, C., & Quigley, M. A. (2013). Effect of teenage motherhood on cognitive outcomes in children: a population based cohort study. *Archives of Disease in Childhood, 98*, 959-964. doi:10.1136/archdischild-2012-302525

[clxi] Kearney, M. S., & Levine, P. B. (2012). Why is the teen birth rate in the United States so high and why does it matter? *Journal of Economic Perspectives, 26*, 141-163. doi: 10.3386/w17965

[clxii] Washington State Institute of Public Policy. (2015). *Benefit-Cost Results*. Retrieved from http://www.wsipp.wa.gov/BenefitCost

[clxiii] Wachino, V. & Macrae, J. (2016). *Coverage of maternal, infant, and early childhood home visiting services*. Health Resources and Services Administration. Retrieved from https://www.medicaid.gov/federal-policy-guidance/downloads/CIB-03-02-16.pdf

[clxiv] Child Care Aware. (2015). *Parents and the high cost of child care*. Child Care Aware of America, Arlington, VA. Retrieved from http://usa.childcareaware.org/wp-content/uploads/2015/12/Parents-and-the-High-Cost-of-Child-Care-2015-FINAL.pdf

[clxv] National Institute of Child Health and Human Development. (2006). *The NICHD study of early child care and youth development*. U.S. Department of Health and Human Services. Retrieved from https://www.nichd.nih.gov/publications/pubs/documents/seccyd_06.pdf

[clxvi] Matthews, H., Schulman, K., Vogtman, J., Johnson-Staub, C., & Blank, H. (2015). *Implementing the child care and development block grant reauthorization: A guide for states*. CLASP & National Women's Law Center. Retrieved from http://www.clasp.org/resources-and-publications/publication-1/ccdbg-guide-for-states-final.pdf

[clxvii] Child Care Aware. (2015). *Parents and the high cost of child care*. Child Care Aware of America, Arlington, VA. Retrieved from http://usa.childcareaware.org/wp-content/uploads/2015/12/Parents-and-the-High-Cost-of-Child-Care-2015-FINAL.pdf

[clxviii] Child Care Aware. (2015). *Parents and the high cost of child care*. Child Care Aware of America, Arlington, VA. Retrieved from http://usa.childcareaware.org/wp-content/uploads/2015/12/Parents-and-the-High-Cost-of-Child-Care-2015-FINAL.pdf

[clxix] Barnett, W., Friedman-Krauss, A., Gomez, R., Horowitz, M., Weisenfeld, G.G., Brown, K., & Squires, J. (2016). The state of preschool 2015. *The National Institute for Early Education Research*. Retrieved from http://nieer.org/sites/nieer/files/Executive%20Summary%202015.pdf

[clxx] Office of Head Start. (2016). *Head start program performance standards (HSPPS) Final Rule*. U.S. Department of Health and Human Services. Retrieved from https://eclkc.ohs.acf.hhs.gov/policy/pi/acf-pi-hs-16-04

[clxxi] Bassok, D., Latham, S. & Rorem, A. (2016). Is kindergarten the new first grade. *AERA Open, 1*, 1-31. doi: 10.1177/2332858415616358.

[clxxii] Powell, D., Higgins, H., J., Aram, R., & Freed, A. (2009). Impact of No Child Left Behind on curriculum and instruction in rural schools. *Rural Educator, 32*, 19-28. Retrieved from http://files.eric.ed.gov/fulltext/EJ876130.pdf

[clxxiii] Because principals could give more than one answer to the survey, the percentages add up to over 100%.

[clxxiv] Sylva, K., Bruner, J., & Genova, P. (1976). *The Role of Play in the Problem Solving of Children*. New York, NY: Basic Books.

[clxxv] Bassok, D., Latham, S. & Rorem, A. (2016). Is kindergarten the new first grade. *AERA Open, 1*, 1-31. doi: 10.1177/2332858415616358.

[clxxvi] Copeland, K., Sherman, S., Kendeigh, C., Kalkwarf, H., Saelens, B. (2012). Societal values and policies may curtain preschool children's physical activity in child care centers. *Pediatrics, 129*, 265-274. Retrieved from http://pediatrics.aappublications.org/content/pediatrics/early/2012/01/02/peds.2011-2102.full.pdf

[clxxvii] Hirsh-Pasek, K. & Golinkoff, R.M. (2011). The great balancing act: Optimizing core curricula through playful learning. In E. Zigler, W.S. Gilliam, & W.S. Barnett (Eds.), *The pre-K debates: Current controversies and issues* (pp. 110-115). Baltimore, MD: Brookes Publishing.

[clxxviii] Koestler, C., Felton, M. D., Bieda, K., & Otten, S. (2013). *Connecting the NCTM Process Standards and the Common Core State Standards for Mathematics Practices to improve instruction*. Reston, VA: National Council of Teachers of Mathematics.

[clxxix] Kober, N., & Rentner, D. S. (2012). *Year two of implementing the Common Core State Standards: States' progress and challenges*. Washington, DC: Center on Education Policy. Retrieved from http://eric.ed.gov/?id=ED528907

[clxxx] Babione, C. (2010). Rural and small community educator responses to state academic standards. *Rural Educator, 31*, 7–15. Retrieved from https://www.ebscohost.com

[clxxxi] Howley, A., Wood, L., & Hough, B. (2011). Rural elementary school teachers' technology integration. *Journal of Research in Rural Education, 26*, 1-13. Retrieved from http://jrre.vmhost.psu.edu/wp-content/uploads/2014/02/26-9.pdf

[clxxxii] Walters, K., Scheopner Torres, A., Smith, T., and Ford, J. (2014). *Gearing up to teach the Common Core State Standards for Mathematics in rural Northeast Region schools* (REL 2015– 031). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northeast & Islands. Retrieved from http://ies.ed.gov/ncee/edlabs.

[clxxxiii] Workman, E. (2014). *Third-grade reading policies*. Education Commission of the States: Denver, CO. Retrieved from http://www.ecs.org/clearinghouse/01/16/44/11644.pdf

[clxxxiv] Lloyd, D.N. (1978). Prediction of school failure from third-grade data. *Educational and Psychological Measurement, 38*, 1193-2000. Retrieved from https://www.ebscohost.com

[clxxxv] Hernandez, D. (2012). *How Third-Grade Reading Skills and Poverty Influence High School Graduation*. The Annie E. Casey Foundation: Baltimore, MD. Retrieved from http://gradelevelreading.net/wp-content/uploads/2012/01/Double-Jeopardy-Report-030812-for-web1.pdf

[clxxxvi] Watson, C., Johanson, M., Loder, M., & Dankiw, J. (2014). Effects of high-stakes testing on third through fifth grade students: Student voices and concerns for educational leaders. *Journal of Organizational Learning and Leadership, 12*, 1-11. Retrieved from http://www.leadingtoday.org/weleadinlearning/Spring2014/Spring_2014_Watson.pdf

[clxxxvii] Andrew, M. (2014). The scarring effects of primary-grade retention? A study of cumulative advantage in the educational career. *Social Forces, 93*, 653-685. doi: 10.1093/sf/sou074

[clxxxviii] Anderson, G. E., Jimerson, S. R., & Whipple, A. D. (2005). Student ratings of stressful experiences at home and school: Loss of a parent and grade retention as superlative stressors. *Journal of Applied School Psychology, 21*, 1-20. doi: 10.1300/J370v21n01_01

[clxxxix] DeYoung, A. J. (1995). Constructing and staffing the cultural bridge: The school as change agent in rural Appalachia. *Anthropology & Education Quarterly, 26*, 168-192. Retrieved from https://www.ebscohost.com

[cxc] Schafft, K. A., & Jackson, A. (Eds.). (2011). *Rural education for the twenty-first century: Identity, place, and community in a globalizing world*. University Park, PA: Penn State University Press.

[cxci] Anderson, G. E., Jimerson, S. R., & Whipple, A. D. (2005). Student ratings of stressful experiences at home and school: Loss of a parent and grade retention as superlative stressors. *Journal of Applied School Psychology, 21*, 1-20. doi: 10.1300/J370v21n01_01

[cxcii] Fitchett, P. & Heafner, T. (2010). A national perspective on the effects of high-stakes testing and standardization on elementary social studies marginalization, *Theory and Research in Social Education, 3*, 114-130. doi: 10.1080/00933104.2010.10473418

[cxciii] VanFossen, P. & McGrew, C. (2008). Is the sky really falling? An update on the status of social studies education in the K-5 curriculum in Indiana. *International Journal of Social Studies, 33*, 139-178. Retrieved from http://files.eric.ed.gov/fulltext/EJ944028.pdf

[cxciv] Schneider, S., Dorph, R., Goldstein, D., Lee, S., Lepori, K., Venkatesan, S. (2007). *The status of science education in the Bay Area: Research brief*. Lawrence Hall of Science, University of California, Berkeley. Retrieved from http://static.lawrencehallofscience.org/rea/bayareastudy/pdf/final_to_print_research_brief.pdf

[cxcv] Powell, D., Higgins, H., J., Aram, R., & Freed, A. (2009). Impact of No Child Left Behind on curriculum and instruction in rural schools. *Rural Educator, 32*, 19-28. Retrieved from http://files.eric.ed.gov/fulltext/EJ876130.pdf

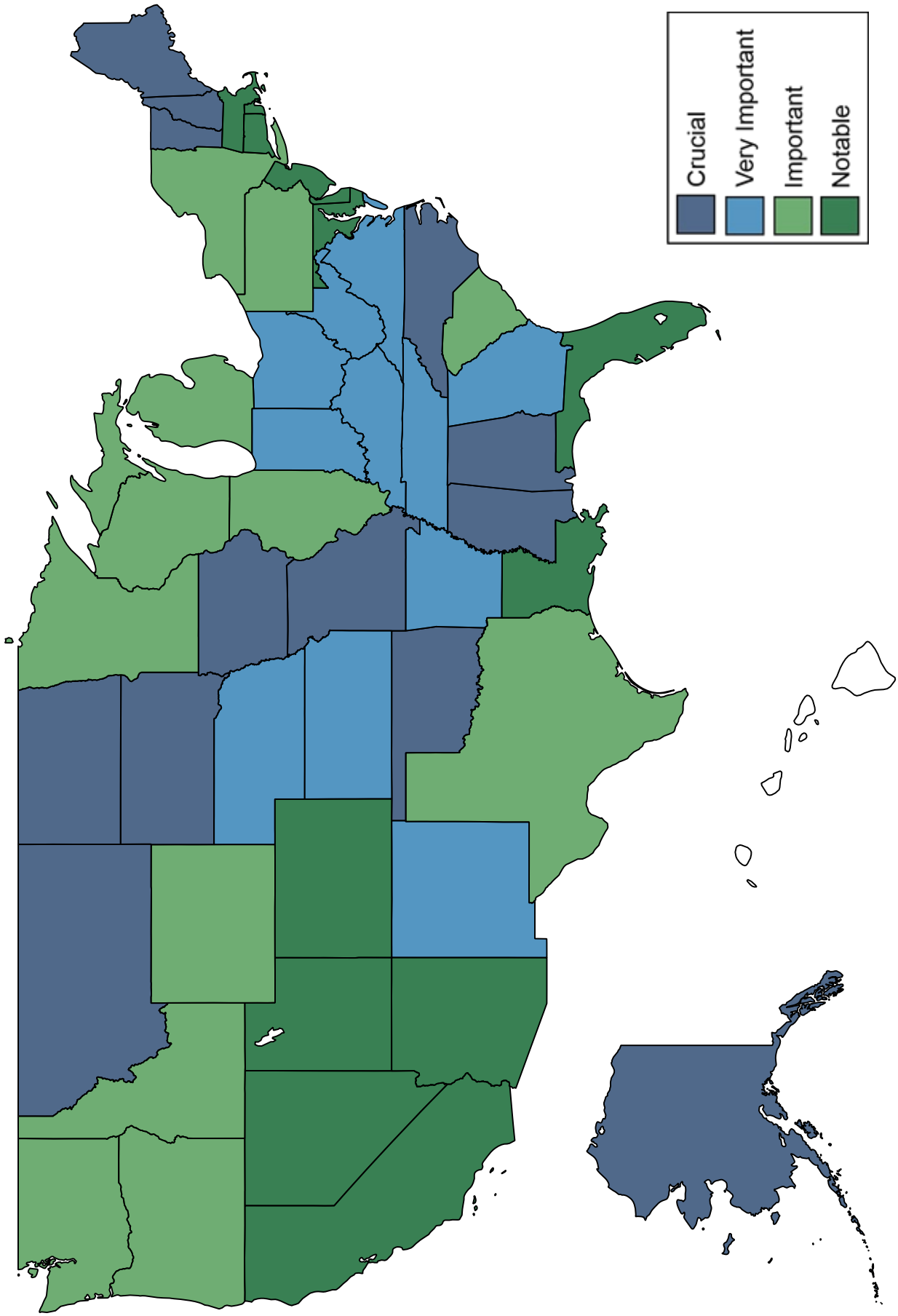
[cxcvi] Murphy, C., Neil, P., & Beggs, J. (2007). Primary science teacher confidence revisited: Ten years on. *Educational Research, 49*, 415-430. doi: 10.1080/00131880701717289

[cxcvii] Bell, P., Lewenstein, B. V., Shouse, A. W., & Feder, M. A. (2009). *Learning science in informal environments: People, places, and pursuits*. Washington, DC: National Academies Press.

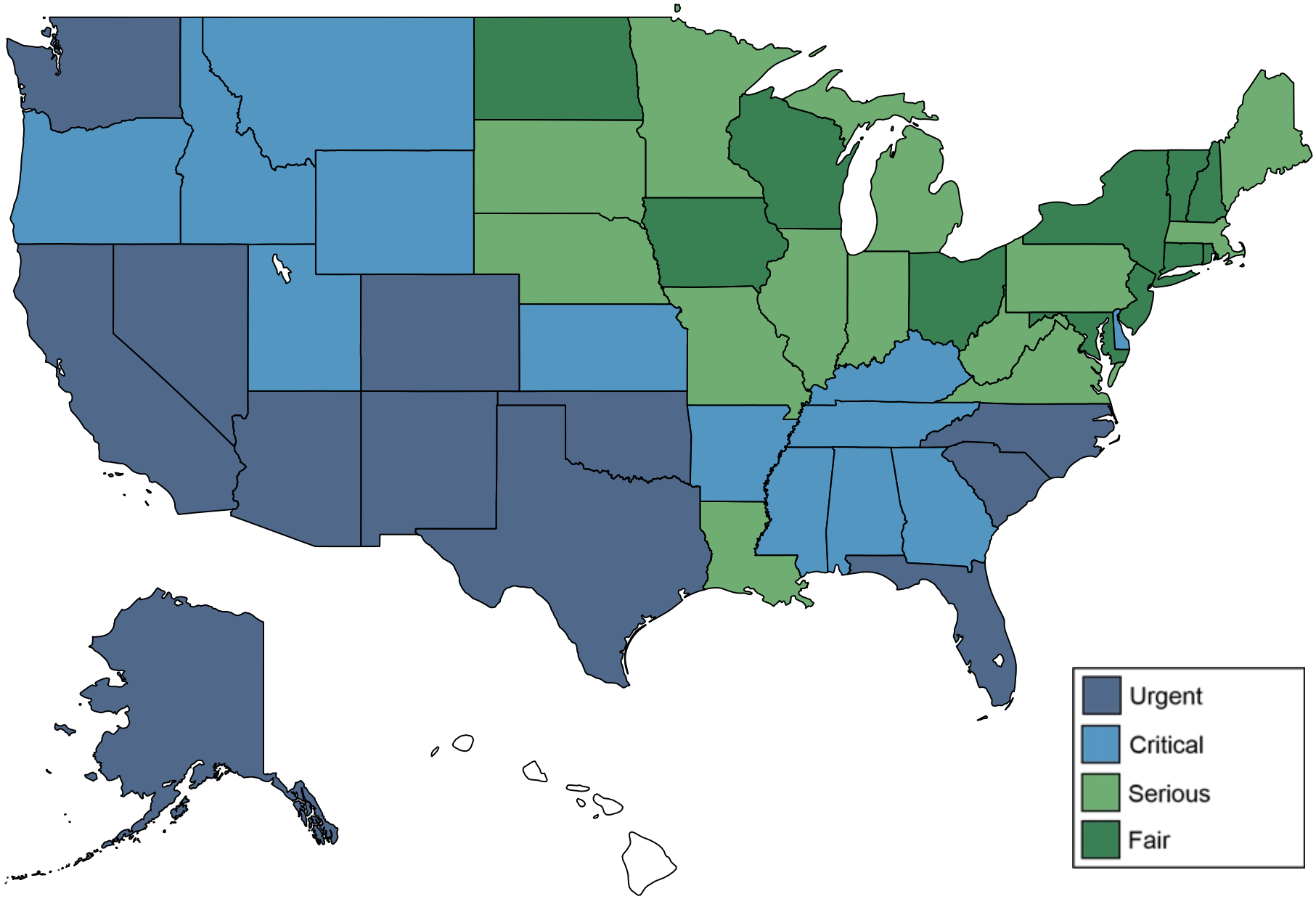
[cxcviii] Luke, J.J. & Garvin, V. (2014). *Learning value of children's museums research agenda: Association of children's museums*. Retrieved from http://www.childrensmuseums.org

[cxcix] Association of Children's Museums. (2015). *About children's museums*. Retrieved from http://www.childrensmuseums.org/childrens-museums/about-childrens-museums

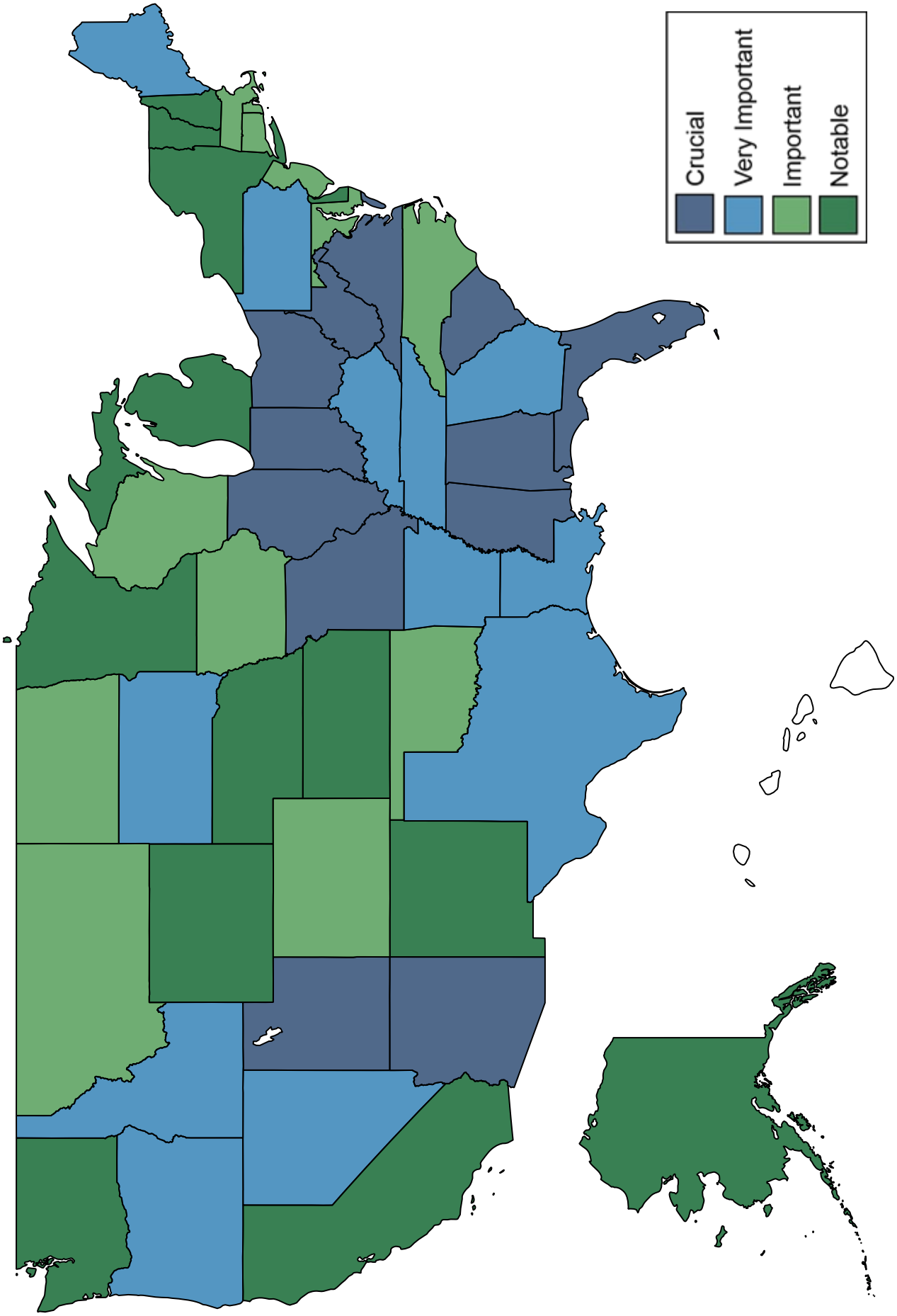
Importance Gauge



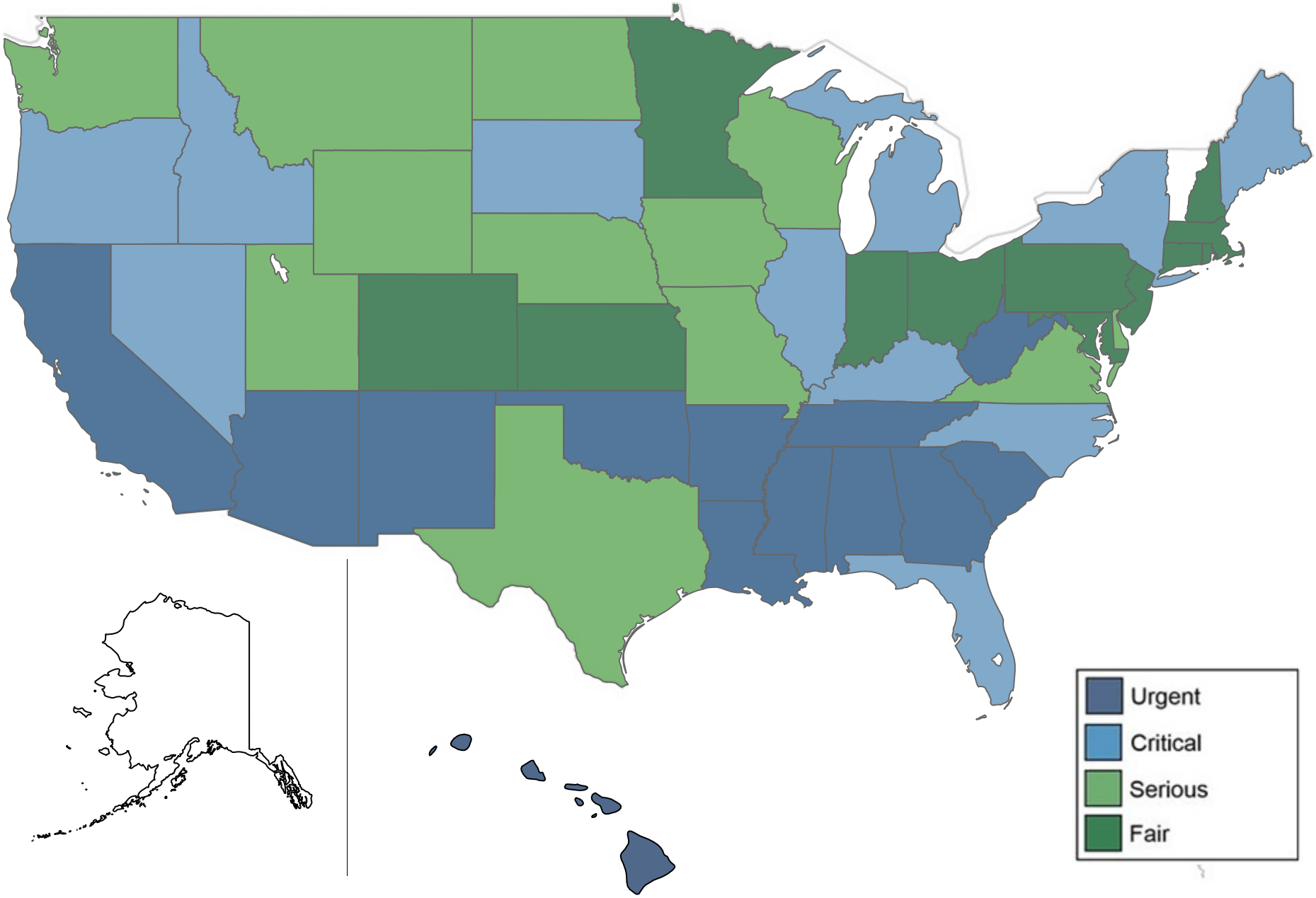
Student and Family Diversity Gauge



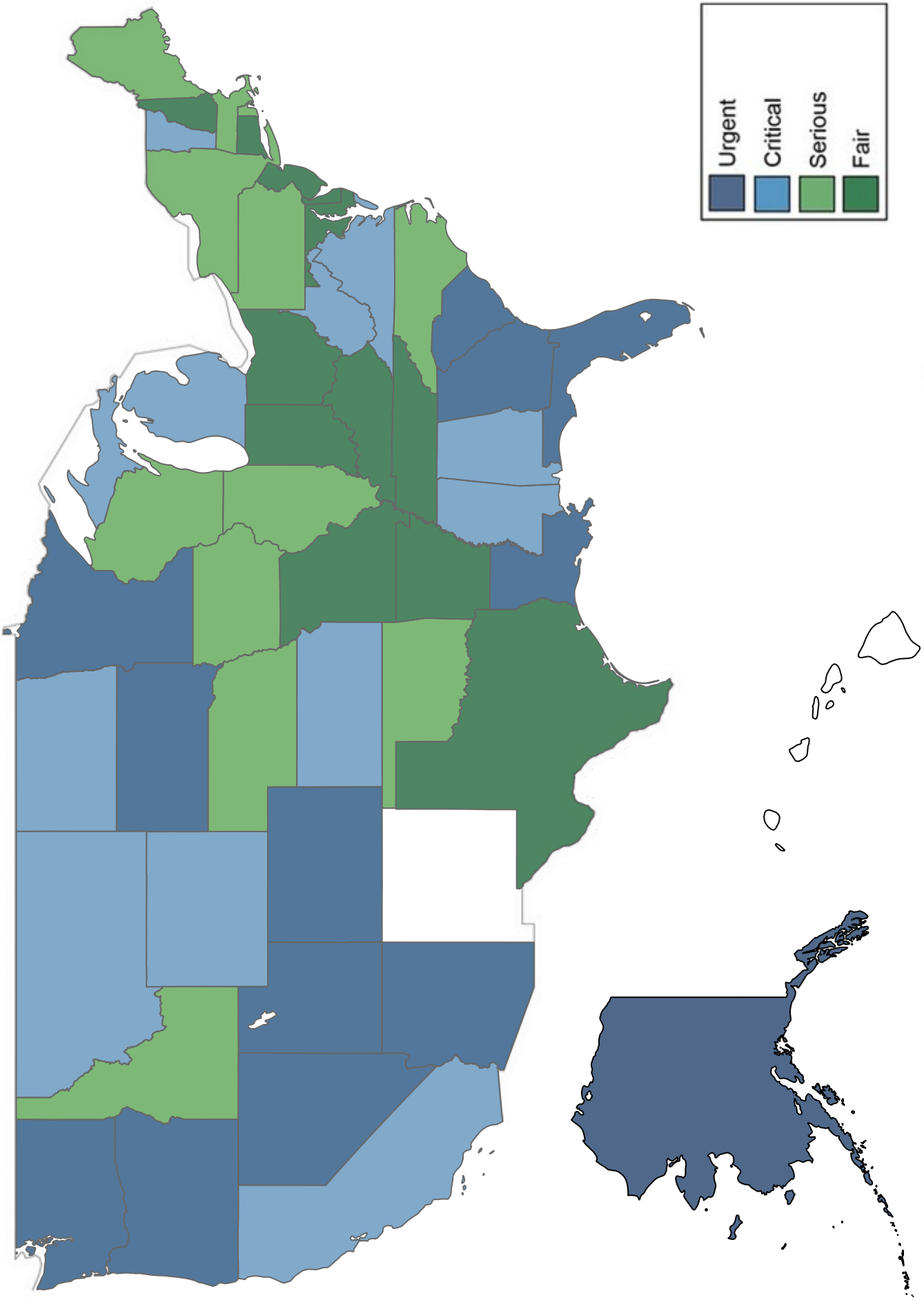
Educational Policy Context Gauge



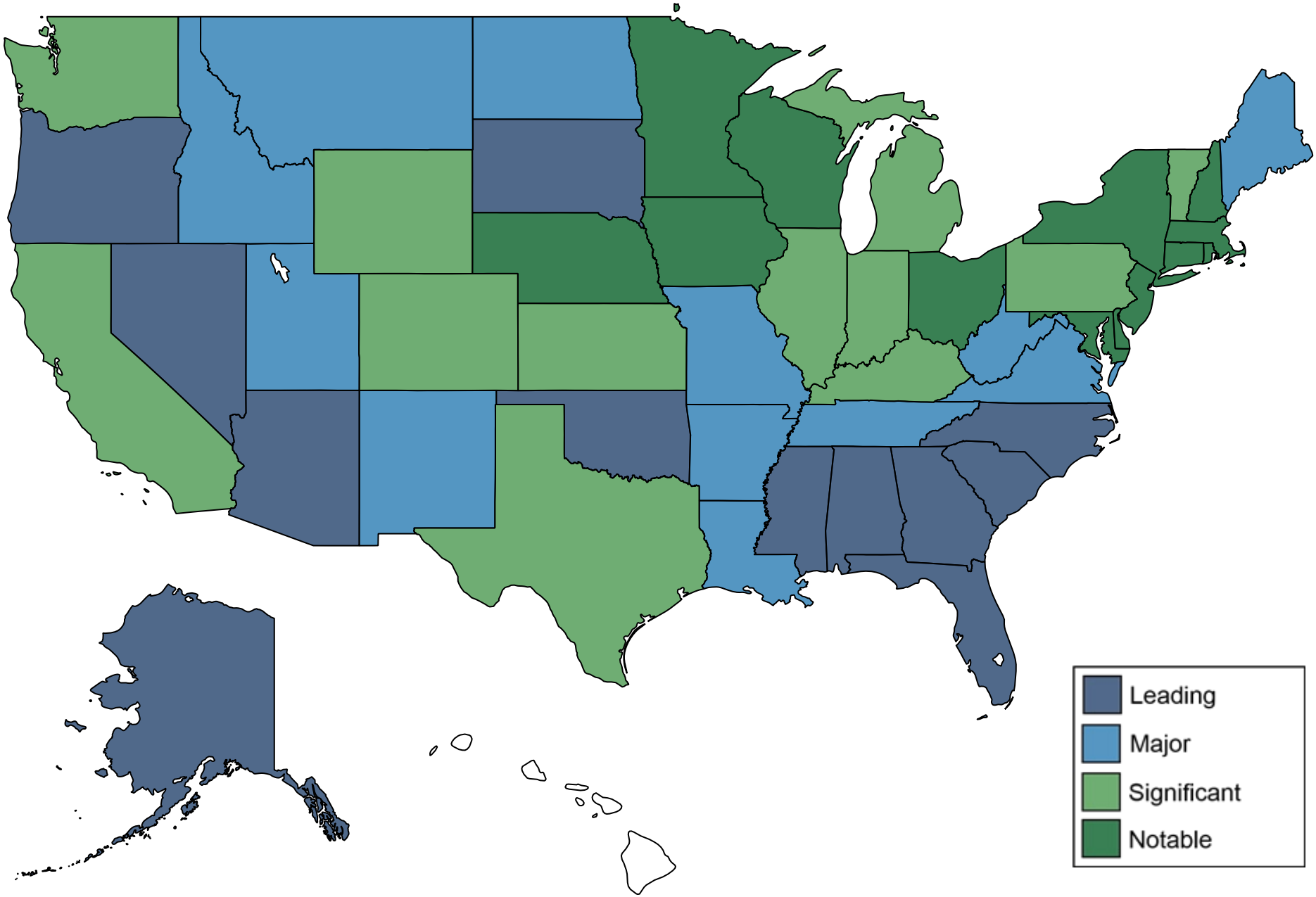
Educational Outcomes Gauge



College Readiness Gauge

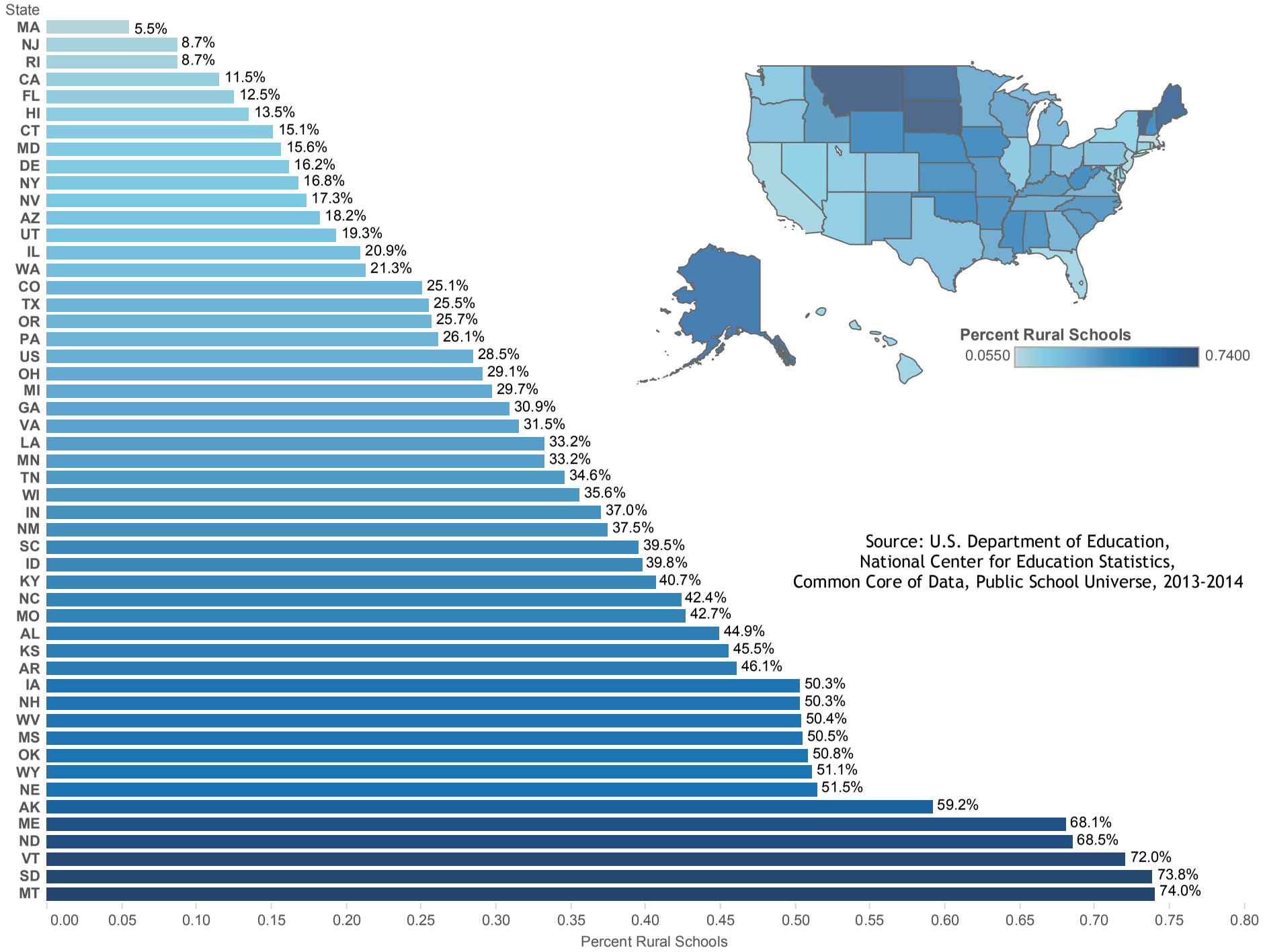


2016 Priority Ranking



Percent Rural Schools

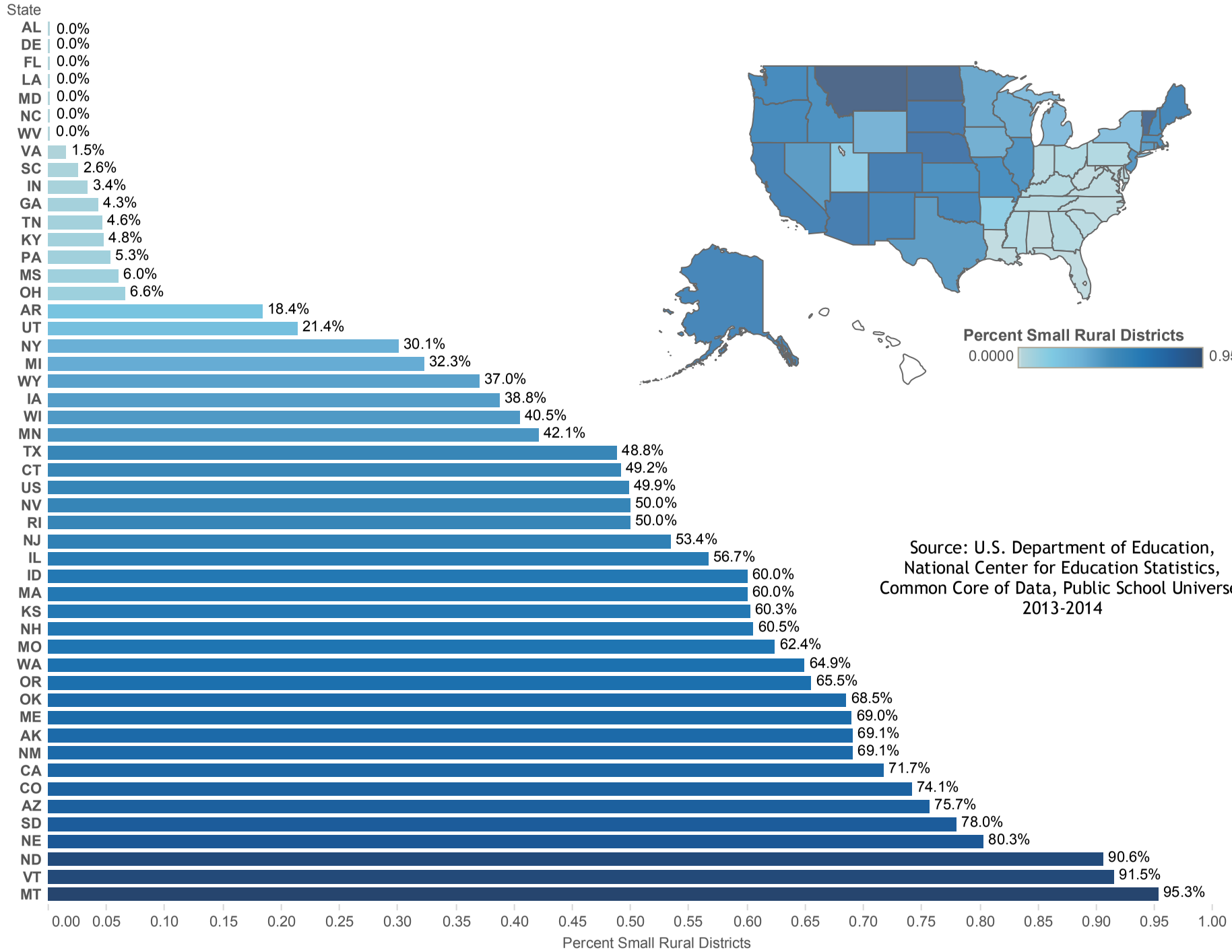
The number of public schools located in places classifed as rural by the U.S. Census Bureau, expressed as a percentage of all public schools in the state.



Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, Public School Universe, 2013-2014

Percent Small Rural Districts

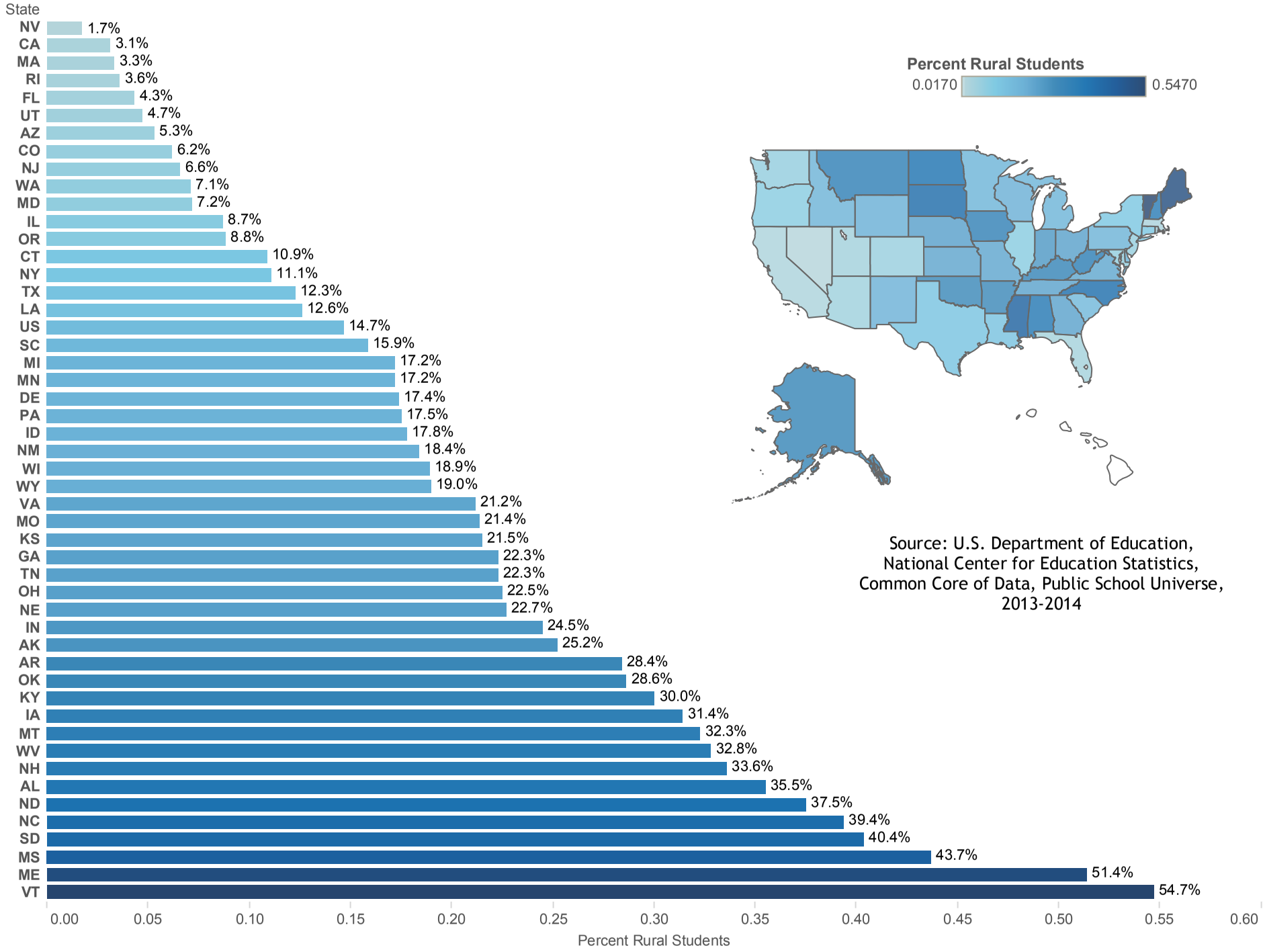
The number of rural public school districts with an enrollment size below the national median for rural districts, expressed as a percentage of the total number of public school districts in the state.



Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, Public School Universe, 2013-2014

Percent Rural Students

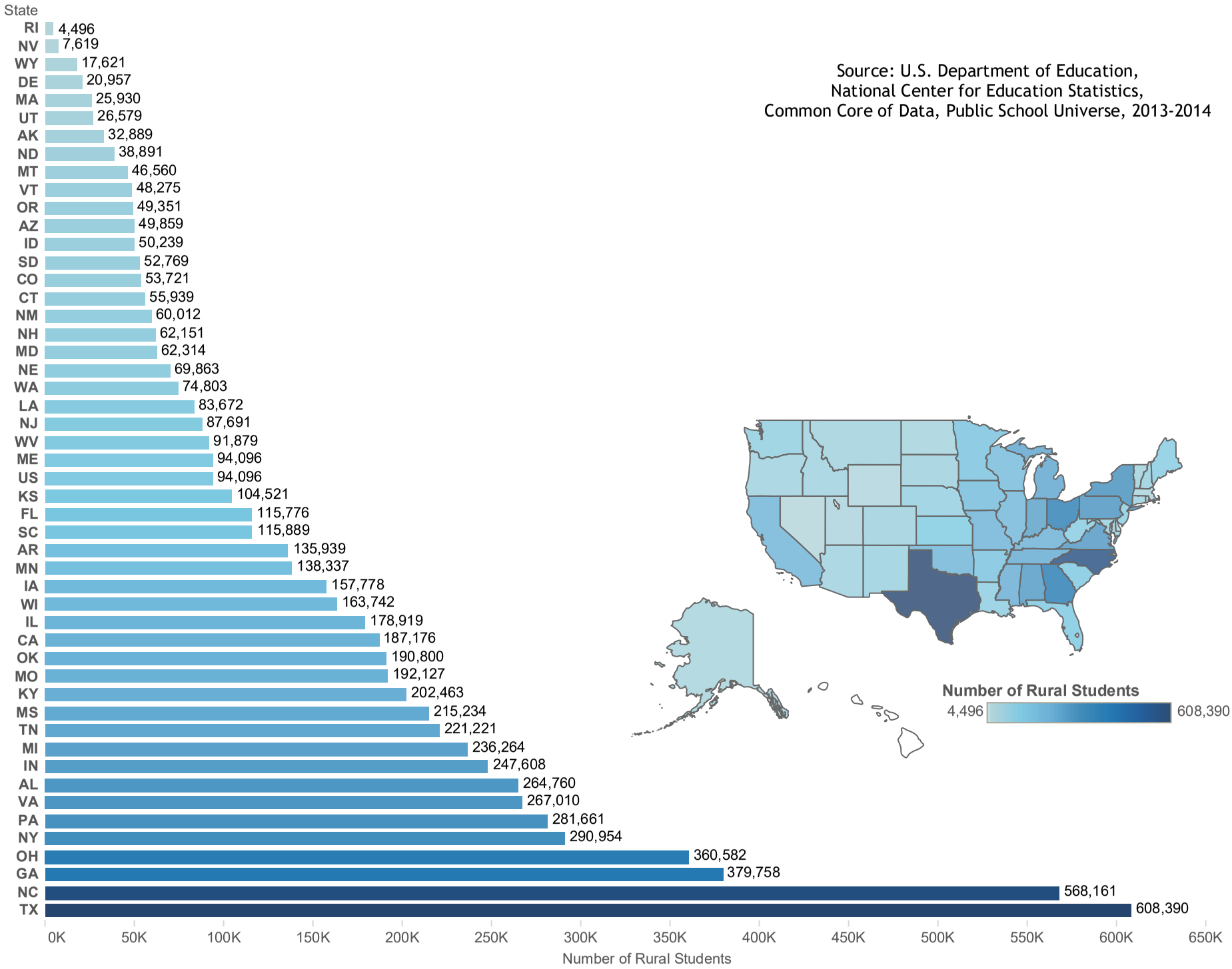
The number of students attending public schools located in places classified as rural by the U.S. Census Bureau, expressed as a percentage of all public school students in the state.



Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, Public School Universe, 2013-2014

Number of Rural Students

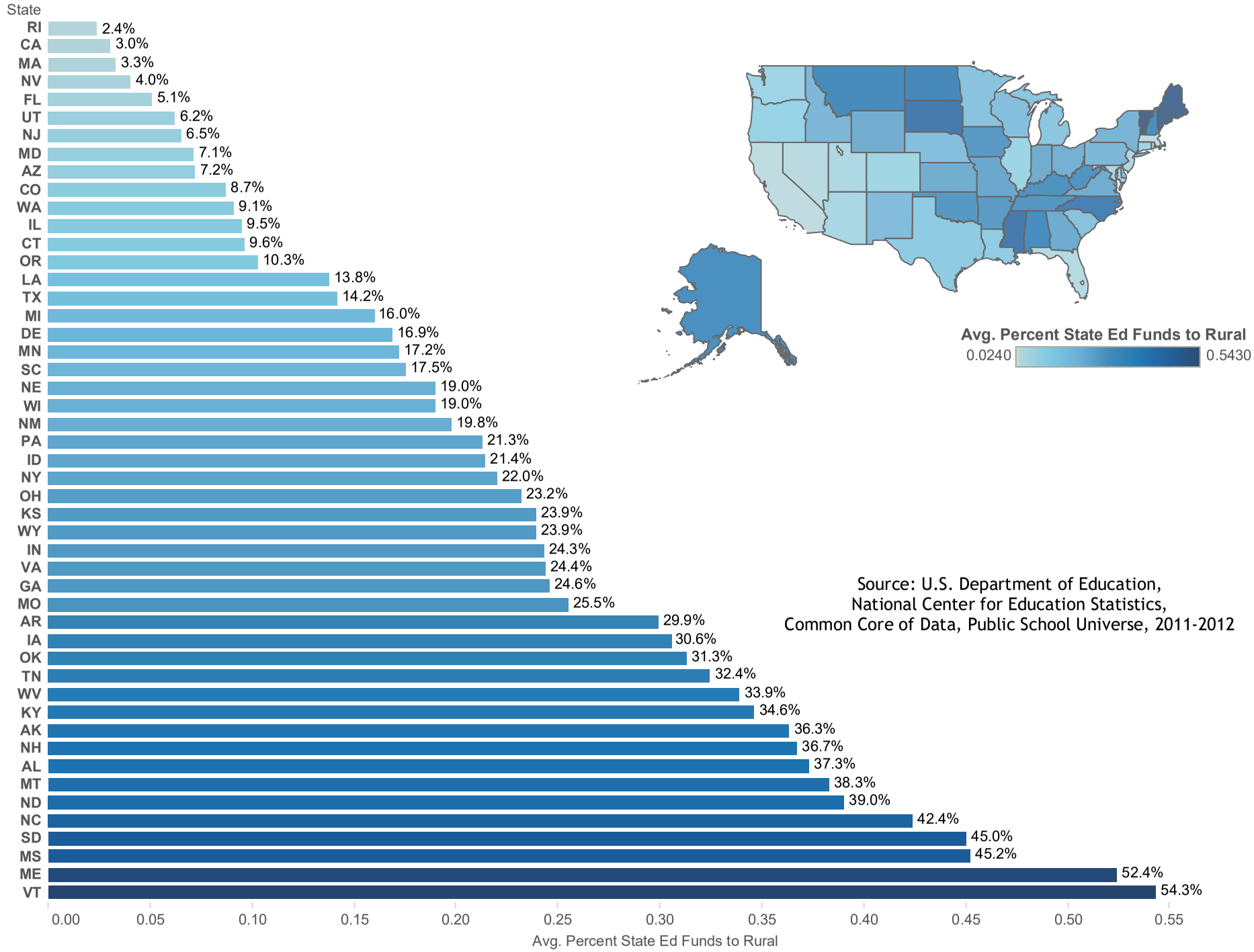
The number of students attending public schools located in a district classified as rural by the U.S. Census Bureau.



Source: U.S. Department of Education,
National Center for Education Statistics,
Common Core of Data, Public School Universe, 2013-2014

Percent of State Education Funds to Rural Districts

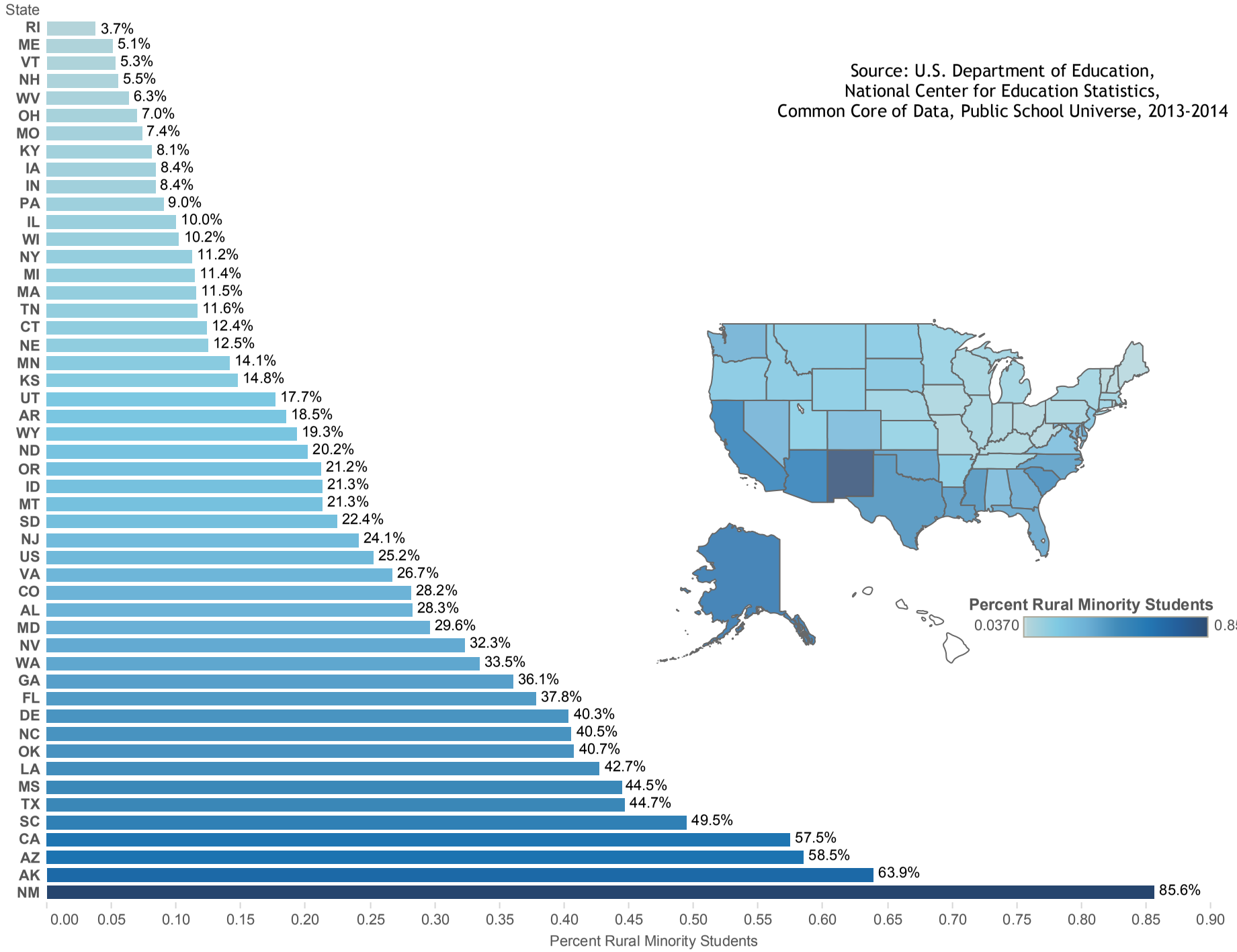
State education funding to local school districts located in rural settings, expressed as a percentage of all state education funding to local school districts.



Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, Public School Universe, 2011-2012

Percent Rural Minority Students

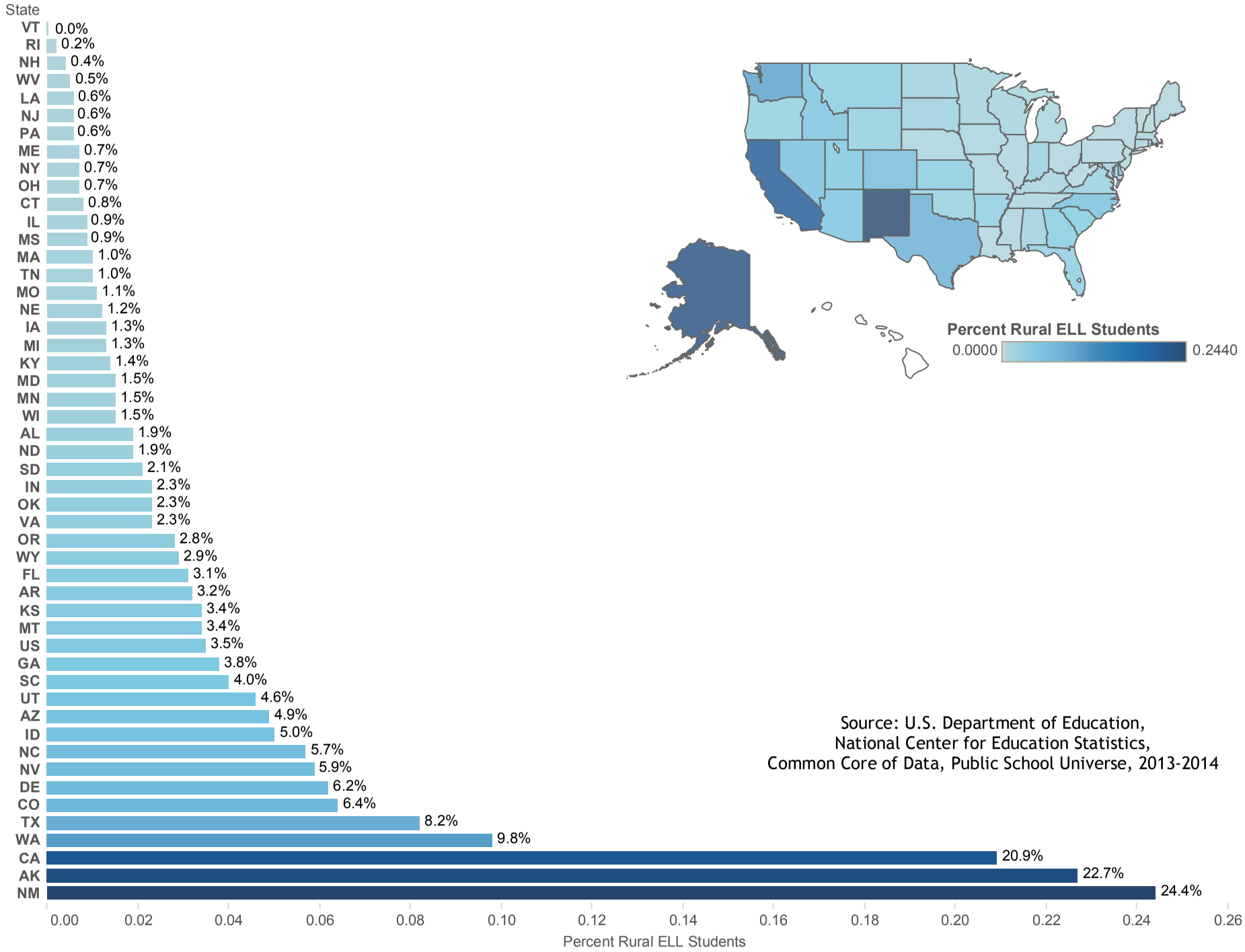
The number of students enrolled in rural districts who are classified in a racial minority group, expressed as a percentage of all students enrolled in rural districts



Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, Public School Universe, 2013-2014

Percent Rural English Language Learner (ELL) Students

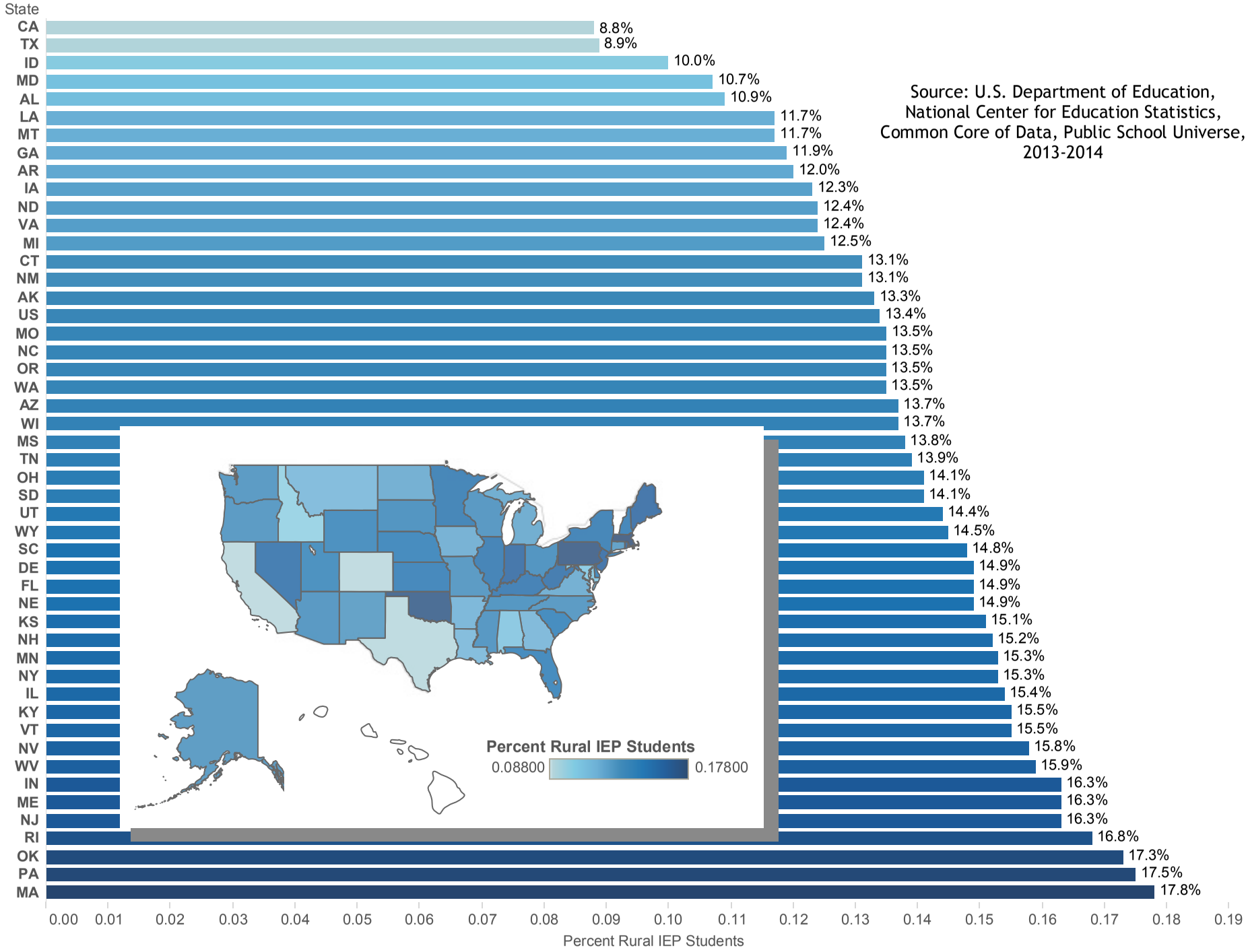
The total number of students enrolled in rural districts who are English Language Learners, expressed as a percentage of all students enrolled in rural districts.



Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, Public School Universe, 2013-2014

Percent Rural Special Education (IEP) Students

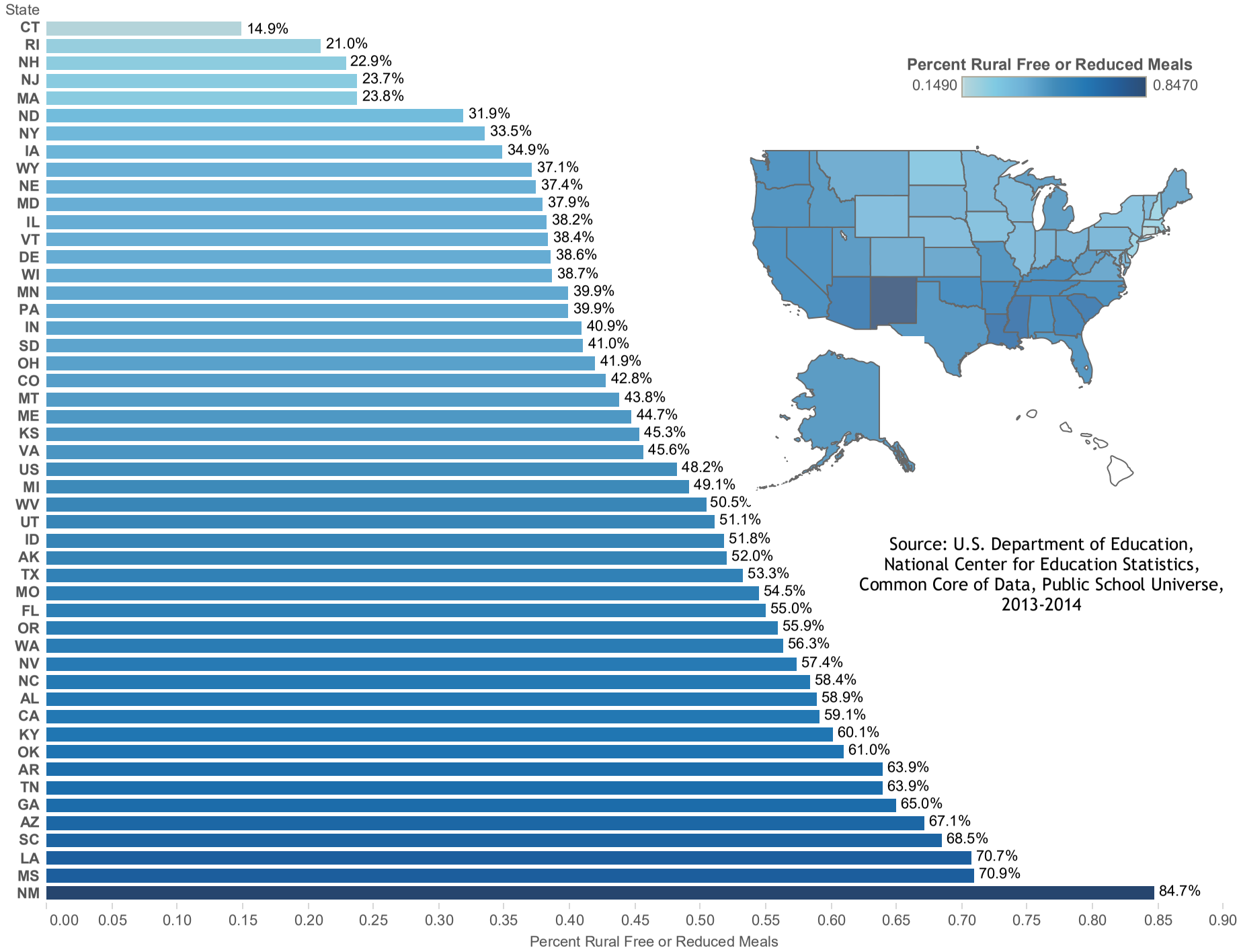
The total number of students enrolled in rural districts who receive special education services, expressed as a percentage of all students enrolled in rural districts.



Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, Public School Universe, 2013-2014

Percent of Rural Students Eligible for Free or Reduced Meals

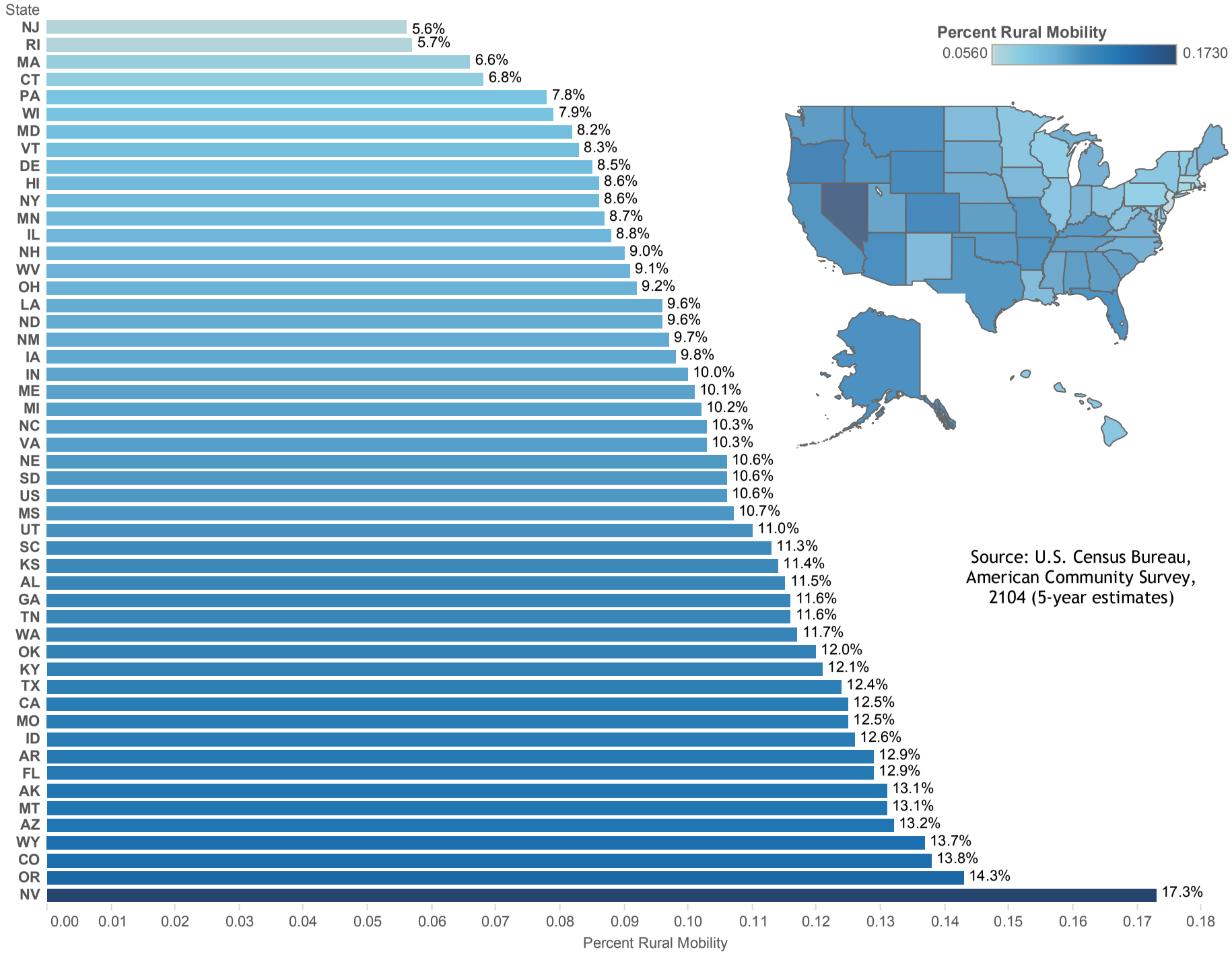
Students attending public schools in rural districts who qualify for free or reduced-price meal programs, expressed as a percentage of all students attending public schools in rural districts.



Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, Public School Universe, 2013-2014

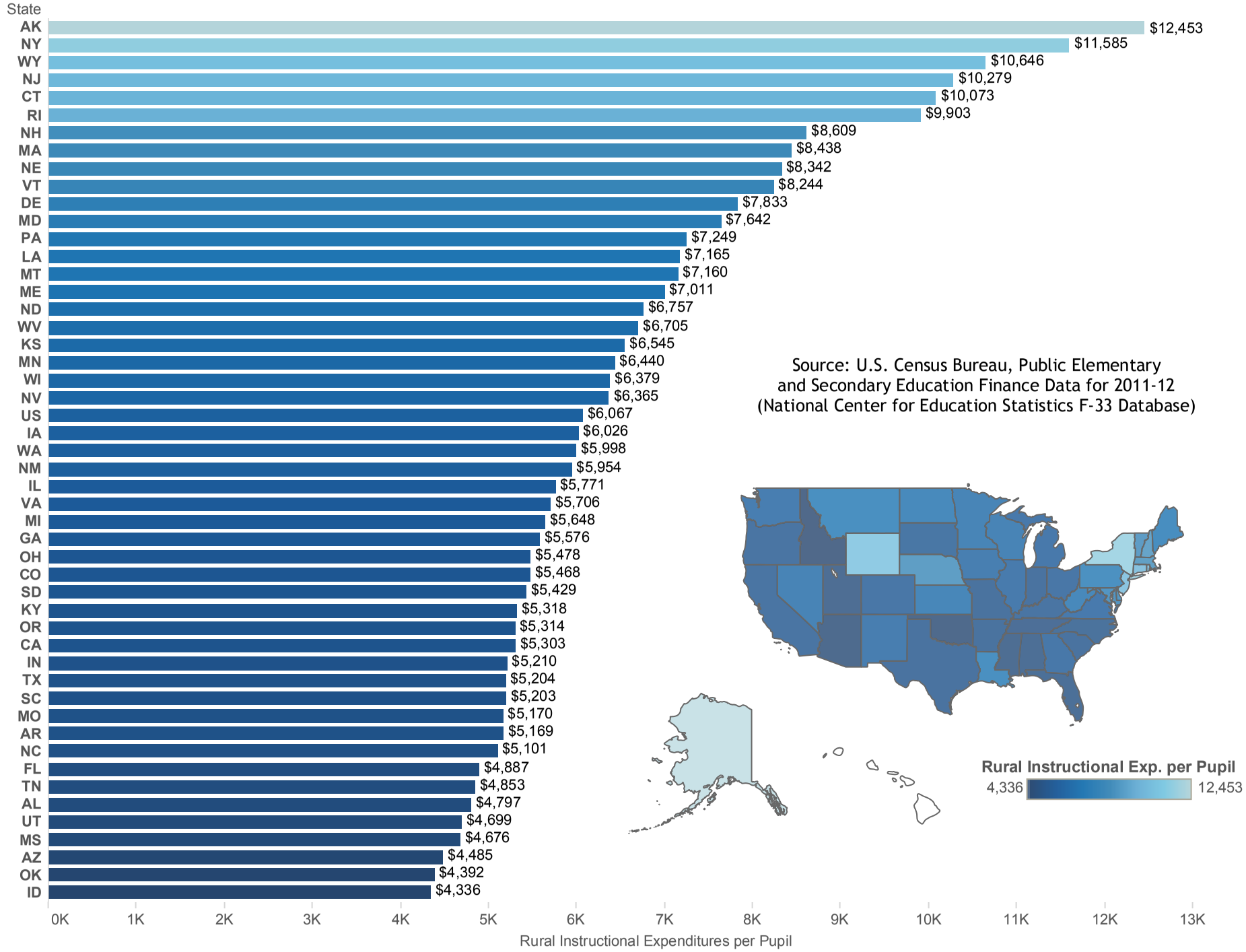
Percent Rural Student Mobility

The percentage of rural households with school-age children who changed residences within the previous 12 months, per U.S. Census figures.



Rural Instructional Expenditures per Pupil

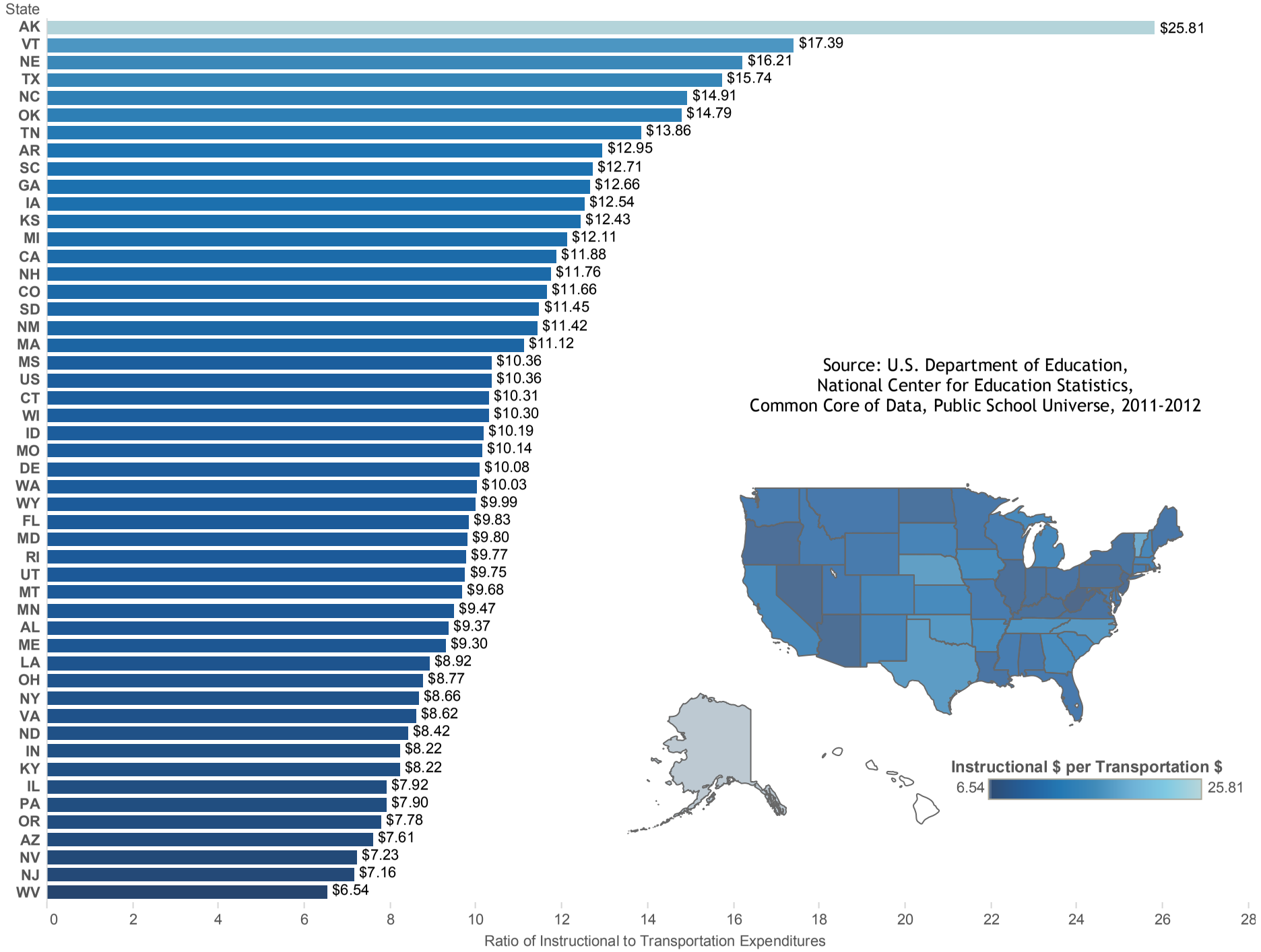
Total current expenditures for instruction in rural school districts, divided by the total number of students enrolled in those school districts.



Source: U.S. Census Bureau, Public Elementary and Secondary Education Finance Data for 2011-12 (National Center for Education Statistics F-33 Database)

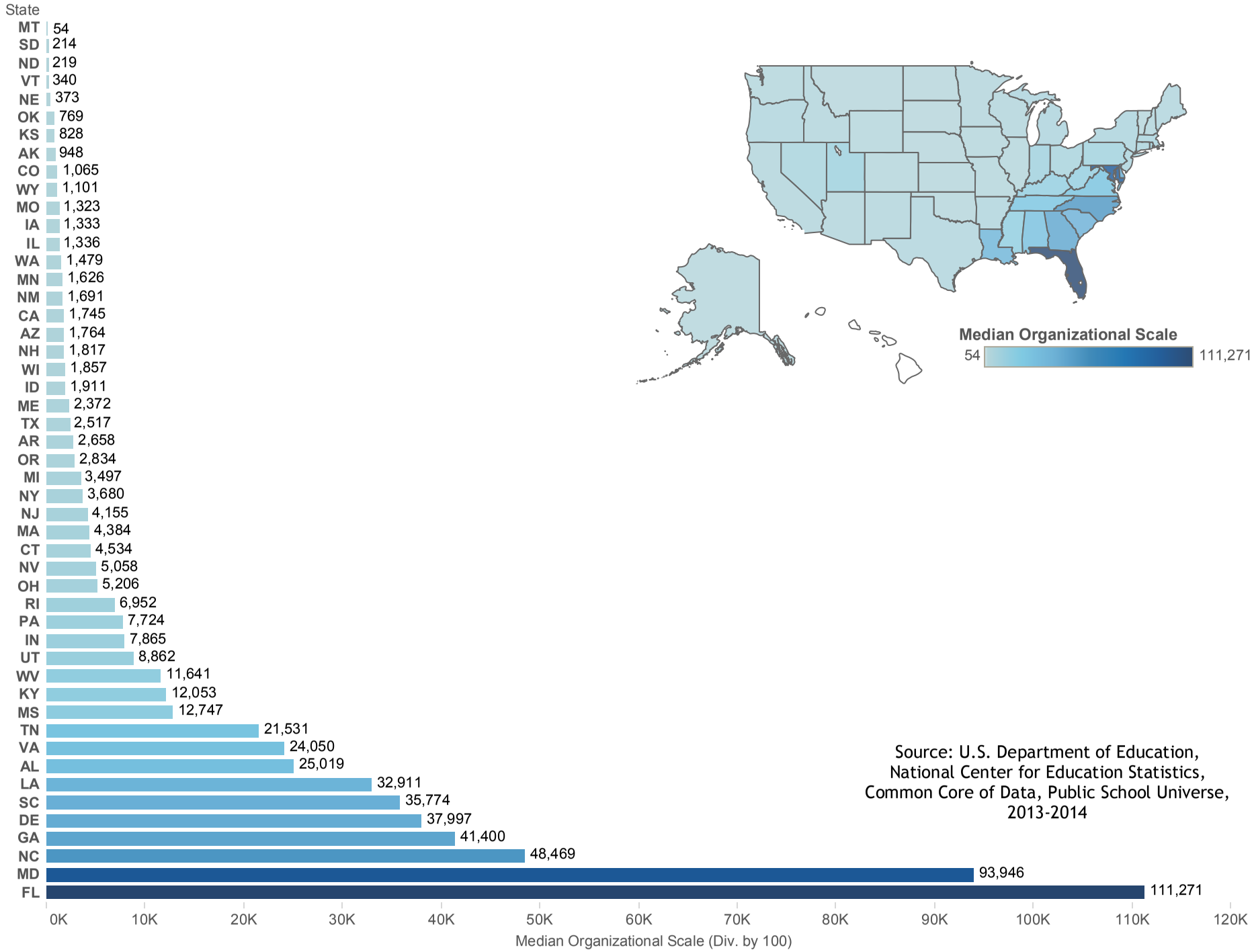
Ratio of Instructional Dollars to Transportation Dollars in Rural Districts

Ratio of total current expenditures for regular education instruction to total current expenditures for pupil transportation.



Median Organizational Scale for Rural Districts

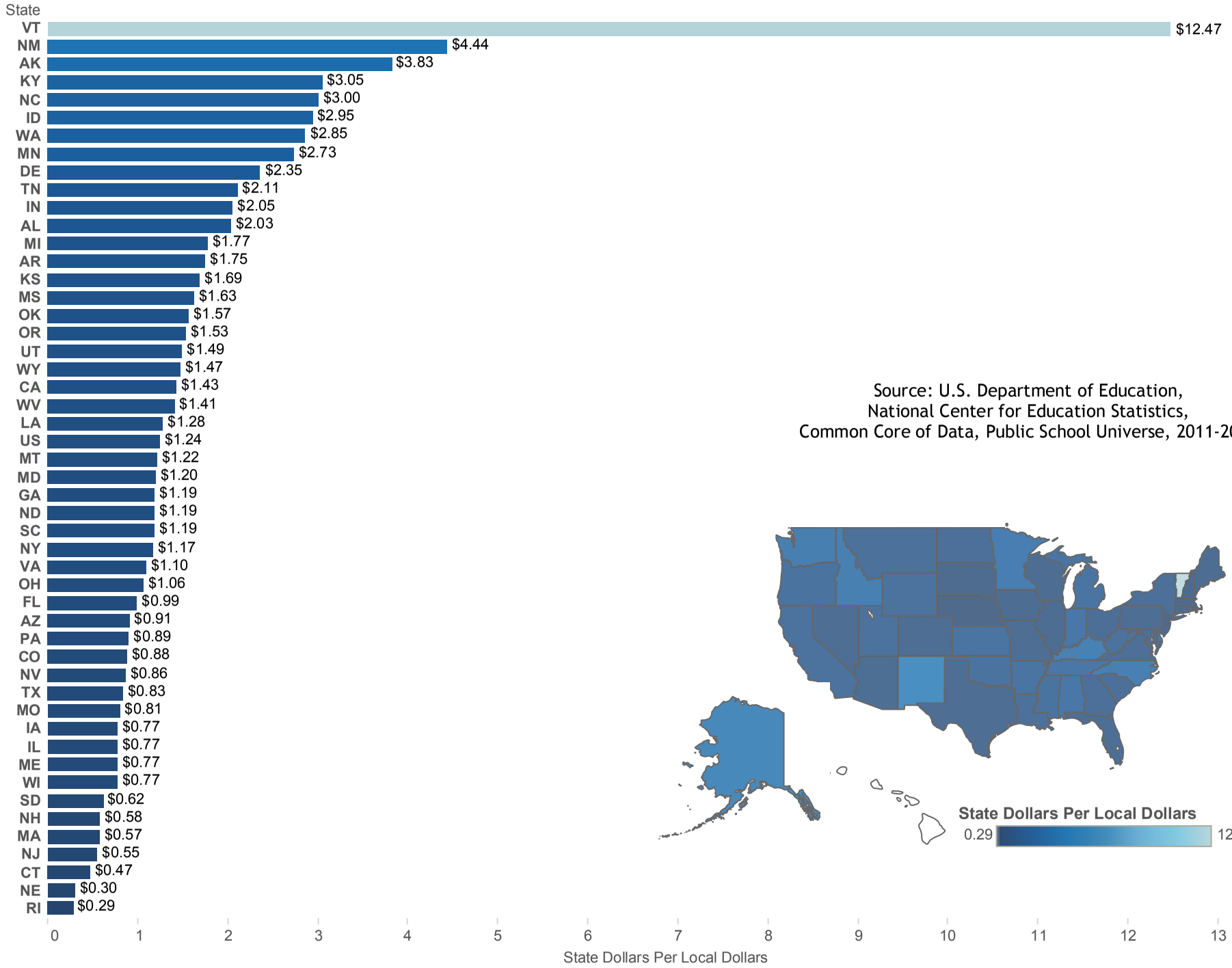
The state median for the organizational scale indicator obtained by multiplying school enrollment by district enrollment. (Note: For simplification, the indicators were divided by 100.)



Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, Public School Universe, 2013-2014

State Funding per Local Dollar to Rural Districts

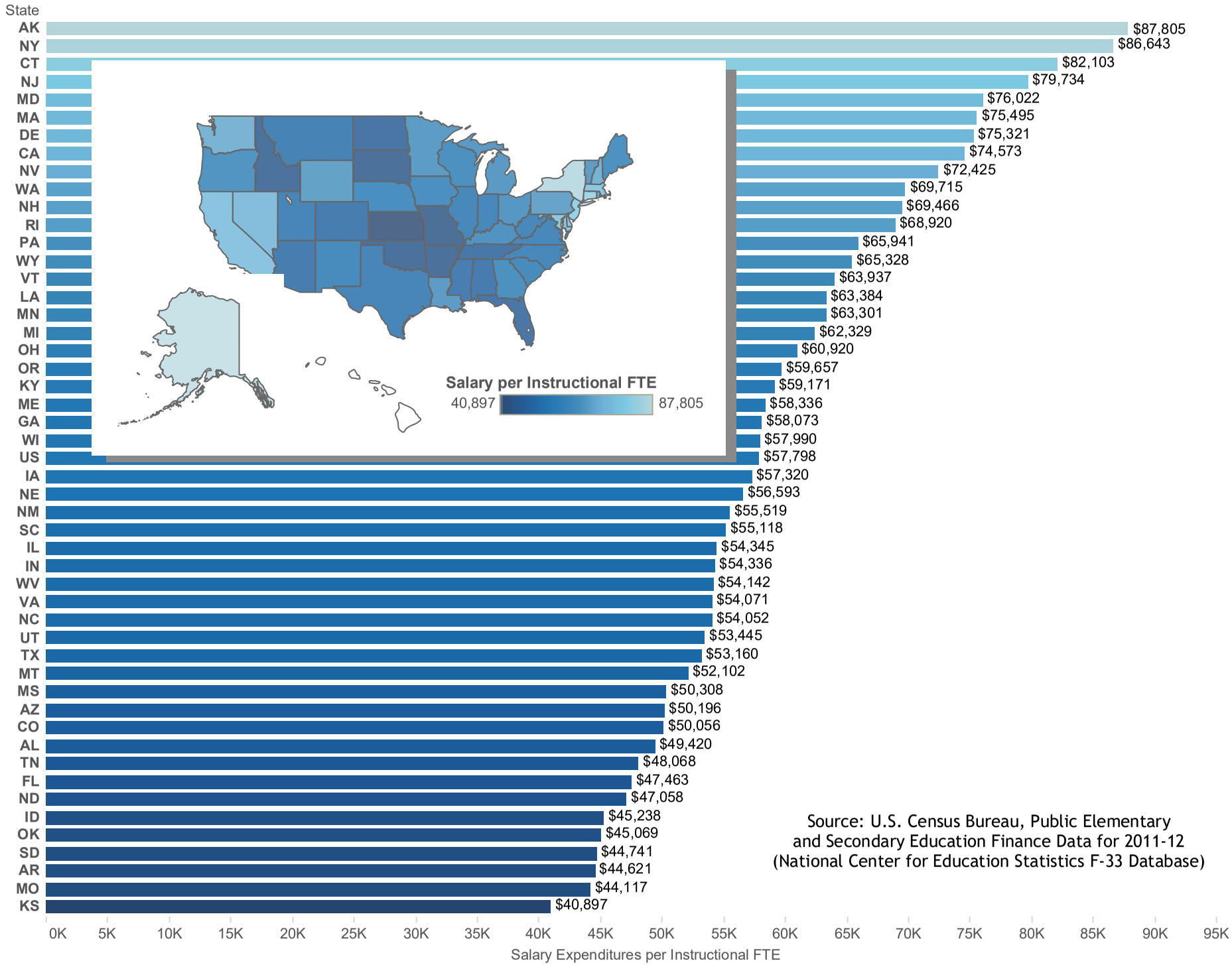
The number of dollars received by rural districts from state funds for each dollar generated by local funds.



Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, Public School Universe, 2011-2012

Rural Salary Expenditures per Instructional FTE

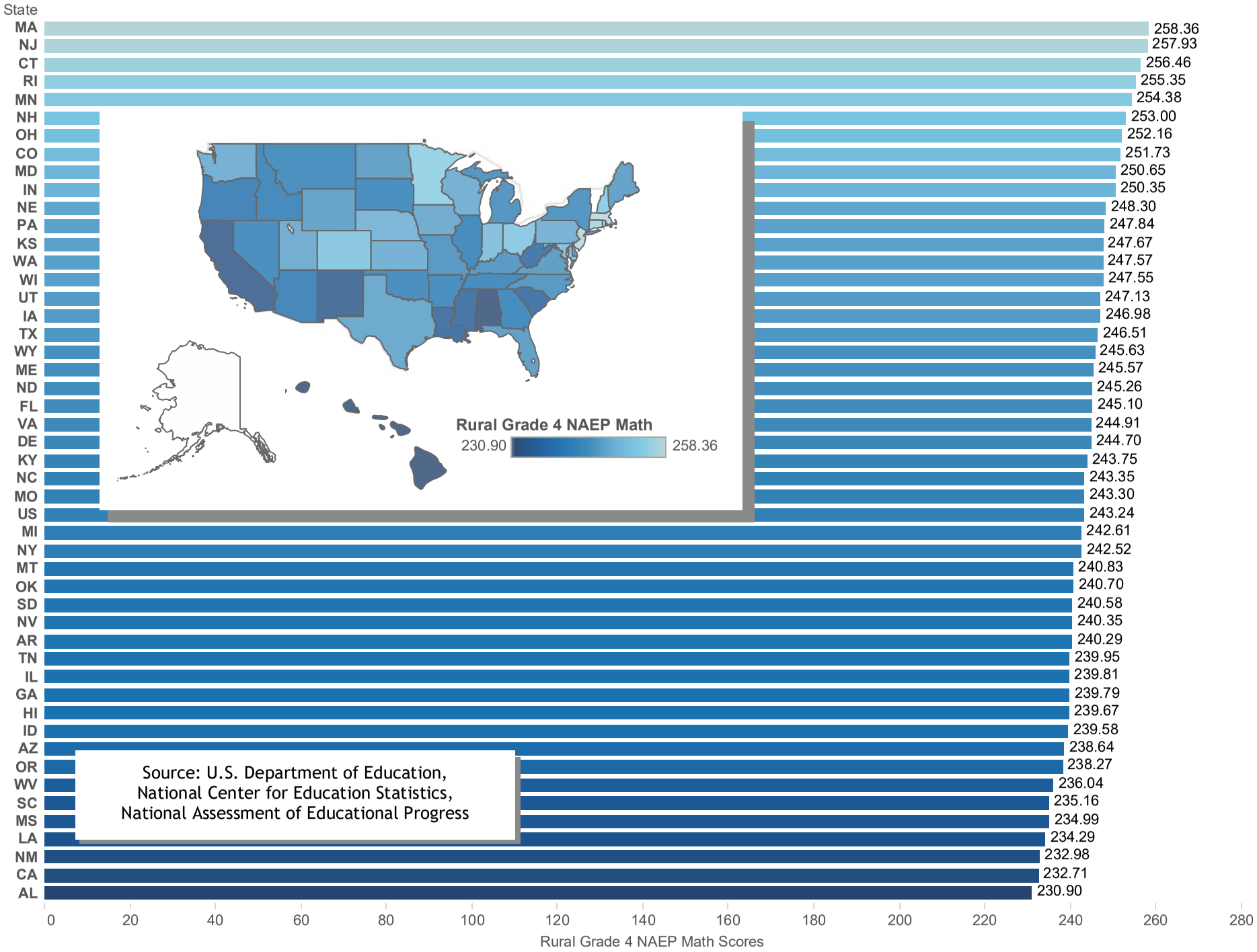
Total current expenditures for instructional salaries, divided by the total number of instructional staff members.



Source: U.S. Census Bureau, Public Elementary and Secondary Education Finance Data for 2011-12 (National Center for Education Statistics F-33 Database)

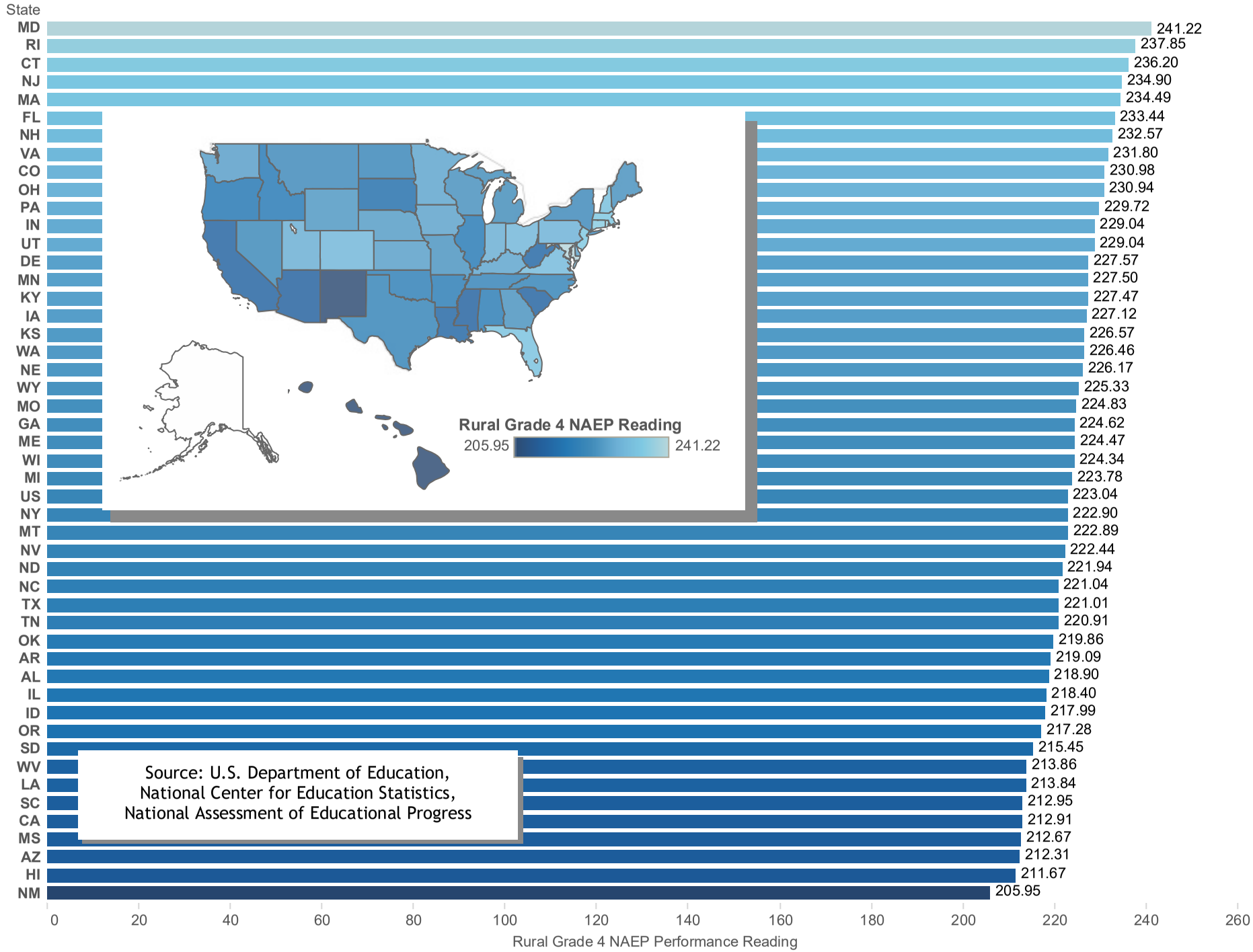
Rural Grade 4 NAEP Math Scores

The mean score on the 2013 National Assessment of Educational Progress (NAEP) math test administered to students in grade 4, as reported by the U.S. Department of Education for the sample of rural schools in each state.



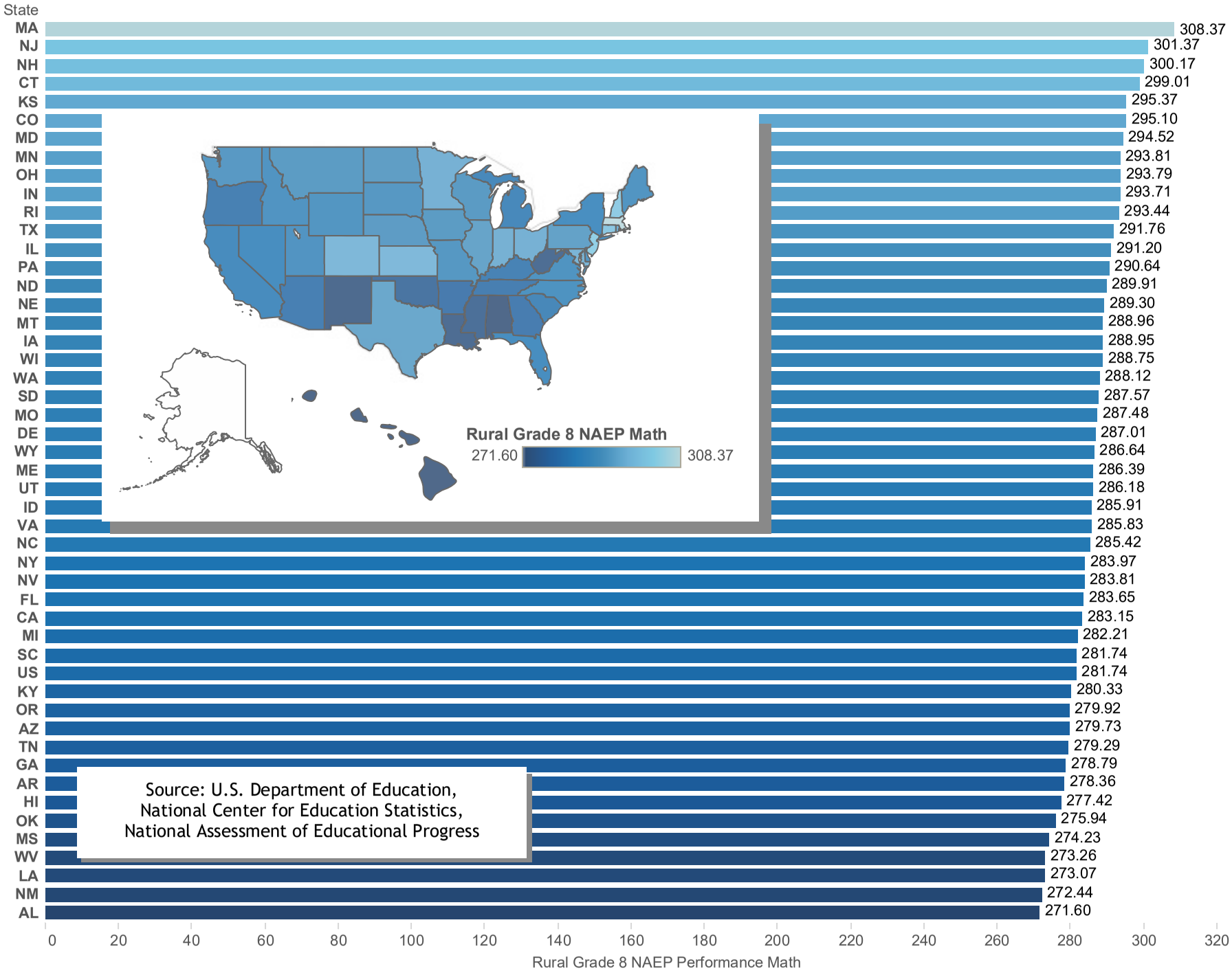
Rural Grade 4 NAEP Reading Scores

The mean score on the 2013 National Assessment of Educational Progress (NAEP) reading test administered to students in grade 4, as reported by the U.S. Department of Education for the sample of rural schools in each state.



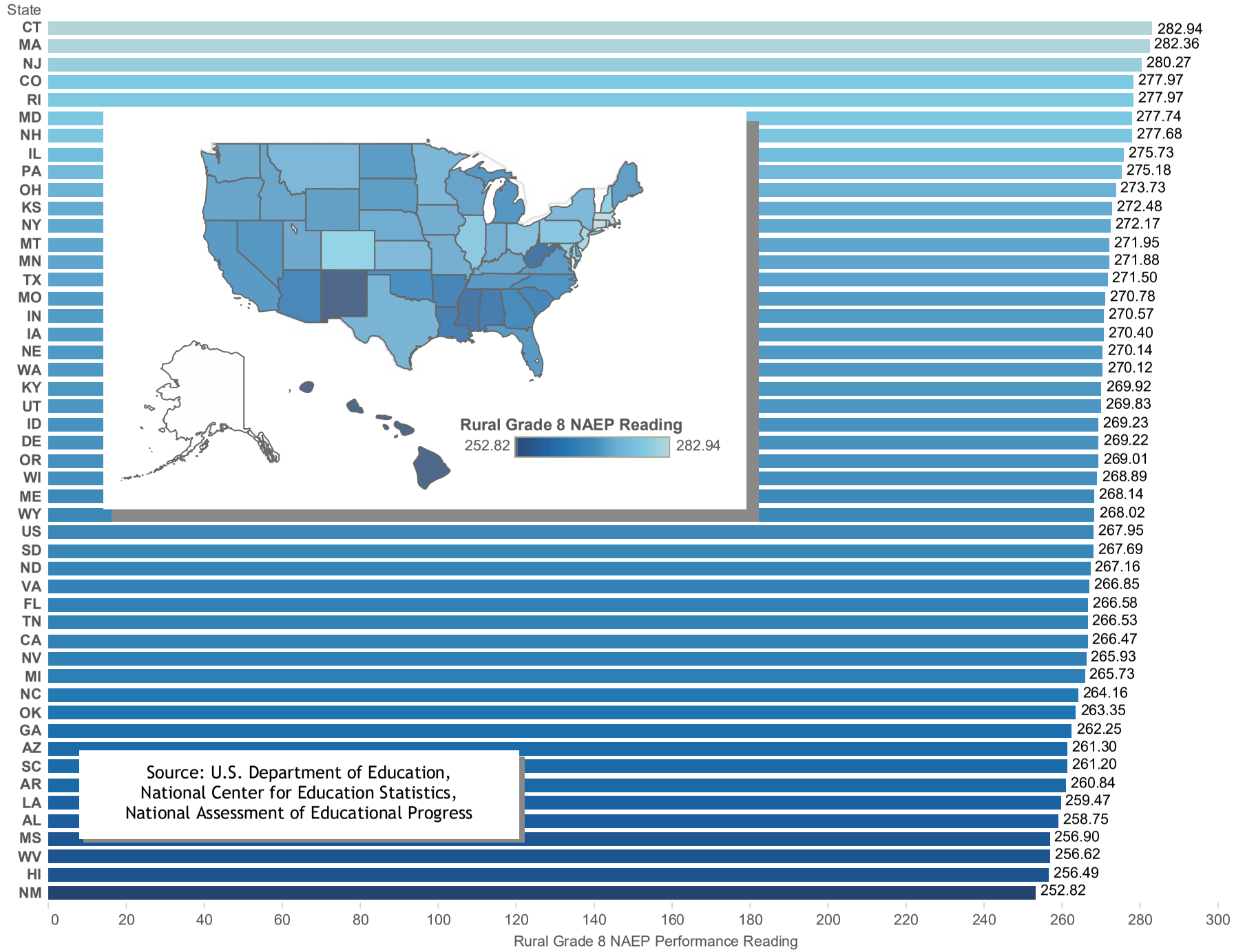
Rural Grade 8 NAEP Math Scores

The mean score on the 2013 National Assessment of Educational Progress (NAEP) math test administered to students in grade 8, as reported by the U.S. Department of Education for the sample of rural schools in each state.



Rural Grade 8 NAEP Reading Scores

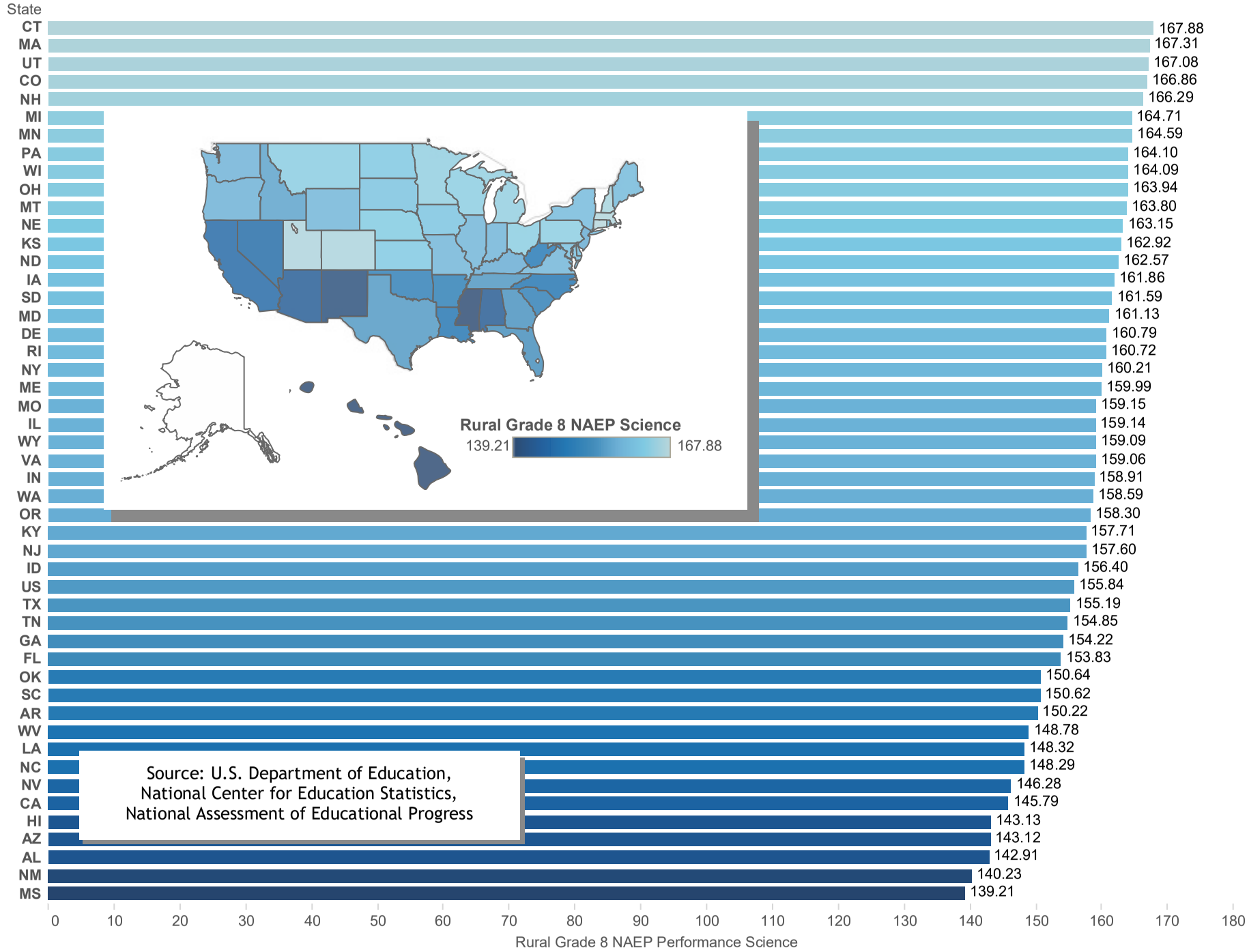
The mean score on the 2013 National Assessment of Educational Progress (NAEP) reading test administered to students in grade 8, as reported by the U.S. Department of Education for the sample of rural schools in each state.



Source: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress

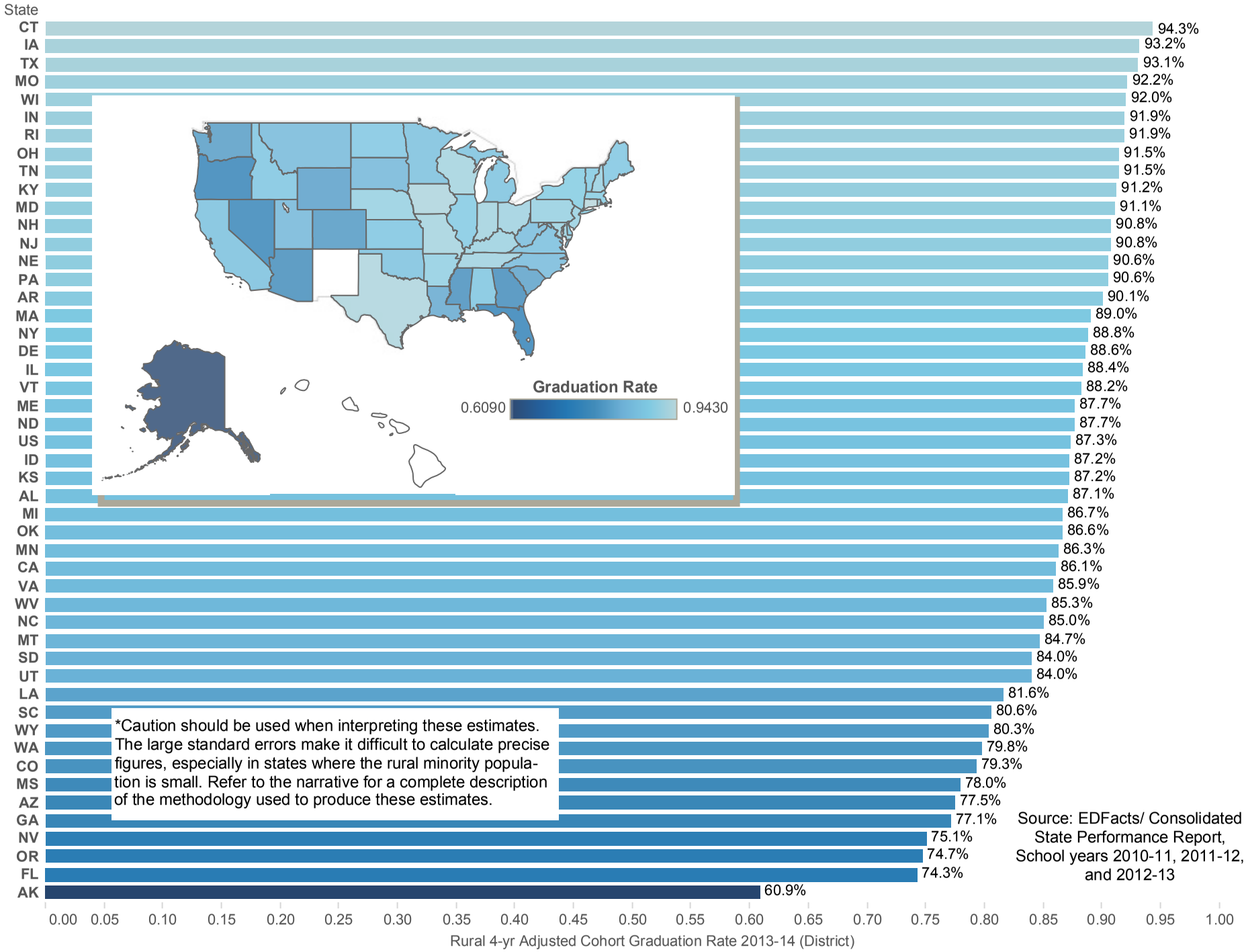
Rural Grade 8 NAEP Science Scores

The mean score on the 2011 National Assessment of Educational Progress (NAEP) science test administered to students in grade 8, as reported by the U.S. Department of Education for the sample of rural schools in each state.



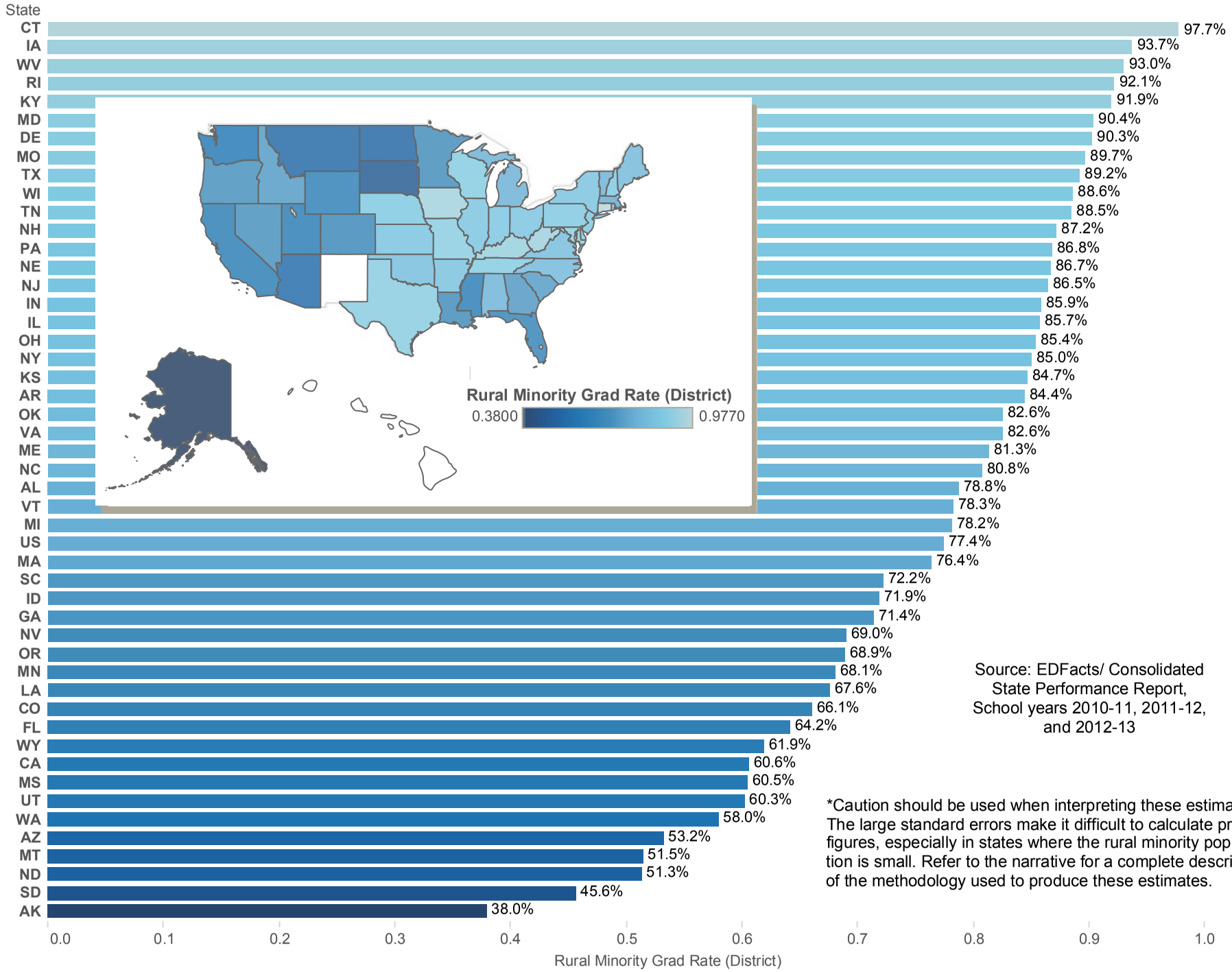
Graduation Rates of Rural Districts

The number of graduating seniors in rural school districts divided by the total number of students who started with the cohort four years earlier, adjusted for transfer students.*



Graduation Rates among Rural Minority Students

The number of graduating seniors in rural school districts who were of a race other than White divided by the total number who started with the cohort four years earlier, adjusted for transfer students.*

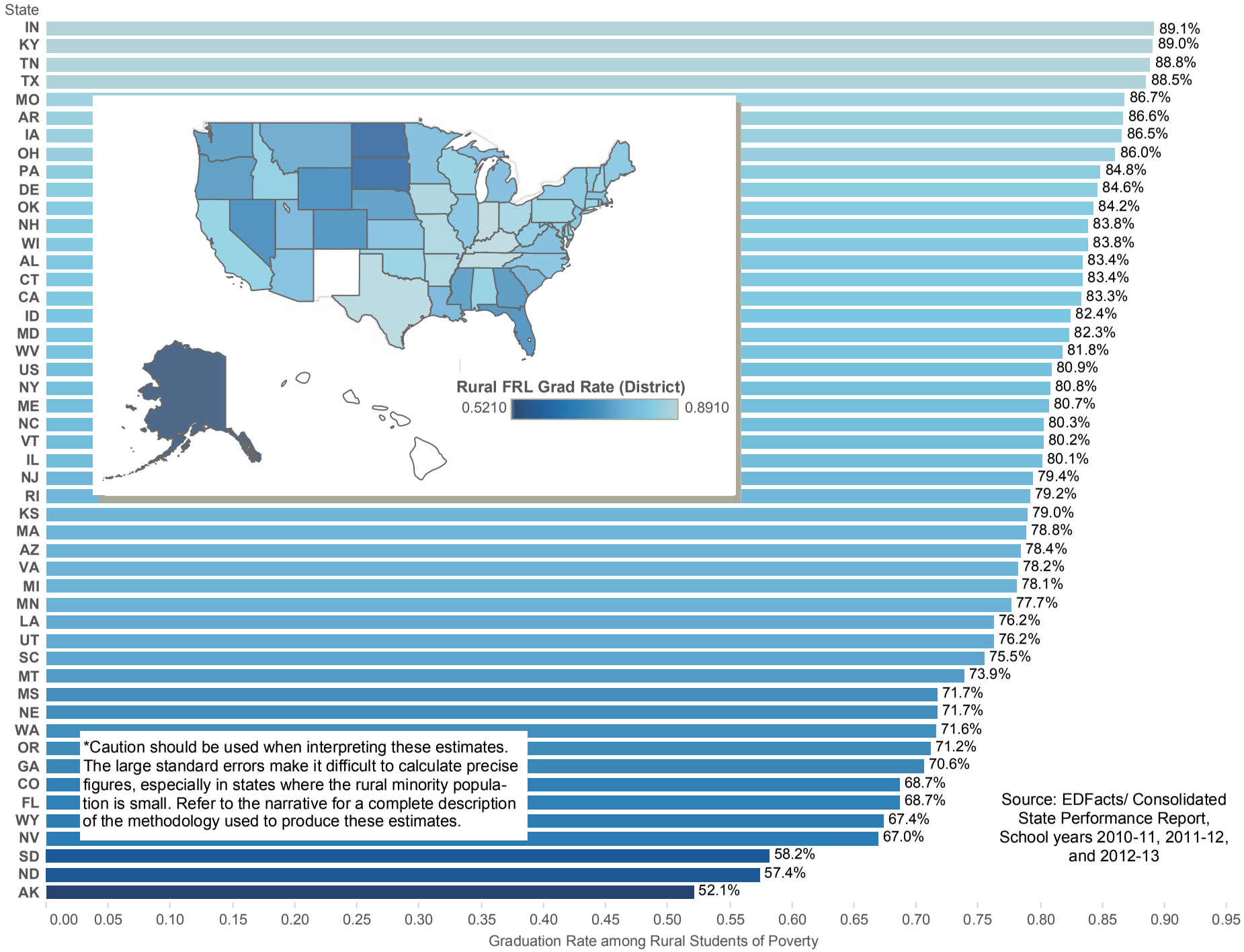


Source: EDFacts/ Consolidated State Performance Report, School years 2010-11, 2011-12, and 2012-13

*Caution should be used when interpreting these estimates. The large standard errors make it difficult to calculate precise figures, especially in states where the rural minority population is small. Refer to the narrative for a complete description of the methodology used to produce these estimates.

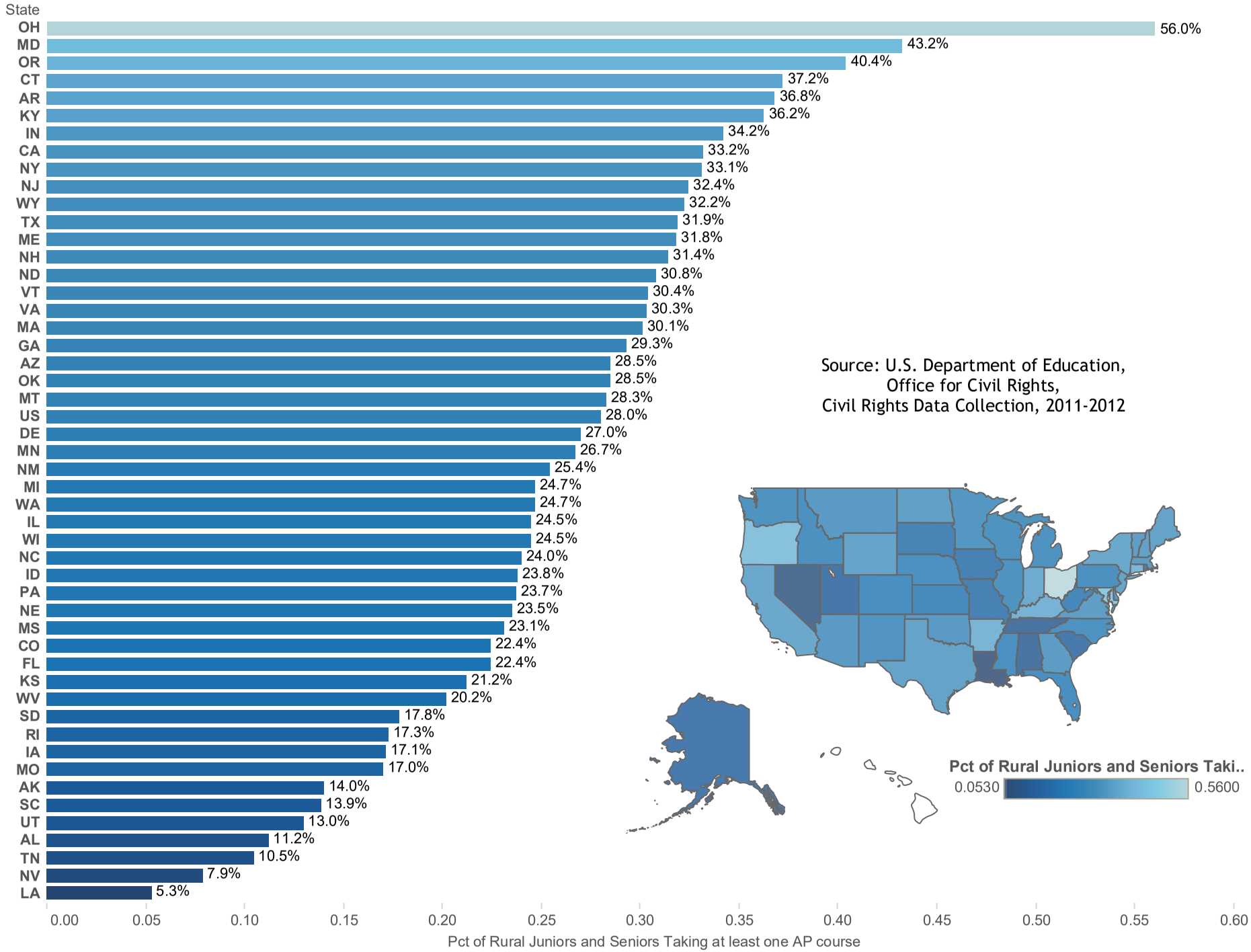
Graduation Rates among Rural Students of Poverty

The number of graduating seniors in rural school districts who were eligible for free or reduced lunches divided by the total number who started with the cohort four years earlier, adjusted for transfer students.*



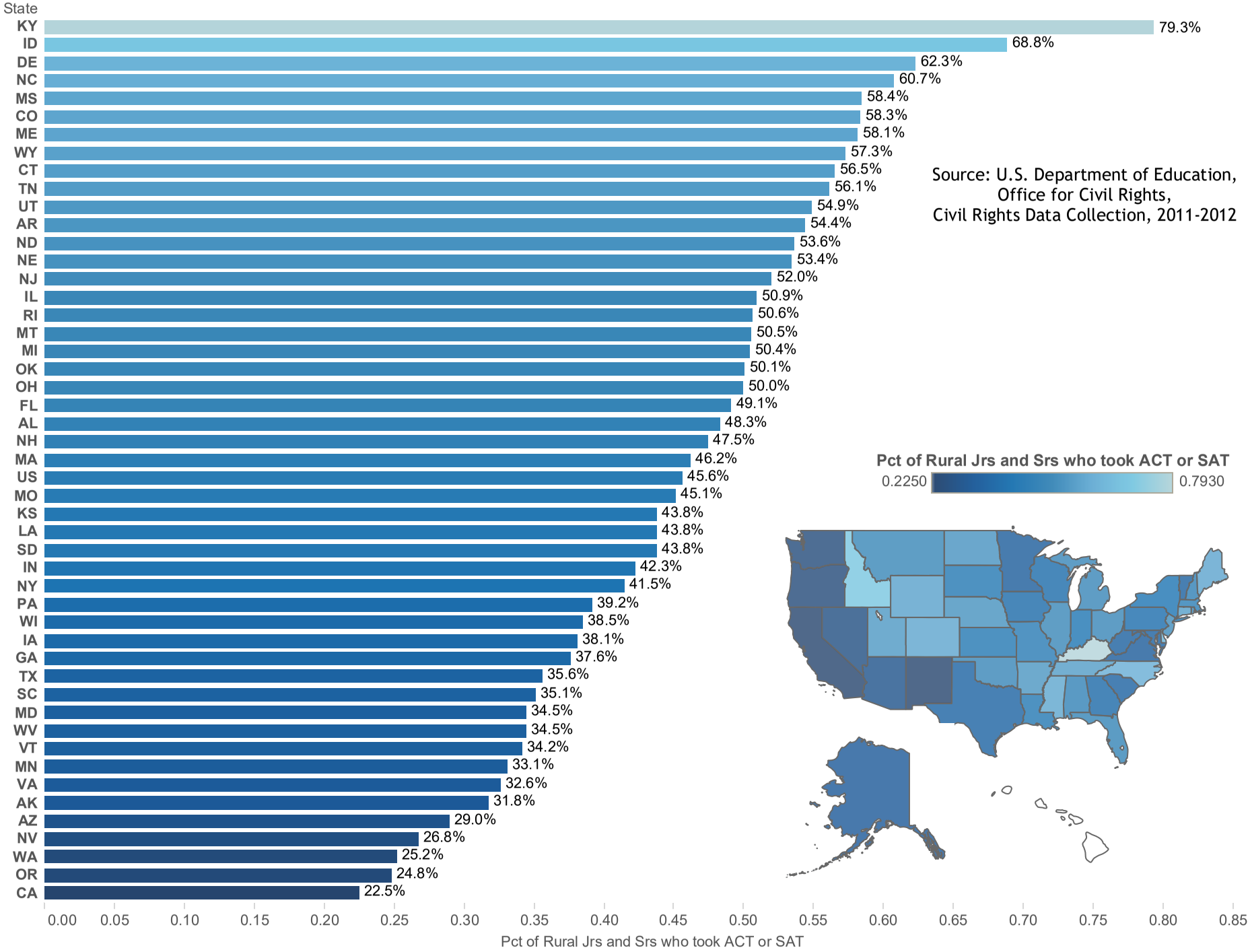
Percent of Rural Juniors and Seniors Taking AP Coursework

The number of juniors and seniors in rural districts who took at least one AP course, expressed as a percentage of all juniors and seniors enrolled in rural districts.



Percent of Rural Juniors and Seniors Taking the ACT or SAT

The number of juniors and seniors in rural districts who took the ACT or the SAT, expressed as a percentage of all juniors and seniors enrolled in rural districts.



ALABAMA - Alabama is the nation's third highest priority rural state according to our ranking system. More than one in three students attend rural schools, one of the largest proportional rural student enrollments in the nation. Nearly six in 10 of the state's nearly 265,000 rural students live in poverty. Rural schools and districts are among the nation's largest, and instructional spending and instructional salaries are lower than in nearly all other states. Rural high school graduation rates and minority graduation are below the national average, and rural student participation in Advanced Placement courses is among the nation's lowest.

PRIORITY RANKING

3

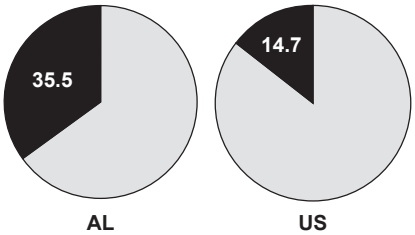
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

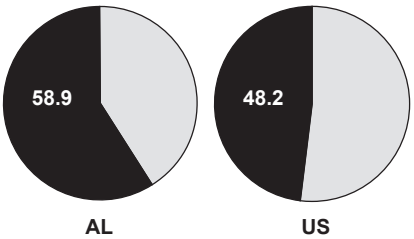
10

	AL	Rank*
Percent rural schools	44.9%	16
Percent small rural school districts	0.0%	43
Percent rural students	35.5%	7
Number of rural students	264,760	8
Percent state education funds to rural districts	37.3%	8

Percent rural students



Percent rural students eligible for free or reduced lunches



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

24

	AL	Rank*
Percent rural minority students	28.3%	17
Percent rural ELL students	1.9%	25
Percent rural IEP students	10.9%	44
Percent rural students eligible for free or reduced lunches	58.9%	12
Percent rural mobility	11.5%	19

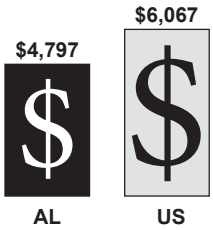
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

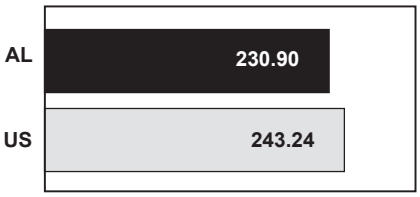
10

	AL	Rank*
Rural instructional expenditures per pupil	$4,797	6
Ratio of instructional to transportation expenditures	$9.37	16
Median organizational scale (x 100)	25,019	8
State revenue to schools per local dollar	$2.03	38
Rural salary expenditures per instructional FTE	$49,420	10

Rural instructional expenditures per pupil



Rural Grade 4 NAEP performace (math)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

3

	AL	Rank*
Rural Grade 4 NAEP performance (math)	230.90	1
Rural Grade 4 NAEP performance (reading)	218.90	13
Rural Grade 8 NAEP performance (math)	271.60	1
Rural Grade 8 NAEP performance (reading)	258.75	5
Rural Grade 8 NAEP performance (science)	142.91	3

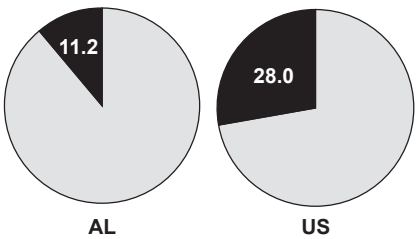
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

21

	AL	Rank*
Overall graduation rate in rural districts	87.1%	23
Graduation rate for rural minority students	78.8%	23
Graduation rate for rural free or reduced lunch eligible students	83.4%	34
Percent rural Juniors and Seniors taking at least one AP course	11.2%	4
Percent rural Juniors and Seniors who took the ACT or SAT	48.3%	27

Percent rural Juniors and Seniors taking at least one AP course



*** A rank of 1 is most crucial or most urgent**

ALASKA - Nearly six in ten Alaska schools are located in rural areas, and these rural schools serve high percentages of ELL students, minority students, and families who have changed residence in the previous 12 months. Even with rural instructional expenditures and salary expenditures that are among the highest in the U.S., Alaska is our highest priority state with regard to college readiness indicators (including the nation's lowest graduation rate for rural students overall, rural minority students, and economically disadvantaged rural students). The high school graduation rate for rural minority students is less than half of the national average.

PRIORITY RANKING

10

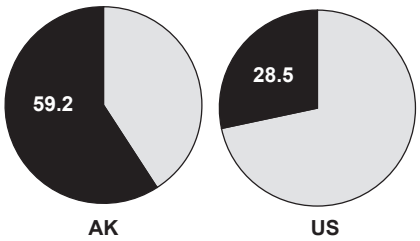
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

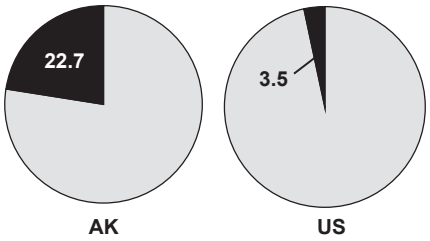
11

	AK	Rank*
Percent rural schools	59.2%	6
Percent small rural school districts	69.1%	9
Percent rural students	25.2%	15
Number of rural students	32,889	43
Percent state education funds to rural districts	36.3%	10

Percent rural schools



Percent rural ELL students



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

4

	AK	Rank*
Percent rural minority students	63.9%	2
Percent rural ELL students	22.7%	2
Percent rural IEP students	13.3%	33
Percent rural students eligible for free or reduced lunches	52.0%	20
Percent rural mobility	13.1%	6

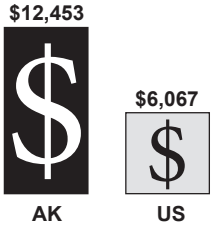
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

49

	AK	Rank*
Rural instructional expenditures per pupil	$12,453	49
Ratio of instructional to transportation expenditures	$25.81	49
Median organizational scale (x 100)	948	42
State revenue to schools per local dollar	$3.83	47
Rural salary expenditures per instructional FTE	$87,805	49

Rural instructional expenditures per pupil



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

NA

	AK	Rank*
Rural Grade 4 NAEP performance (math)	NA	NA
Rural Grade 4 NAEP performance (reading)	NA	NA
Rural Grade 8 NAEP performance (math)	NA	NA
Rural Grade 8 NAEP performance (reading)	NA	NA
Rural Grade 8 NAEP performance (science)	NA	NA

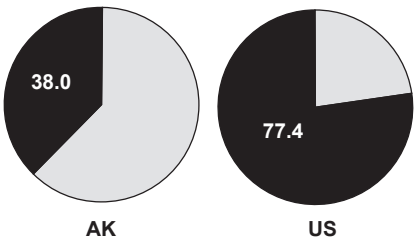
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

1

	AK	Rank*
Overall graduation rate in rural districts	60.9%	1
Graduation rate for rural minority students	38.0%	1
Graduation rate for rural free or reduced lunch eligible students	52.1%	1
Percent rural Juniors and Seniors taking at least one AP course	14.0%	7
Percent rural Juniors and Seniors who took the ACT or SAT	31.8%	6

Graduation rate for rural minority students



*** A rank of 1 is most crucial or most urgent**

ARIZONA - Arizona's rural students represent a fairly small proportion of all public students in the state, but they are one of the nation's most diverse student populations. More than half of all rural students are minorities, nearly seven in ten live in poverty, and one in 20 is a non-native English speaker. Spending on instruction is the nation's second lowest at nearly $1,500 per pupil below the national average. Outcomes are poor, with rural NAEP performance below those of nearly all other states. On three of five measures of college readiness (rural high school graduation rate, rural minority high school graduation rate, and rural ACT/SAT participation), Arizona ranks among the 10 lowest performing.

PRIORITY RANKING

2

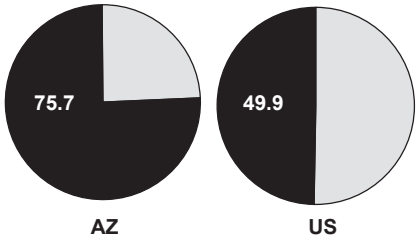
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

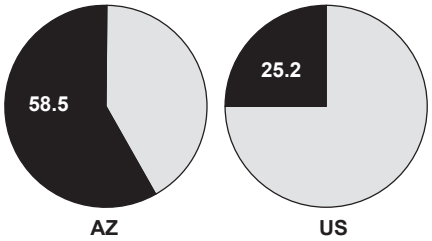
41

	AZ	Rank*
Percent rural schools	18.2%	39
Percent small rural school districts	75.7%	6
Percent rural students	5.3%	43
Number of rural students	49,859	38
Percent state education funds to rural districts	7.2%	41

Percent small rural districts



Percent rural minority students



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

2

	AZ	Rank*
Percent rural minority students	58.5%	3
Percent rural ELL students	4.9%	11
Percent rural IEP students	13.7%	27
Percent rural students eligible for free or reduced lunches	67.1%	5
Percent rural mobility	13.2%	5

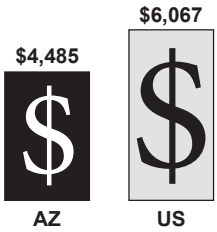
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

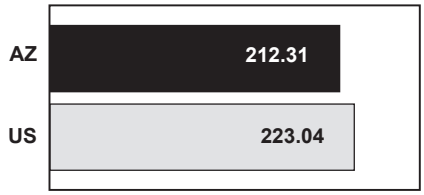
2

	AZ	Rank*
Rural instructional expenditures per pupil	$4,485	3
Ratio of instructional to transportation expenditures	$7.61	4
Median organizational scale (x 100)	1,764	32
State revenue to schools per local dollar	$0.91	17
Rural salary expenditures per instructional FTE	$50,196	12

Rural instructional expenditures per pupil



Rural Grade 4 NAEP performace (reading)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

7

	AZ	Rank*
Rural Grade 4 NAEP performance (math)	238.64	9
Rural Grade 4 NAEP performance (reading)	212.31	3
Rural Grade 8 NAEP performance (math)	279.73	11
Rural Grade 8 NAEP performance (reading)	261.30	9
Rural Grade 8 NAEP performance (science)	143.12	4

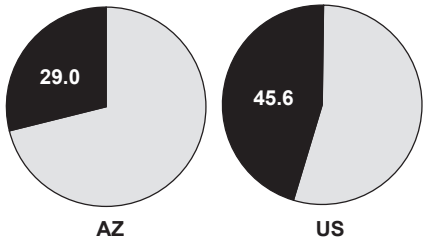
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

8

	AZ	Rank*
Overall graduation rate in rural districts	77.5%	6
Graduation rate for rural minority students	53.2%	5
Graduation rate for rural free or reduced lunch eligible students	78.4%	20
Percent rural Juniors and Seniors taking at least one AP course	28.5%	29
Percent rural Juniors and Seniors who took the ACT or SAT	29.0%	5

Percent rural Juniors and Seniors who took the ACT or SAT



*** A rank of 1 is most crucial or most urgent**

ARKANSAS - Nearly three in ten students in Arkansas attend rural schools, and nearly half of all schools serve rural communities. The poverty rate among rural students is seventh highest in the US, and nearly 13% of all students have experienced a residence change in the previous 12 months. Instructional spending and salaries are among the lowest in the nation, with only two states spending less on instructional salaries. Outcome measures are among the lowest in the nation across the board, with the lowest rural NAEP performance coming at the 8th grade level. College readiness measures are all above the national median, with graduation rates for rural economically disadvantaged students and rural AP course-taking rates that are higher than nearly all other states.

PRIORITY RANKING

20

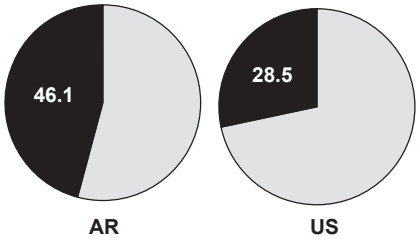
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

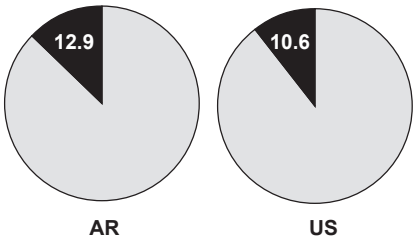
16

	AR	Rank*
Percent rural schools	46.1%	14
Percent small rural school districts	18.4%	33
Percent rural students	28.4%	14
Number of rural students	135,939	21
Percent state education funds to rural districts	29.9%	16

Percent rural schools



Percent rural mobility



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

16

	AR	Rank*
Percent rural minority students	18.5%	27
Percent rural ELL students	3.2%	17
Percent rural IEP students	12.0%	40
Percent rural students eligible for free or reduced lunches	63.9%	7
Percent rural mobility	12.9%	8

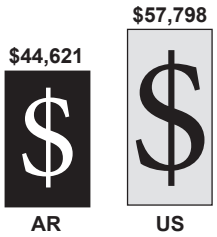
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

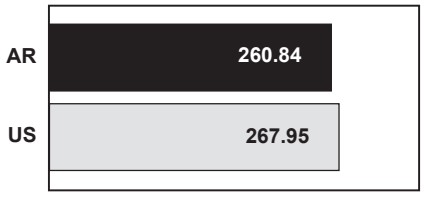
23

	AR	Rank*
Rural instructional expenditures per pupil	$5,169	10
Ratio of instructional to transportation expenditures	$12.95	42
Median organizational scale (x 100)	2,658	26
State revenue to schools per local dollar	$1.75	36
Rural salary expenditures per instructional FTE	$44,621	3

Rural salary expenditures per instructional FTE



Rural Grade 8 NAEP performace (reading)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

10

	AR	Rank*
Rural Grade 4 NAEP performance (math)	240.29	15
Rural Grade 4 NAEP performance (reading)	219.09	14
Rural Grade 8 NAEP performance (math)	278.36	8
Rural Grade 8 NAEP performance (reading)	260.84	7
Rural Grade 8 NAEP performance (science)	150.22	11

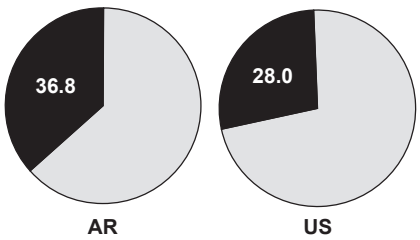
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

45

	AR	Rank*
Overall graduation rate in rural districts	90.1%	33
Graduation rate for rural minority students	84.4%	28
Graduation rate for rural free or reduced lunch eligible students	86.6%	43
Percent rural Juniors and Seniors taking at least one AP course	36.8%	45
Percent rural Juniors and Seniors who took the ACT or SAT	54.4%	38

Percent rural Juniors and Seniors taking at least one AP course



*** A rank of 1 is most crucial or most urgent**

CALIFORNIA - California has one of the nation's lowest percentages of rural schools and students, but one of the highest percentages of small rural districts and the 16th largest absolute rural student enrollment. The state also educates the largest percentage of rural ELL students in the nation and one of the highest percentages of rural minority students. Per pupil instructional spending in rural school districts is lower than all but 14 states, and rural NAEP performance is consistently among the nation's lowest. College readiness indicators are a mixed bag, with two measures above the national median (graduation rate for rural economically disadvantaged students and rural AP participation rates) and two others among the lowest in the U.S. (rural minority graduation rate and rural ACT/SAT participation rate).

PRIORITY RANKING

25

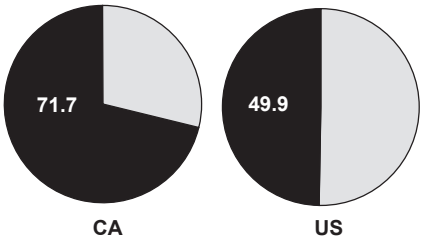
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

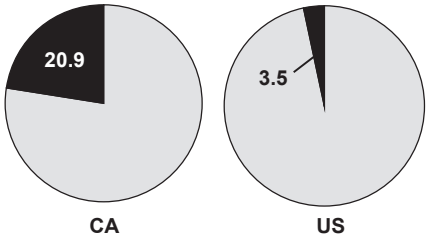
39

	CA	Rank*
Percent rural schools	11.5%	47
Percent small rural school districts	71.7%	8
Percent rural students	3.1%	48
Number of rural students	187,176	16
Percent state education funds to rural districts	3.0%	48

Percent small rural districts



Percent rural ELL students



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

9

	CA	Rank*
Percent rural minority students	57.5%	4
Percent rural ELL students	20.9%	3
Percent rural IEP students	8.8%	48
Percent rural students eligible for free or reduced lunches	59.1%	11
Percent rural mobility	12.5%	11

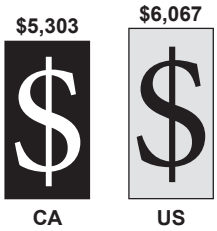
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

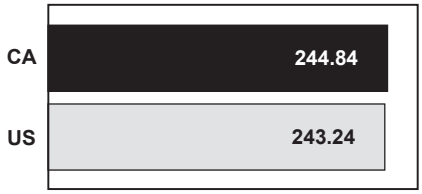
42

	CA	Rank*
Rural instructional expenditures per pupil	$5,303	15
Ratio of instructional to transportation expenditures	$11.86	36
Median organizational scale (x 100)	1,745	33
State revenue to schools per local dollar	$1.43	29
Rural salary expenditures per instructional FTE	$74,573	42

Rural instructional expenditures per pupil



Rural Grade 4 NAEP performace (math)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

8

	CA	Rank*
Rural Grade 4 NAEP performance (math)	232.71	2
Rural Grade 4 NAEP performance (reading)	212.91	5
Rural Grade 8 NAEP performance (math)	283.15	16
Rural Grade 8 NAEP performance (reading)	266.47	15
Rural Grade 8 NAEP performance (science)	145.79	6

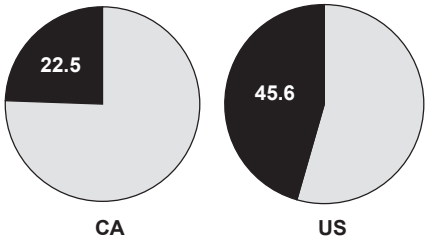
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

18

	CA	Rank*
Overall graduation rate in rural districts	86.1%	19
Graduation rate for rural minority students	60.6%	9
Graduation rate for rural free or reduced lunch eligible students	83.3%	33
Percent rural Juniors and Seniors taking at least one AP course	33.2%	42
Percent rural Juniors and Seniors who took the ACT or SAT	22.5%	1

Percent rural Juniors and Seniors who took the ACT or SAT



*** A rank of 1 is most crucial or most urgent**

COLORADO - One fourth of Colorado's schools are rural, while only 6% of its students are. Colorado schools and districts are smaller than in most other states, but enroll a high percentage of rural minority and ELL students. Rural expenditures per pupil and teacher salaries are below the U.S. median. Educational outcomes are consistently positive, with rural NAEP scores higher than nearly all other states. College readiness measures are among the nation's lowest, however, with graduation rates for rural students overall, rural minority students, and rural economically disadvantaged students all urgent areas for concern. Rural student participation in Advanced Placement courses is also a concern.

PRIORITY RANKING

28

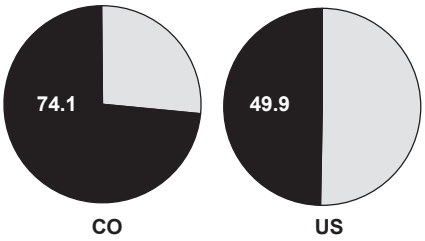
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

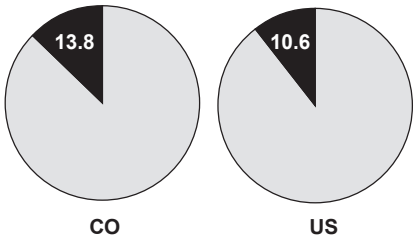
37

	CO	Rank*
Percent rural schools	25.1%	35
Percent small rural school districts	74.1%	7
Percent rural students	6.2%	42
Number of rural students	53,721	35
Percent state education funds to rural districts	8.7%	40

Percent small rural districts



Percent rural mobility



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

7

	CO	Rank*
Percent rural minority students	28.2%	18
Percent rural ELL students	6.4%	6
Percent rural IEP students	NA	NA
Percent rural students eligible for free or reduced lunches	42.8%	29
Percent rural mobility	13.8%	3

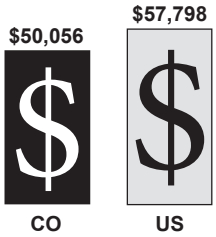
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

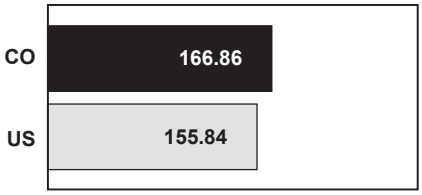
27

	CO	Rank*
Rural instructional expenditures per pupil	$5,468	19
Ratio of instructional to transportation expenditures	$11.66	34
Median organizational scale (x 100)	1,065	41
State revenue to schools per local dollar	$0.88	15
Rural salary expenditures per instructional FTE	$50,056	$57,798

Rural salary expenditures per instructional FTE



Rural Grade 8 NAEP performace (science)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

45

	CO	Rank*
Rural Grade 4 NAEP performance (math)	251.73	41
Rural Grade 4 NAEP performance (reading)	230.98	40
Rural Grade 8 NAEP performance (math)	295.10	43
Rural Grade 8 NAEP performance (reading)	277.97	44
Rural Grade 8 NAEP performance (science)	166.86	45

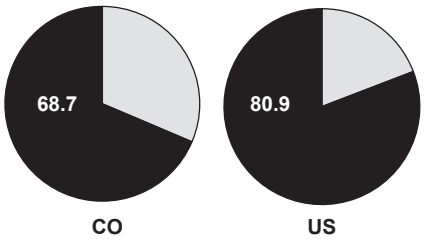
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

12

	CO	Rank*
Overall graduation rate in rural districts	79.3%	8
Graduation rate for rural minority students	66.1%	12
Graduation rate for rural free or reduced lunch eligible students	68.7%	6
Percent rural Juniors and Seniors taking at least one AP course	22.4%	14
Percent rural Juniors and Seniors who took the ACT or SAT	58.3%	44

Graduation rate for rural free or reduced lunch eligible students



*** A rank of 1 is most crucial or most urgent**

CONNECTICUT - Connecticut's rural districts constitute only 15% of the state's schools and serve just under 56,000 students. Rural household mobility and rural student poverty are lower than in any other state. Expenditures on rural instructional salaries rank second only to Alaska, and state funding support relative to local support is weak. NAEP performance among rural Connecticut students is consistently among the nation's highest. Rural college readiness measures are also consistently strong, with one exception (high school graduation for rural students in poverty—at 83%, below the rankings on other indicators in the gauge but still above the national median).

PRIORITY RANKING

49

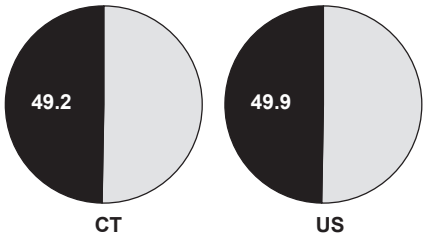
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

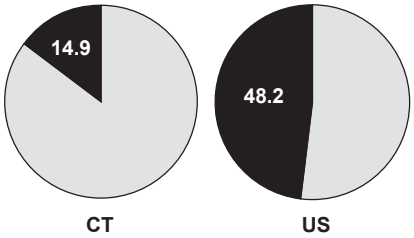
41

	CT	Rank*
Percent rural schools	15.1%	44
Percent small rural school districts	49.2%	24
Percent rural students	10.9%	36
Number of rural students	55,939	34
Percent state education funds to rural districts	9.6%	37

Percent small rural districts



Percent rural students eligible for free or reduced lunches



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

49

	CT	Rank*
Percent rural minority students	12.4%	32
Percent rural ELL students	0.8%	39
Percent rural IEP students	13.1%	34
Percent rural students eligible for free or reduced lunches	14.9%	49
Percent rural mobility	6.8%	47

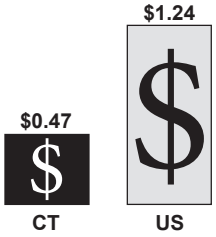
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

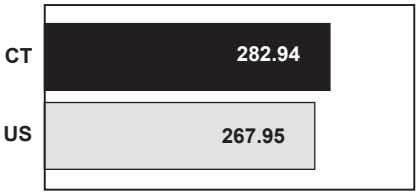
36

	CT	Rank*
Rural instructional expenditures per pupil	$10,073	45
Ratio of instructional to transportation expenditures	$10.31	29
Median organizational scale (x 100)	4,534	20
State revenue to schools per local dollar	$0.47	3
Rural salary expenditures per instructional FTE	$82,103	47

State revenue to schools per local dollar



Rural Grade 8 NAEP performace (reading)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

47

	CT	Rank*
Rural Grade 4 NAEP performance (math)	256.46	46
Rural Grade 4 NAEP performance (reading)	236.20	46
Rural Grade 8 NAEP performance (math)	299.01	45
Rural Grade 8 NAEP performance (reading)	282.94	48
Rural Grade 8 NAEP performance (science)	167.88	48

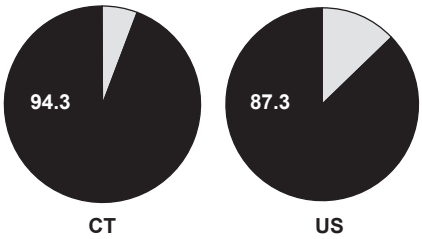
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

47

	CT	Rank*
Overall graduation rate in rural districts	94.3%	48
Graduation rate for rural minority students	97.7%	48
Graduation rate for rural free or reduced lunch eligible students	83.4%	34
Percent rural Juniors and Seniors taking at least one AP course	37.2%	46
Percent rural Juniors and Seniors who took the ACT or SAT	56.5%	41

Overall graduation rate in rural districts



*** A rank of 1 is most crucial or most urgent**

DELAWARE - With fewer than 21,000 students in rural districts, Delaware has one of the lowest absolute rural enrollments in the nation. However, the rural student population includes a relatively high percentage of minority and English Language Learners, as well as a high proportion of special education students. Rural schools and districts are among the nation's largest, and educational outcomes are clustered around the national median. Rural college readiness measures are all above the national median, with notably strong performance on rural high school graduation rates and rates of ACT/SAT participation among rural students.

PRIORITY RANKING

43

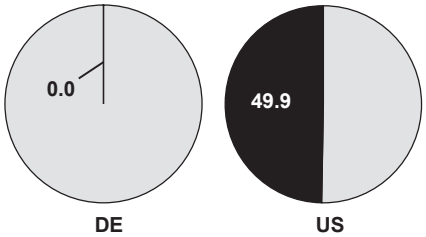
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

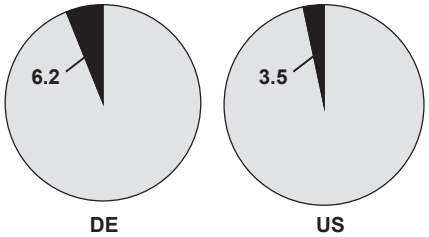
43

	DE	Rank*
Percent rural schools	16.2%	42
Percent small rural school districts	0.0%	43
Percent rural students	17.4%	29
Number of rural students	20,957	46
Percent state education funds to rural districts	16.9%	32

Percent small rural districts



Percent rural ELL students



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

22

	DE	Rank*
Percent rural minority students	40.3%	11
Percent rural ELL students	6.2%	7
Percent rural IEP students	14.9%	17
Percent rural students eligible for free or reduced lunches	38.6%	36
Percent rural mobility	8.5%	32

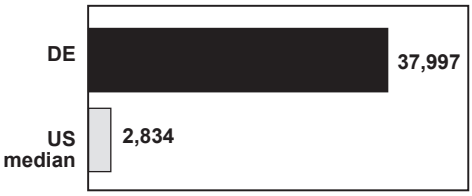
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

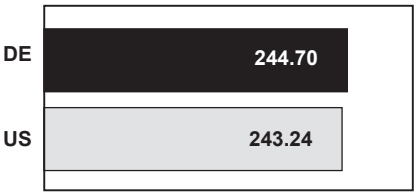
40

	DE	Rank*
Rural instructional expenditures per pupil	$7,833	39
Ratio of instructional to transportation expenditures	$10.08	25
Median organizational scale (x 100)	37,997	5
State revenue to schools per local dollar	$2.35	41
Rural salary expenditures per instructional FTE	$75,321	43

Median organizational scale (x 100)



Rural Grade 4 NAEP performace (math)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

30

	DE	Rank*
Rural Grade 4 NAEP performance (math)	244.70	25
Rural Grade 4 NAEP performance (reading)	277.57	35
Rural Grade 8 NAEP performance (math)	287.01	26
Rural Grade 8 NAEP performance (reading)	269.22	25
Rural Grade 8 NAEP performance (science)	160.79	31

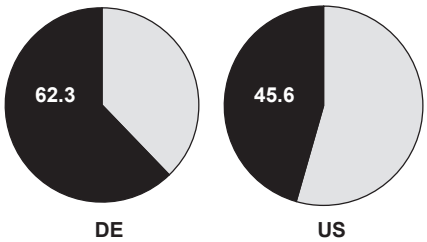
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

43

	DE	Rank*
Overall graduation rate in rural districts	88.6%	30
Graduation rate for rural minority students	90.3%	42
Graduation rate for rural free or reduced lunch eligible students	84.6%	39
Percent rural Juniors and Seniors taking at least one AP course	27.0%	27
Percent rural Juniors and Seniors who took the ACT or SAT	62.3%	47

Percent rural Juniors and Seniors who took the ACT or SAT



*** A rank of 1 is most crucial or most urgent**

FLORIDA - Florida's rural student population is not very large in absolute or proportional terms; it is however one of the most diverse rural student populations in the U.S. More than half of all rural students live in poverty, nearly 40% are minorities, and 14% qualify for special education. Rural mobility is higher than in all but seven other states. Rural schools and districts are the nation's largest, and instructional spending and salaries are low. Outcomes are mixed, with performance at or above the national median at grade four and performance well below the national median at grade eight. College readiness measures are among the nation's lowest on four of five indicators (rural ACT/SAT participation is the one exception, with a rate that is just above the national median).

PRIORITY RANKING

8

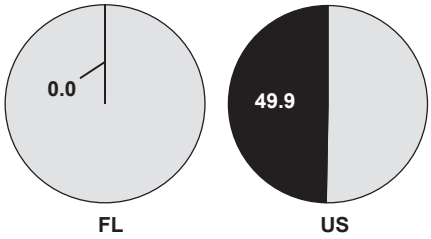
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

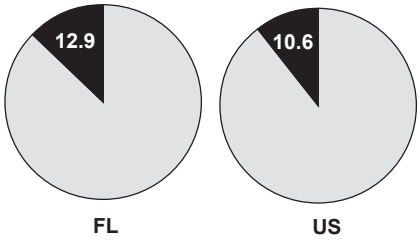
45

	FL	Rank*
Percent rural schools	12.5%	46
Percent small rural school districts	0.0%	43
Percent rural students	4.3%	45
Number of rural students	115,776	23
Percent state education funds to rural districts	5.1%	45

Percent small rural districts



Percent rural mobility



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

8

	FL	Rank*
Percent rural minority students	37.8%	12
Percent rural ELL students	3.1%	18
Percent rural IEP students	14.9%	17
Percent rural students eligible for free or reduced lunches	55.0%	17
Percent rural mobility	12.9%	8

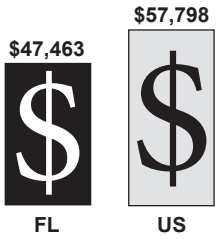
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

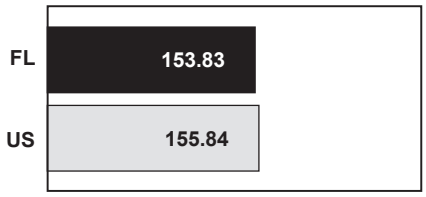
8

	FL	Rank*
Rural instructional expenditures per pupil	$4,887	8
Ratio of instructional to transportation expenditures	$9.83	22
Median organizational scale (x 100)	111,271	1
State revenue to schools per local dollar	$0.99	18
Rural salary expenditures per instructional FTE	$47,463	8

Rural salary expenditures per instructional FTE



Rural Grade 8 NAEP performace (science)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

20

	FL	Rank*
Rural Grade 4 NAEP performance (math)	245.10	27
Rural Grade 4 NAEP performance (reading)	233.44	43
Rural Grade 8 NAEP performance (math)	283.65	17
Rural Grade 8 NAEP performance (reading)	266.58	17
Rural Grade 8 NAEP performance (science)	153.83	14

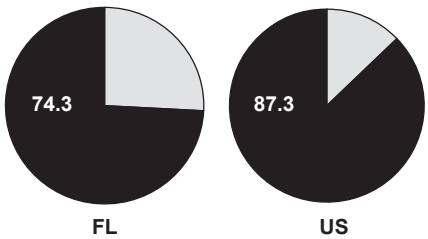
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

5

	FL	Rank*
Overall graduation rate in rural districts	74.3%	2
Graduation rate for rural minority students	64.2%	11
Graduation rate for rural free or reduced lunch eligible students	68.7%	6
Percent rural Juniors and Seniors taking at least one AP course	22.4%	14
Percent rural Juniors and Seniors who took the ACT or SAT	49.1%	28

Overall graduation rate in rural districts



*** A rank of 1 is most crucial or most urgent**

GEORGIA - Nearly 380,000 students attend rural schools in Georgia, the third largest absolute rural student enrollment in the nation. The rural student poverty rate is among the highest in the US, as are the percentages of rural minority and rural students. Only three states have larger rural schools and districts than Georgia. Rural NAEP performance is consistently among the lowest in the nation (with one exception—grade four reading, which is near the national median). College readiness measures are a cause for concern, with the nation's fifth lowest graduation rate for rural students and eighth lowest rate for rural students in poverty. Only one college readiness measure (rural AP participation rate) is above the national median.

PRIORITY RANKING

6

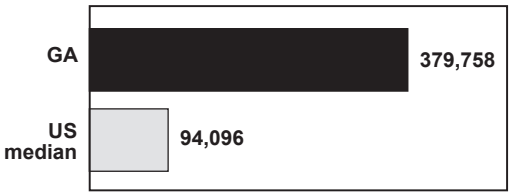
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

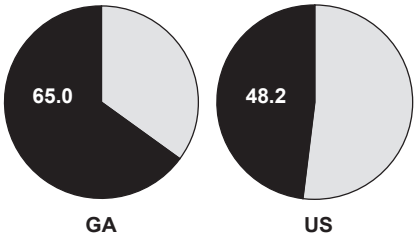
20

	GA	Rank*
Percent rural schools	30.9%	29
Percent small rural school districts	4.3%	39
Percent rural students	22.3%	19
Number of rural students	379,758	3
Percent state education funds to rural districts	24.6%	18

Number of rural students



Percent rural students eligible for free or reduced lunches



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

13

	GA	Rank*
Percent rural minority students	36.1%	13
Percent rural ELL students	3.8%	14
Percent rural IEP students	11.9%	41
Percent rural students eligible for free or reduced lunches	65.0%	6
Percent rural mobility	11.6%	17

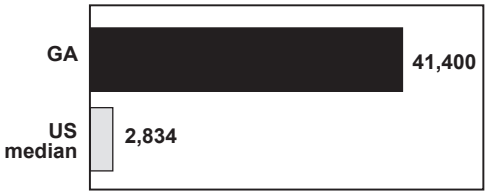
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

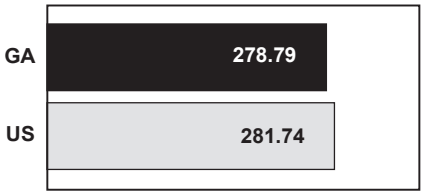
21

	GA	Rank*
Rural instructional expenditures per pupil	$5,576	21
Ratio of instructional to transportation expenditures	$12.66	40
Median organizational scale (x 100)	41,400	4
State revenue to schools per local dollar	$1.19	22
Rural salary expenditures per instructional FTE	$58,073	27

Median organizational scale (x 100)



Rural Grade 8 NAEP performace (math)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

12

	GA	Rank*
Rural Grade 4 NAEP performance (math)	239.79	12
Rural Grade 4 NAEP performance (reading)	224.62	26
Rural Grade 8 NAEP performance (math)	278.79	9
Rural Grade 8 NAEP performance (reading)	262.25	10
Rural Grade 8 NAEP performance (science)	154.22	15

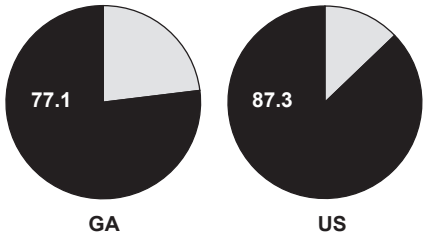
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

9

	GA	Rank*
Overall graduation rate in rural districts	77.1%	5
Graduation rate for rural minority students	71.4%	17
Graduation rate for rural free or reduced lunch eligible students	70.6%	8
Percent rural Juniors and Seniors taking at least one AP course	29.3%	31
Percent rural Juniors and Seniors who took the ACT or SAT	37.6%	15

Overall graduation rate in rural districts



*** A rank of 1 is most crucial or most urgent**

HAWAII - Hawaii is the only state where public schooling is organized as a single local education agency, making it impossible to differentiate by locale at the district level. However, the information that is available is presented below. Just over one in ten of Hawaii's schools are located in rural areas and rural household mobility is less than nine percent (both well below the national median and ranked as lower priority than nearly all other states). NAEP performance in rural areas is lower than nearly all other states, but we were not able to compute college readiness measures due to data limitations. Hawaii is excluded from four of the five gauge rankings, and is not part of the overall state ranking.

PRIORITY RANKING

NA

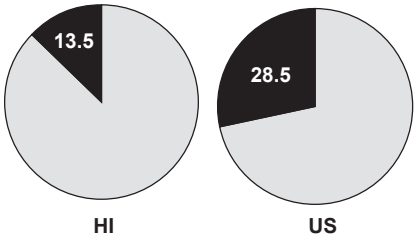
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

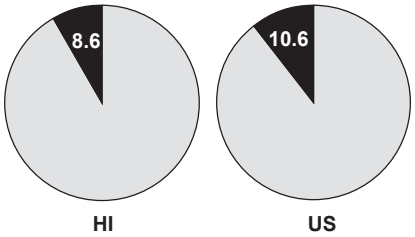
NA

	HI	Rank*
Percent rural schools	13.5%	45
Percent small rural school districts	NA	NA
Percent rural students	NA	NA
Number of rural students	NA	NA
Percent state education funds to rural districts	NA	NA

Percent rural schools



Percent rural mobility



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

NA

	HI	Rank*
Percent rural minority students	NA	NA
Percent rural ELL students	NA	NA
Percent rural IEP students	NA	NA
Percent rural students eligible for free or reduced lunches	NA	NA
Percent rural mobility	8.6%	40

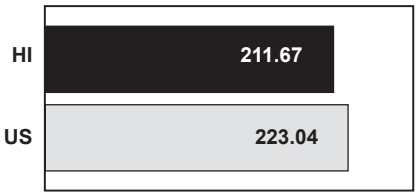
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

NA

	HI	Rank*
Rural instructional expenditures per pupil	NA	NA
Ratio of instructional to transportation expenditures	NA	NA
Median organizational scale (x 100)	NA	NA
State revenue to schools per local dollar	NA	NA
Rural salary expenditures per instructional FTE	NA	NA

Rural Grade 4 NAEP performace (reading)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

4

	HI	Rank*
Rural Grade 4 NAEP performance (math)	239.67	11
Rural Grade 4 NAEP performance (reading)	211.67	2
Rural Grade 8 NAEP performance (math)	277.42	7
Rural Grade 8 NAEP performance (reading)	256.49	2
Rural Grade 8 NAEP performance (science)	143.13	5

GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

NA

	HI	Rank*
Overall graduation rate in rural districts	NA	NA
Graduation rate for rural minority students	NA	NA
Graduation rate for rural free or reduced lunch eligible students	NA	NA
Percent rural Juniors and Seniors taking at least one AP course	NA	NA
Percent rural Juniors and Seniors who took the ACT or SAT	NA	NA

*** A rank of 1 is most crucial or most urgent**

IDAHO - Four in ten of Idaho's public schools are located in rural communities, and six in ten rural districts are smaller than the national median. More than one in five rural students in Idaho is from a minority population, only nine states educate a higher percentage of rural ELL students, and the rural student mobility rate is 10th highest in the U.S. No state spends less on instruction per pupil, only five states have lower instructional salaries, and educational outcomes are at or below national medians (with grade four performance the most concerning). College readiness measures are a mixed bag, with strong rates of rural ACT/SAT participation, weak performance on rural AP participation and rural minority high school graduation, and average performance on overall rural graduation rate and graduation rate for rural economically disadvantaged students.

PRIORITY RANKING

17

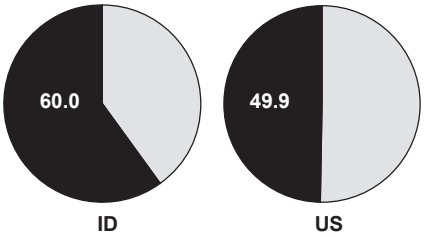
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

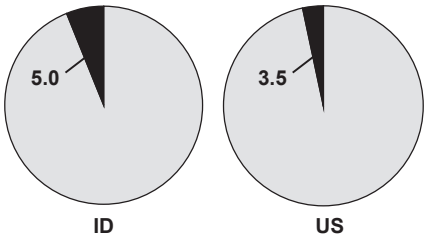
26

	ID	Rank*
Percent rural schools	39.8%	20
Percent small rural school districts	60.0%	18
Percent rural students	17.8%	27
Number of rural students	50,239	37
Percent state education funds to rural districts	21.4%	25

Percent small rural districts



Percent rural ELL students



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

20

	ID	Rank*
Percent rural minority students	21.3%	22
Percent rural ELL students	5.0%	10
Percent rural IEP students	10.0%	46
Percent rural students eligible for free or reduced lunches	51.8%	21
Percent rural mobility	12.6%	10

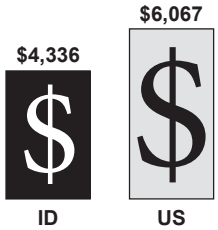
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

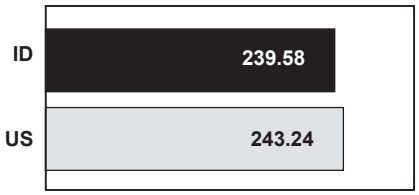
14

	ID	Rank*
Rural instructional expenditures per pupil	$4,336	1
Ratio of instructional to transportation expenditures	$10.19	27
Median organizational scale (x 100)	1,911	29
State revenue to schools per local dollar	$2.95	44
Rural salary expenditures per instructional FTE	$45,238	6

Rural instructional expenditures per pupil



Rural Grade 4 NAEP performace (math)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

17

	ID	Rank*
Rural Grade 4 NAEP performance (math)	239.58	10
Rural Grade 4 NAEP performance (reading)	217.99	11
Rural Grade 8 NAEP performance (math)	285.91	22
Rural Grade 8 NAEP performance (reading)	269.23	26
Rural Grade 8 NAEP performance (science)	156.40	18

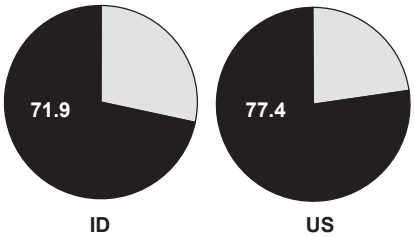
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

28

	ID	Rank*
Overall graduation rate in rural districts	87.2%	24
Graduation rate for rural minority students	71.9%	18
Graduation rate for rural free or reduced lunch eligible students	82.4%	32
Percent rural Juniors and Seniors taking at least one AP course	23.8%	19
Percent rural Juniors and Seniors who took the ACT or SAT	68.8%	48

Graduation rate for rural minority students



*** A rank of 1 is most crucial or most urgent**

ILLINOIS - Illinois has relatively large absolute rural student enrollment, but rural students make up only one in eleven public school students in the state. Rural students in Illinois have one of the highest rates of qualification for special education in rural America, with all other indicators in our diversity gauge well below the national medians. Instructional spending and instructional salaries are near the national median, but proportional state contribution to funding is less than all but seven states and the burden of pupil transportation expenditures is higher than all but six other states. Educational outcomes are mixed, with notably lower performance at grade four in comparison with grade eight. College readiness measures are clustered around the national medians, as reflected in the overall gauge ranking of 28.

PRIORITY RANKING

31

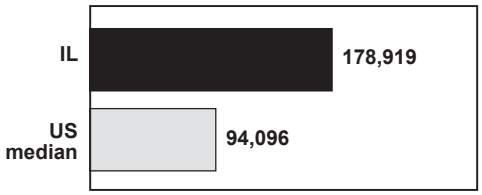
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

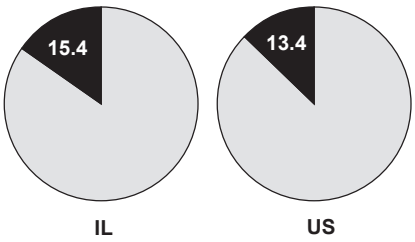
34

	IL	Rank*
Percent rural schools	20.9%	37
Percent small rural school districts	56.7%	20
Percent rural students	8.7%	38
Number of rural students	178,919	17
Percent state education funds to rural districts	9.5%	38

Number of rural students



Percent rural IEP students



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

36

	IL	Rank*
Percent rural minority students	10.0%	38
Percent rural ELL students	0.9%	37
Percent rural IEP students	15.4%	12
Percent rural students eligible for free or reduced lunches	38.2%	38
Percent rural mobility	8.8%	38

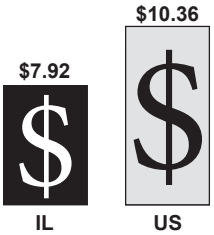
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

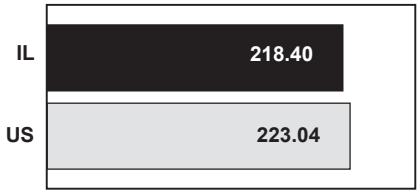
10

	IL	Rank*
Rural instructional expenditures per pupil	$5,771	24
Ratio of instructional to transportation expenditures	$7.92	7
Median organizational scale (x 100)	1,336	37
State revenue to schools per local dollar	$0.77	8
Rural salary expenditures per instructional FTE	$54,345	21

Ratio of instructional to transportation expenditures



Rural Grade 4 NAEP performace (reading)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

23

	IL	Rank*
Rural Grade 4 NAEP performance (math)	239.81	13
Rural Grade 4 NAEP performance (reading)	218.40	12
Rural Grade 8 NAEP performance (math)	291.20	36
Rural Grade 8 NAEP performance (reading)	275.73	41
Rural Grade 8 NAEP performance (science)	159.14	26

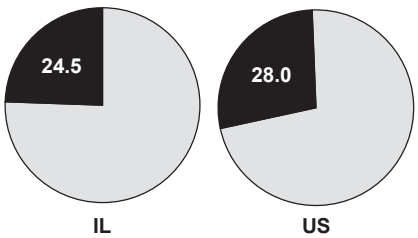
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

28

	IL	Rank*
Overall graduation rate in rural districts	88.4%	29
Graduation rate for rural minority students	85.7%	32
Graduation rate for rural free or reduced lunch eligible students	80.1%	25
Percent rural Juniors and Seniors taking at least one AP course	24.5%	21
Percent rural Juniors and Seniors who took the ACT or SAT	50.9%	34

Percent rural Juniors and Seniors taking at least one AP course



*** A rank of 1 is most crucial or most urgent**

INDIANA - At nearly 250,000, Indiana has a larger absolute rural student population than all but eight other states. Proportionally, they represent roughly one in four of the state's public school students. The state's rural schools enroll a high percentage of students with special educational needs and a relatively small percentage of minority students. Indiana's rural NAEP performance is relatively strong, with somewhat higher performance in grade four than in grade eight. College readiness measures are generally strong, with the notable exception of ACT/SAT participation rates among rural students (at 42%, the only indicator that ranks below the national median).

PRIORITY RANKING

32

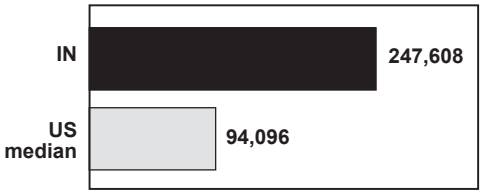
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

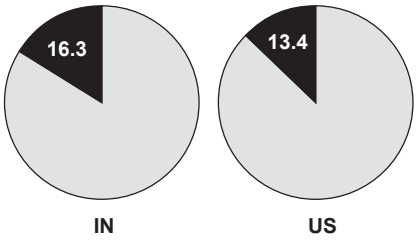
20

	IN	Rank*
Percent rural schools	37.0%	23
Percent small rural school districts	3.4%	40
Percent rural students	24.5%	16
Number of rural students	247,608	9
Percent state education funds to rural districts	24.3%	20

Number of rural students



Percent rural IEP students



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

27

	IN	Rank*
Percent rural minority students	8.4%	40
Percent rural ELL students	2.3%	21
Percent rural IEP students	16.3%	5
Percent rural students eligible for free or reduced lunches	40.9%	32
Percent rural mobility	10.0%	30

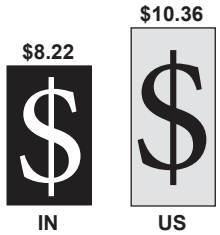
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

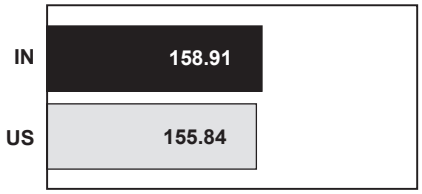
9

	IN	Rank*
Rural instructional expenditures per pupil	$5,210	14
Ratio of instructional to transportation expenditures	$8.22	8
Median organizational scale (x 100)	7,865	15
State revenue to schools per local dollar	$2.05	39
Rural salary expenditures per instructional FTE	$54,336	20

Ratio of instructional to transportation expenditures



Rural Grade 8 NAEP performace (science)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

37

	IN	Rank*
Rural Grade 4 NAEP performance (math)	250.35	39
Rural Grade 4 NAEP performance (reading)	229.04	36
Rural Grade 8 NAEP performance (math)	293.71	39
Rural Grade 8 NAEP performance (reading)	270.57	32
Rural Grade 8 NAEP performance (science)	158.91	23

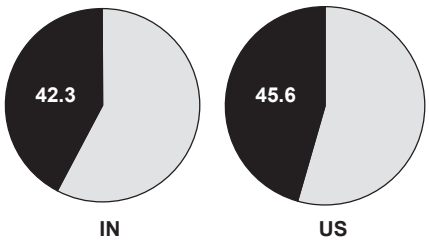
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

44

	IN	Rank*
Overall graduation rate in rural districts	91.9%	42
Graduation rate for rural minority students	85.9%	33
Graduation rate for rural free or reduced lunch eligible students	89.1%	48
Percent rural Juniors and Seniors taking at least one AP course	34.2%	43
Percent rural Juniors and Seniors who took the ACT or SAT	42.3%	20

Percent rural Juniors and Seniors who took the ACT or SAT



*** A rank of 1 is most crucial or most urgent**

IOWA - Half of Iowa's schools are located in rural districts, and these schools serve nearly one in three of the state's public school students. Student and family diversity indicators are all at or below the national median. Rural schools and districts in Iowa are smaller than those in most other states. Educational policy indicators are relatively positive, with the exception of our measure of proportional state contribution to school funding (which is well below the national average). Rural NAEP performance is slightly above the national median in all areas, and graduation rates are high for all rural students and the subgroups of rural minority and rural economically disadvantaged students. In contrast with those high graduation rates, the other two college readiness measures are concerning—only eight states have lower AP course-taking rates, and AP/SAT participation rates are 16th lowest in the U.S.

PRIORITY RANKING

39

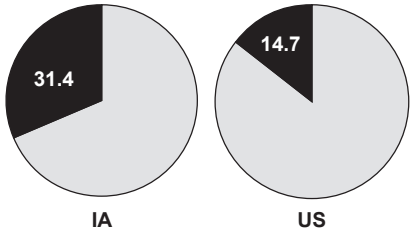
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

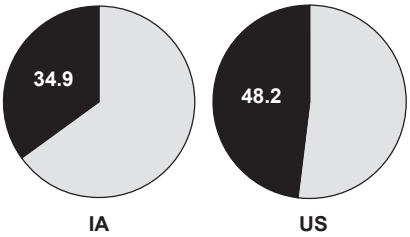
12

	IA	Rank*
Percent rural schools	50.3%	12
Percent small rural school districts	38.8%	28
Percent rural students	31.4%	11
Number of rural students	$157,778	19
Percent state education funds to rural districts	30.6%	15

Percent rural students



Percent rural students eligible for free or reduced lunches



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

45

	IA	Rank*
Percent rural minority students	8.4%	40
Percent rural ELL students	1.3%	31
Percent rural IEP students	12.3%	39
Percent rural students eligible for free or reduced lunches	34.9%	42
Percent rural mobility	9.8%	31

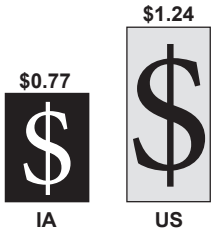
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

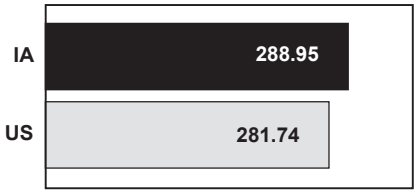
33

	IA	Rank*
Rural instructional expenditures per pupil	$6,026	27
Ratio of instructional to transportation expenditures	$12.54	39
Median organizational scale (x 100)	1,333	38
State revenue to schools per local dollar	$0.77	8
Rural salary expenditures per instructional FTE	$57,320	25

State revenue to schools per local dollar



Rural Grade 8 NAEP performace (math)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

34

	IA	Rank*
Rural Grade 4 NAEP performance (math)	246.98	32
Rural Grade 4 NAEP performance (reading)	227.12	32
Rural Grade 8 NAEP performance (math)	288.95	31
Rural Grade 8 NAEP performance (reading)	270.40	31
Rural Grade 8 NAEP performance (science)	161.86	34

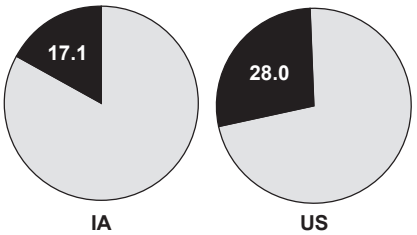
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

36

	IA	Rank*
Overall graduation rate in rural districts	93.2%	47
Graduation rate for rural minority students	93.7%	47
Graduation rate for rural free or reduced lunch eligible students	86.5%	42
Percent rural Juniors and Seniors taking at least one AP course	17.1%	9
Percent rural Juniors and Seniors who took the ACT or SAT	38.1%	16

Percent rural Juniors and Seniors taking at least one AP course



*** A rank of 1 is most crucial or most urgent**

KANSAS - Just over one in five public school students in Kansas attend a rural school, 46% of all public schools in Kansas are in rural areas, and two out of three districts report enrollments below the national median for rural districts. Student and family diversity indicators are mostly at or above the US median, with ELL and IEP student rates just outside the highest priority quartile. Instructional salary expenditures per FTE are nearly $17,000 below the national average, and educational outcomes are above average in all subject areas at all grades. Measures of college readiness among rural students is mostly clustered around the national medians, with the notable exception of ACT/SAT test-taking (13th lowest in the nation).

PRIORITY RANKING

28

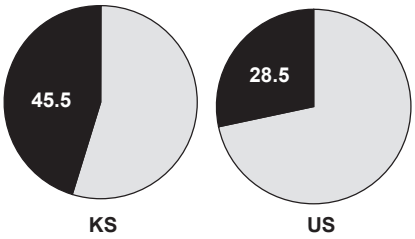
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

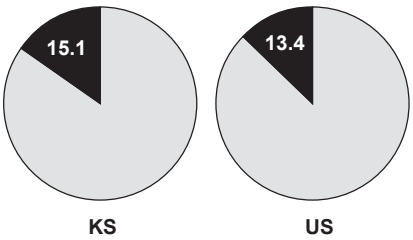
16

	KS	Rank*
Percent rural schools	45.5%	15
Percent small rural school districts	60.3%	17
Percent rural students	21.5%	21
Number of rural students	104,521	24
Percent state education funds to rural districts	23.9%	21

Percent rural schools



Percent rural IEP students



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

17

	KS	Rank*
Percent rural minority students	14.8%	29
Percent rural ELL students	3.4%	15
Percent rural IEP students	15.1%	16
Percent rural students eligible for free or reduced lunches	45.3%	26
Percent rural mobility	11.4%	20

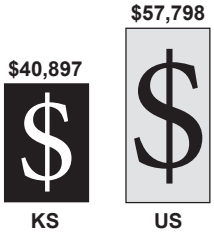
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

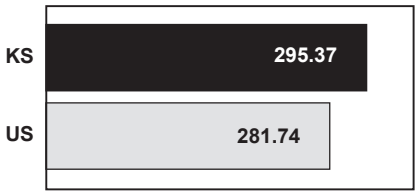
37

	KS	Rank*
Rural instructional expenditures per pupil	$6,545	31
Ratio of instructional to transportation expenditures	$12.43	38
Median organizational scale (x 100)	828	43
State revenue to schools per local dollar	$1.69	35
Rural salary expenditures per instructional FTE	$40,897	1

Rural salary expenditures per instructional FTE



Rural Grade 8 NAEP performace (math)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

38

	KS	Rank*
Rural Grade 4 NAEP performance (math)	247.67	36
Rural Grade 4 NAEP performance (reading)	226.57	31
Rural Grade 8 NAEP performance (math)	295.37	44
Rural Grade 8 NAEP performance (reading)	272.48	38
Rural Grade 8 NAEP performance (science)	162.92	36

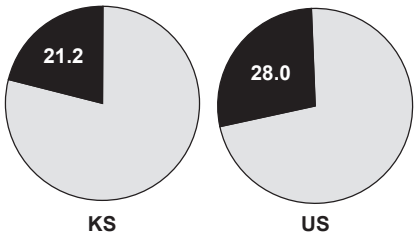
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

20

	KS	Rank*
Overall graduation rate in rural districts	87.2%	24
Graduation rate for rural minority students	84.7%	29
Graduation rate for rural free or reduced lunch eligible students	79.0%	22
Percent rural Juniors and Seniors taking at least one AP course	21.2%	13
Percent rural Juniors and Seniors who took the ACT or SAT	43.8%	21

Percent rural Juniors and Seniors taking at least one AP course



*** A rank of 1 is most crucial or most urgent**

KENTUCKY - Four in 10 public schools in Kentucky are located in rural areas, and they serve more 30% of all public school students. Rural enrollments are characterized by high rates of poverty, rural mobility, and students qualifying for special education services. The educational policy context does little to help, with large schools and districts, high transportation costs, and low levels of instructional spending. Educational outcomes are a mixed bag, with three measures near the national median, one notably higher (Grade 4 reading) and one notably lower Grade 8 math). Measures of college readiness among rural students are exceptionally strong, with four of five measures in the top 10 (i.e., highest readiness level according to our measures) and the other just outside the top 10.

PRIORITY RANKING

26

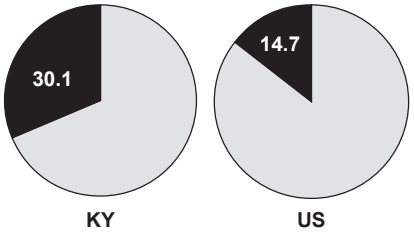
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

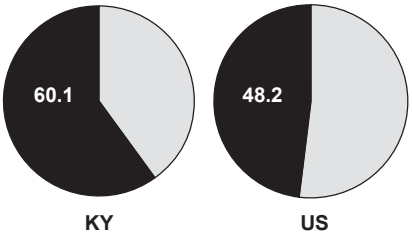
15

	KY	Rank*
Percent rural schools	40.7%	19
Percent small rural school districts	4.8%	37
Percent rural students	30.1%	12
Number of rural students	202,463	13
Percent state education funds to rural districts	34.6%	11

Percent rural students



Percent rural students eligible for free or reduced lunches



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

17

	KY	Rank*
Percent rural minority students	8.1%	42
Percent rural ELL students	1.4%	30
Percent rural IEP students	15.5%	10
Percent rural students eligible for free or reduced lunches	60.1%	10
Percent rural mobility	12.1%	14

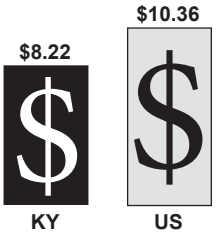
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

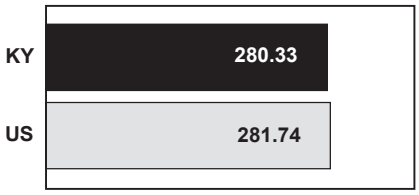
18

	KY	Rank*
Rural instructional expenditures per pupil	$5,318	17
Ratio of instructional to transportation expenditures	$8.22	8
Median organizational scale (x 100)	12,053	12
State revenue to schools per local dollar	$3.05	46
Rural salary expenditures per instructional FTE	$59,171	29

Ratio of instructional to transportation expenditures



Rural Grade 8 NAEP performace (math)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

20

	KY	Rank*
Rural Grade 4 NAEP performance (math)	243.75	24
Rural Grade 4 NAEP performance (reading)	227.47	33
Rural Grade 8 NAEP performance (math)	280.33	13
Rural Grade 8 NAEP performance (reading)	269.92	28
Rural Grade 8 NAEP performance (science)	157.71	20

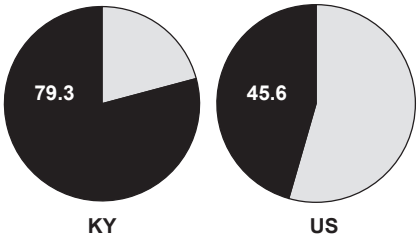
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

48

	KY	Rank*
Overall graduation rate in rural districts	91.2%	39
Graduation rate for rural minority students	91.9%	44
Graduation rate for rural free or reduced lunch eligible students	89.0%	47
Percent rural Juniors and Seniors taking at least one AP course	36.2%	44
Percent rural Juniors and Seniors who took the ACT or SAT	79.3%	49

Percent rural Juniors and Seniors who took the ACT or SAT



*** A rank of 1 is most crucial or most urgent**

LOUISIANA - Louisiana's rural students represent a fairly small proportion of all public students in the state, even though one in three of the state's public schools is located in a rural area. Seven in ten rural students live in poverty, 43% are minorities, and one in ten has changed residences in the previous 12 months. Spending on instruction relative to transportation is low, reflecting the large enrollment size of rural schools and districts in the state (7th largest in the U.S.). Outcomes are poor, with rural NAEP performance near the bottom on all subjects at all grade levels. Likewise, measures of rural college readiness are poor, with low graduation rates (collectively and among specific populations) and the nation's lowest rate of AP participation among rural students.

PRIORITY RANKING

16

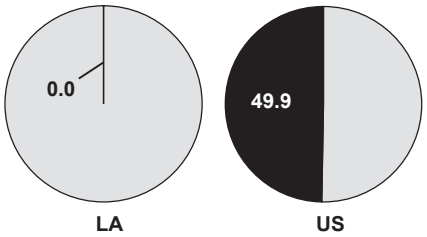
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

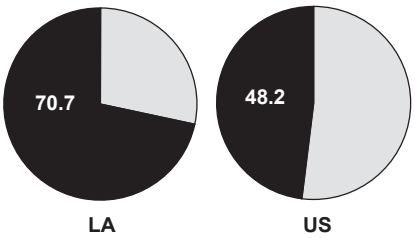
38

	LA	Rank*
Percent rural schools	33.2%	26
Percent small rural school districts	0.0%	43
Percent rural students	12.6%	33
Number of rural students	83,672	28
Percent state education funds to rural districts	13.8%	35

Percent small rural districts



Percent rural students eligible for free or reduced lunches



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

29

	LA	Rank*
Percent rural minority students	42.7%	8
Percent rural ELL students	0.6%	43
Percent rural IEP students	11.7%	42
Percent rural students eligible for free or reduced lunches	70.7%	3
Percent rural mobility	9.6%	33

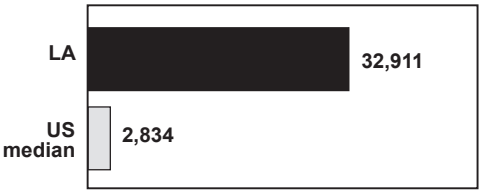
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

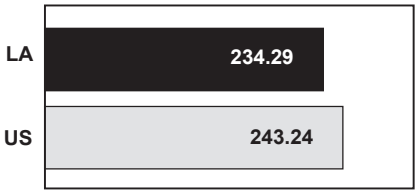
24

	LA	Rank*
Rural instructional expenditures per pupil	$7,165	36
Ratio of instructional to transportation expenditures	$8.92	14
Median organizational scale (x 100)	32,911	7
State revenue to schools per local dollar	$1.28	27
Rural salary expenditures per instructional FTE	$63,384	34

Median organizational scale (x 100)



Rural Grade 4 NAEP performace (math)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

5

	LA	Rank*
Rural Grade 4 NAEP performance (math)	234.29	4
Rural Grade 4 NAEP performance (reading)	213.84	7
Rural Grade 8 NAEP performance (math)	273.07	3
Rural Grade 8 NAEP performance (reading)	259.47	6
Rural Grade 8 NAEP performance (science)	148.32	9

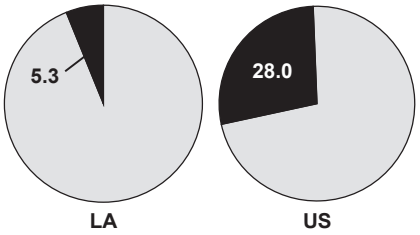
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

6

	LA	Rank*
Overall graduation rate in rural districts	81.6%	12
Graduation rate for rural minority students	67.5%	13
Graduation rate for rural free or reduced lunch eligible students	76.2%	15
Percent rural Juniors and Seniors taking at least one AP course	5.3%	1
Percent rural Juniors and Seniors who took the ACT or SAT	43.8%	21

Percent rural Juniors and Seniors taking at least one AP course



*** A rank of 1 is most crucial or most urgent**

MAINE - Maine ranks highest in the nation for rural importance, with seven of ten schools and more than half of its students in rural communities. Seven of ten rural districts report enrollments below the national median, and only Vermont spends more of its state education budget on rural districts. Maine serves a large percentage of rural students with special educational needs and has a poverty rate right around the national average. Rural students in Maine score close to the median in all NAEP subjects at all grade levels. In terms of college readiness measures, graduation rates hover around national averages, but rural AP participation and ACT/SAT test-taking rates are higher than most other states.

PRIORITY RANKING

21

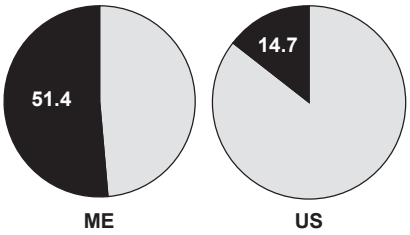
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

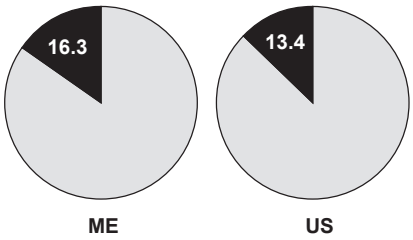
1

	ME	Rank*
Percent rural schools	68.1%	5
Percent small rural school districts	69.0%	11
Percent rural students	51.4%	2
Number of rural students	94,096	25
Percent state education funds to rural districts	52.4%	2

Percent rural students



Percent rural IEP students



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

33

	ME	Rank*
Percent rural minority students	5.1%	48
Percent rural ELL students	0.7%	40
Percent rural IEP students	16.3%	5
Percent rural students eligible for free or reduced lunches	44.7%	27
Percent rural mobility	10.1%	29

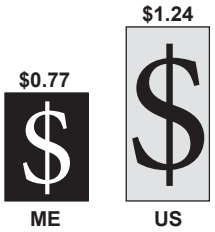
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

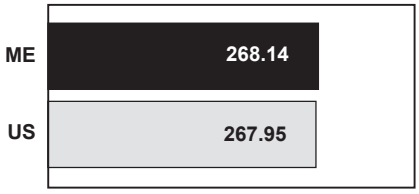
20

	ME	Rank*
Rural instructional expenditures per pupil	$7,011	34
Ratio of instructional to transportation expenditures	$9.30	15
Median organizational scale (x 100)	2,372	28
State revenue to schools per local dollar	$0.77	8
Rural salary expenditures per instructional FTE	$58,336	28

State revenue to schools per local dollar



Rural Grade 8 NAEP performace (reading)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

23

	ME	Rank*
Rural Grade 4 NAEP performance (math)	245.57	29
Rural Grade 4 NAEP performance (reading)	224.47	25
Rural Grade 8 NAEP performance (math)	286.39	24
Rural Grade 8 NAEP performance (reading)	268.14	22
Rural Grade 8 NAEP performance (science)	159.99	28

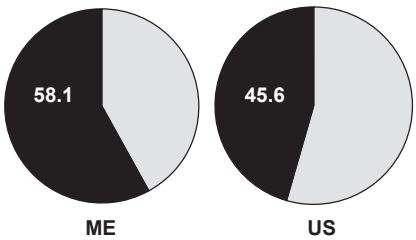
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

35

	ME	Rank*
Overall graduation rate in rural districts	87.7%	26
Graduation rate for rural minority students	81.3%	25
Graduation rate for rural free or reduced lunch eligible students	80.7%	28
Percent rural Juniors and Seniors taking at least one AP course	31.8%	37
Percent rural Juniors and Seniors who took the ACT or SAT	58.1%	43

Percent rural Juniors and Seniors who took the ACT or SAT



*** A rank of 1 is most crucial or most urgent**

MARYLAND - With fewer than one in fourteen students attending school in a rural district (none of which is small by national standards), Maryland is not a very rural state. Nearly one in three students in rural districts are minorities. Most striking in the educational policy context are the extremely large rural schools and districts, second in size only to Florida. NAEP performance in rural districts is among the nation's highest on four of five measures (the fifth, Grade Science, is still above the national average). Graduation rates are strong for the most part, both overall and for specific populations. The remaining two college readiness measures represent an unusual juxtaposition: rural ACT/SAT participation rates are among the highest in the nation, but rural AP participation rates are among the nation's lowest.

PRIORITY RANKING

48

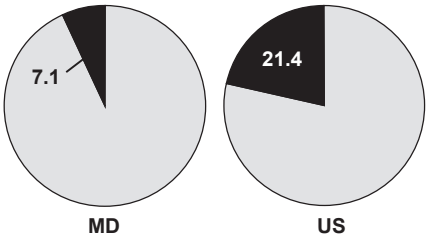
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

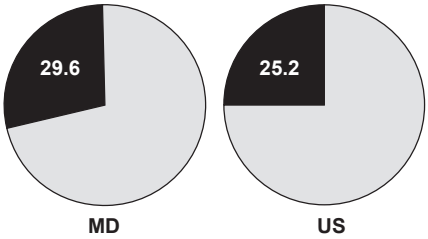
42

	MD	Rank*
Percent rural schools	15.6%	43
Percent small rural school districts	0.0%	43
Percent rural students	7.2%	39
Number of rural students	62,314	31
Percent state education funds to rural districts	7.1%	42

Percent state education funds to rural districts



Percent rural minority students



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

44

	MD	Rank*
Percent rural minority students	29.6%	16
Percent rural ELL students	1.5%	27
Percent rural IEP students	10.7%	45
Percent rural students eligible for free or reduced lunches	37.9%	39
Percent rural mobility	8.2%	44

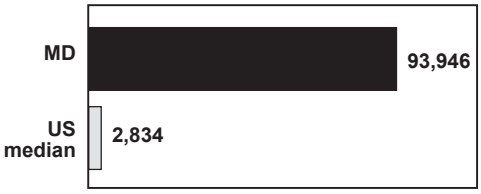
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

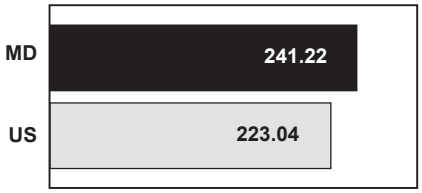
32

	MD	Rank*
Rural instructional expenditures per pupil	$7,642	38
Ratio of instructional to transportation expenditures	$9.80	21
Median organizational scale (x 100)	93,946	2
State revenue to schools per local dollar	$1.20	25
Rural salary expenditures per instructional FTE	$76,022	45

Median organizational scale (x 100)



Rural Grade 4 NAEP performace (reading)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

44

	MD	Rank*
Rural Grade 4 NAEP performance (math)	250.65	40
Rural Grade 4 NAEP performance (reading)	241.22	48
Rural Grade 8 NAEP performance (math)	294.52	42
Rural Grade 8 NAEP performance (reading)	277.74	43
Rural Grade 8 NAEP performance (science)	161.13	32

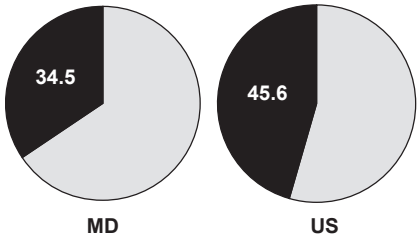
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

40

	MD	Rank*
Overall graduation rate in rural districts	91.1%	38
Graduation rate for rural minority students	90.4%	43
Graduation rate for rural free or reduced lunch eligible students	82.3%	31
Percent rural Juniors and Seniors taking at least one AP course	43.2%	48
Percent rural Juniors and Seniors who took the ACT or SAT	34.5%	10

Percent rural Juniors and Seniors who took the ACT or SAT



*** A rank of 1 is most crucial or most urgent**

MASSACHUSETTS - With only 3% of its students enrolled in rural districts and an absolute rural student enrollment of less than 26,000, Massachusetts is ranked as the nation's least rural state. Rural student poverty is very low, but nearly18% of rural students qualify for special education services (highest in the nation). Rural schools and districts are above average in size, and receive less state revenue relative to local revenue than most other states (overall funding levels are, however, high). Rural NAEP performance rivals Connecticut for highest in the US, with results near the top on all subjects at all grade levels. College readiness measures are less impressive, however, and mainly cluster around the national averages.

PRIORITY RANKING

46

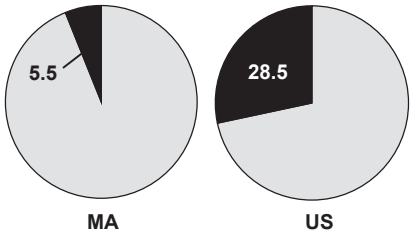
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

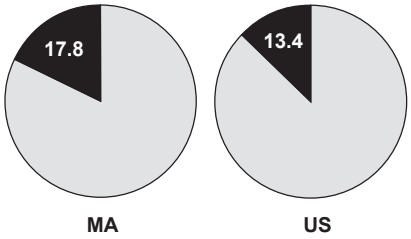
48

	MA	Rank*
Percent rural schools	5.5%	50
Percent small rural school districts	60.0%	18
Percent rural students	3.3%	47
Number of rural students	25,930	45
Percent state education funds to rural districts	3.3%	47

Percent rural schools



Percent rural IEP students



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

48

	MA	Rank*
Percent rural minority students	11.5%	34
Percent rural ELL students	1.0%	35
Percent rural IEP students	17.8%	1
Percent rural students eligible for free or reduced lunches	23.8%	45
Percent rural mobility	6.6%	48

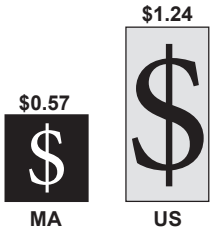
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

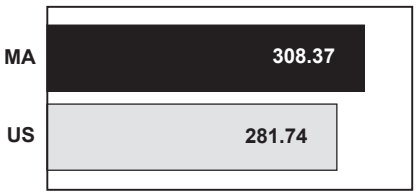
44

	MA	Rank*
Rural instructional expenditures per pupil	$8,438	42
Ratio of instructional to transportation expenditures	$11.12	31
Median organizational scale (x 100)	4,384	21
State revenue to schools per local dollar	$0.57	5
Rural salary expenditures per instructional FTE	$75,495	44

State revenue to schools per local dollar



Rural Grade 8 NAEP performace (math)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

48

	MA	Rank*
Rural Grade 4 NAEP performance (math)	258.36	48
Rural Grade 4 NAEP performance (reading)	234.49	44
Rural Grade 8 NAEP performance (math)	308.37	48
Rural Grade 8 NAEP performance (reading)	282.36	47
Rural Grade 8 NAEP performance (science)	167.31	47

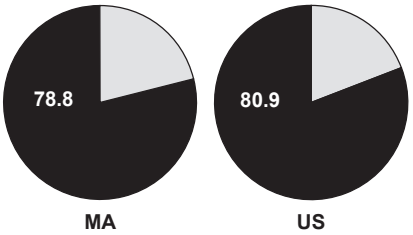
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

26

	MA	Rank*
Overall graduation rate in rural districts	89.0%	32
Graduation rate for rural minority students	76.4%	20
Graduation rate for rural free or reduced lunch eligible students	78.8%	21
Percent rural Juniors and Seniors taking at least one AP course	30.1%	32
Percent rural Juniors and Seniors who took the ACT or SAT	46.2%	25

Graduation rate for rural free or reduced lunch eligible students



*** A rank of 1 is most crucial or most urgent**

MICHIGAN - Over 235,000 students attend rural schools in Michigan, one of the largest absolute rural student enrollments in the nation. Measures of student and family diversity are all at or below national medians, with nearly half of all rural students live in poverty. Total rural instructional expenditures are below the national median, but expenditures on instructional salaries are relatively high. Rural NAEP performance is just below the national average at grade four on both math and reading. Grade eight NAEP performance is mixed, with math and reading near the bottom (15 and 13th lowest performing, respectively) and science near the top (4th highest performing). College readiness measures are all below national averages, with the exception of rural ACT/SAT test-taking.

PRIORITY RANKING

34

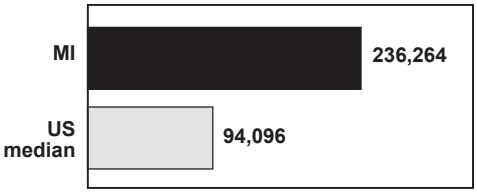
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

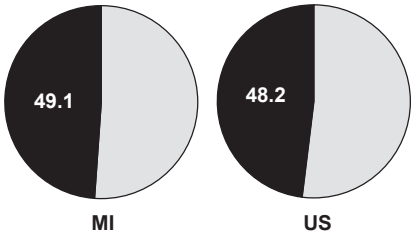
33

	MI	Rank*
Percent rural schools	29.7%	30
Percent small rural school districts	32.3%	30
Percent rural students	17.2%	30
Number of rural students	236,264	10
Percent state education funds to rural districts	13.0%	33

Number of rural students



Percent rural students eligible for free or reduced lunches



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

28

	MI	Rank*
Percent rural minority students	11.4%	35
Percent rural ELL students	1.3%	31
Percent rural IEP students	12.5%	36
Percent rural students eligible for free or reduced lunches	49.1%	24
Percent rural mobility	10.2%	28

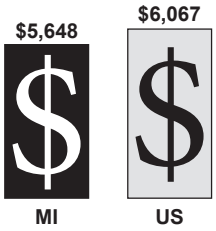
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

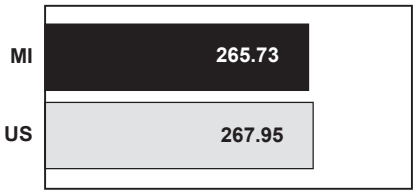
32

	MI	Rank*
Rural instructional expenditures per pupil	$5,648	22
Ratio of instructional to transportation expenditures	$12.11	37
Median organizational scale (x 100)	3,497	24
State revenue to schools per local dollar	$1.77	37
Rural salary expenditures per instructional FTE	$62,329	32

Rural instructional expenditures per pupil



Rural Grade 8 NAEP performace (reading)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

43

	MI	Rank*
Rural Grade 4 NAEP performance (math)	242.61	21
Rural Grade 4 NAEP performance (reading)	223.78	23
Rural Grade 8 NAEP performance (math)	282.21	15
Rural Grade 8 NAEP performance (reading)	265.73	13
Rural Grade 8 NAEP performance (science)	164.71	43

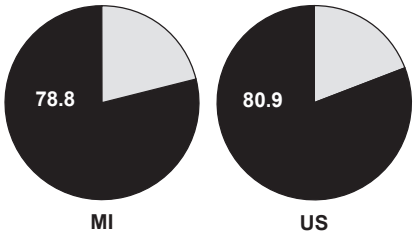
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

31

	MI	Rank*
Overall graduation rate in rural districts	86.7%	22
Graduation rate for rural minority students	78.2%	21
Graduation rate for rural free or reduced lunch eligible students	78.8%	18
Percent rural Juniors and Seniors taking at least one AP course	24.7%	23
Percent rural Juniors and Seniors who took the ACT or SAT	50.4%	31

Graduation rate for rural free or reduced lunch eligible students



*** A rank of 1 is most crucial or most urgent**

MINNESOTA - One in three public schools in Minnesota is located in a rural area, serving a rural student population of close to 140,000 (about one in six of the state's public school students). Measures of student and family diversity measures are all at or below national averages, with the percentage of rural students qualifying for special education at the 13th highest in the U.S.. Rural transportation expenditures are high relative to instructional spending, but state contributions to rural districts amount to more than $2.70 for every local dollar of revenue. Educational outcomes are strong in all subject areas at all grade levels, but college readiness measures are among the lowest in the nation. Only 13 states graduate a lower percentage of their rural minority students, and only seven states have a lower rate of rural students who take the ACT or SAT.

PRIORITY RANKING

38

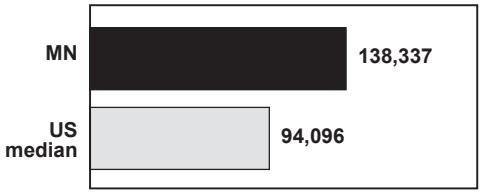
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

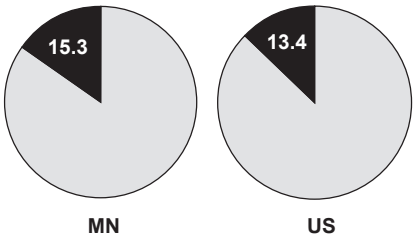
31

	MN	Rank*
Percent rural schools	33.2%	26
Percent small rural school districts	42.1%	26
Percent rural students	17.2%	30
Number of rural students	138,337	20
Percent state education funds to rural districts	17.2%	31

Number of rural students



Percent rural IEP students



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

39

	MN	Rank*
Percent rural minority students	14.1%	30
Percent rural ELL students	1.5%	27
Percent rural IEP students	15.3%	13
Percent rural students eligible for free or reduced lunches	39.9%	33
Percent rural mobility	8.7%	39

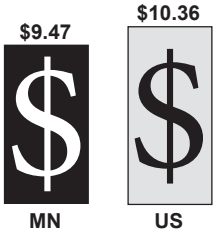
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

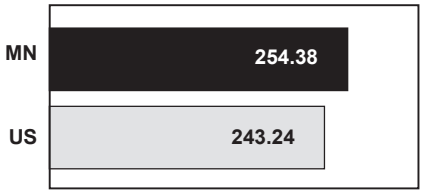
33

	MN	Rank*
Rural instructional expenditures per pupil	$6,440	30
Ratio of instructional to transportation expenditures	$9.47	17
Median organizational scale (x 100)	1,626	35
State revenue to schools per local dollar	$2.73	42
Rural salary expenditures per instructional FTE	$63,301	33

Ratio of instructional to transportation expenditures



Rural Grade 4 NAEP performace (math)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

40

	MN	Rank*
Rural Grade 4 NAEP performance (math)	254.38	44
Rural Grade 4 NAEP performance (reading)	227.50	34
Rural Grade 8 NAEP performance (math)	293.81	41
Rural Grade 8 NAEP performance (reading)	271.88	35
Rural Grade 8 NAEP performance (science)	164.59	42

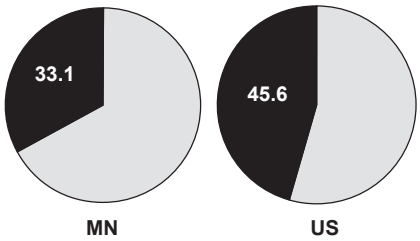
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

13

	MN	Rank*
Overall graduation rate in rural districts	86.3%	20
Graduation rate for rural minority students	68.1%	14
Graduation rate for rural free or reduced lunch eligible students	77.7%	17
Percent rural Juniors and Seniors taking at least one AP course	26.7%	26
Percent rural Juniors and Seniors who took the ACT or SAT	33.1%	8

Percent rural Juniors and Seniors who took the ACT or SAT



*** A rank of 1 is most crucial or most urgent**

MISSISSIPPI - The highest priority rural state according to our ranking system, Mississippi is near the top on all five gauges. More than half of all schools are rural, and only two other states serve a higher percentage of rural students in their public schools. Rural enrollments are characterized by high rates of minority students and students in poverty. The educational policy context does little to help, with instructional spending levels below all but three other states and the nation's 13th lowest instructional salary expenditures. Results reflect that context, with rural schools performing poorly on the NAEP at all grade levels and in all subjects. College readiness measures are equally troubling, with some of the lowest graduation rates in the nation and very low AP participation rates (though rural ACT/SAT test-taking is relatively high).

PRIORITY RANKING

1

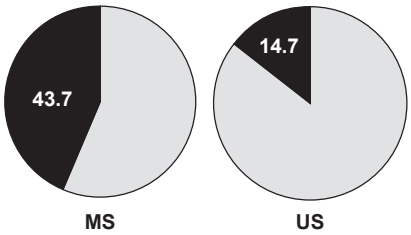
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

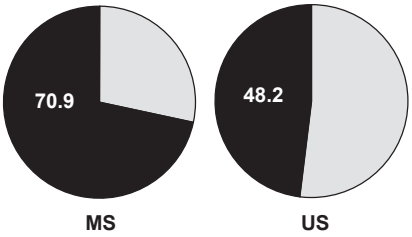
6

	MS	Rank*
Percent rural schools	50.5%	10
Percent small rural school districts	6.0%	35
Percent rural students	43.7%	3
Number of rural students	215,234	12
Percent state education funds to rural districts	45.2%	3

Percent rural students



Percent rural students eligible for free or reduced lunches



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

15

	MS	Rank*
Percent rural minority students	44.5%	7
Percent rural ELL students	0.9%	37
Percent rural IEP students	13.8%	26
Percent rural students eligible for free or reduced lunches	70.9%	2
Percent rural mobility	10.7%	23

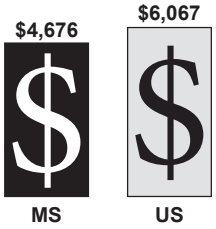
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

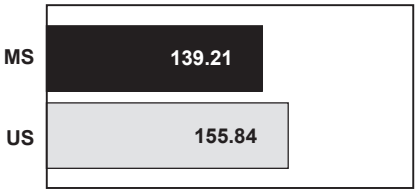
7

	MS	Rank*
Rural instructional expenditures per pupil	$4,676	4
Ratio of instructional to transportation expenditures	$10.36	30
Median organizational scale (x 100)	12,747	11
State revenue to schools per local dollar	$1.63	34
Rural salary expenditures per instructional FTE	$50,308	13

Rural instructional expenditures per pupil



Rural Grade 8 NAEP performace (science)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

2

	MS	Rank*
Rural Grade 4 NAEP performance (math)	234.99	5
Rural Grade 4 NAEP performance (reading)	212.67	4
Rural Grade 8 NAEP performance (math)	274.23	5
Rural Grade 8 NAEP performance (reading)	256.90	4
Rural Grade 8 NAEP performance (science)	139.21	1

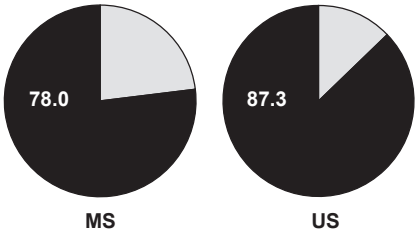
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

14

	MS	Rank*
Overall graduation rate in rural districts	78.0%	7
Graduation rate for rural minority students	60.5%	8
Graduation rate for rural free or reduced lunch eligible students	71.7%	11
Percent rural Juniors and Seniors taking at least one AP course	23.1%	16
Percent rural Juniors and Seniors who took the ACT or SAT	58.4%	45

Overall graduation rate in rural districts



*** A rank of 1 is most crucial or most urgent**

MISSOURI - Missouri is above the national average on each of the importance indicators with more than one in five students in Missouri enrolled in a rural school district, a large absolute student population, and a high percentage of small rural districts. Rural minority and ELL enrollments are among the lowest proportionally in the US (though the rural ELL population is growing). Rural instructional expenditures are low, state contribution to school funding equalization is lower than most other states, and only one other state spends less on instructional salaries. Educational outcomes for Missouri's rural students are close to national averages across the subject areas and grade levels. In terms of college readiness indicators, graduation rates are high but rural ACT/SAT test-taking rates are average and rural AP participation is 8th lowest in the nation.

PRIORITY RANKING

23

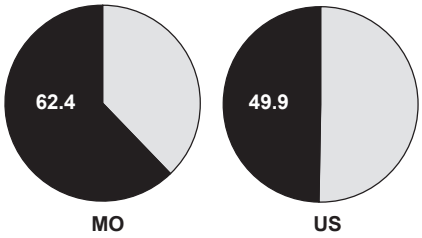
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

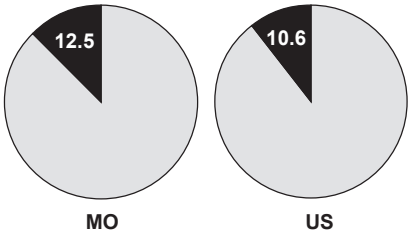
12

	MO	Rank*
Percent rural schools	42.7%	17
Percent small rural school districts	62.4%	15
Percent rural students	21.4%	22
Number of rural students	192,127	14
Percent state education funds to rural districts	25.5%	17

Percent small rural districts



Percent rural mobility



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

30

	MO	Rank*
Percent rural minority students	7.4%	43
Percent rural ELL students	1.1%	34
Percent rural IEP students	13.5%	29
Percent rural students eligible for free or reduced lunches	54.5%	18
Percent rural mobility	12.5%	11

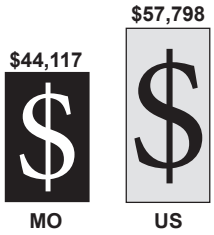
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

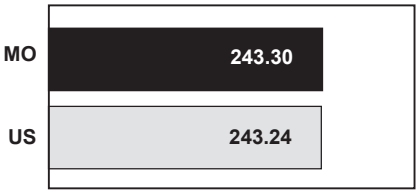
6

	MO	Rank*
Rural instructional expenditures per pupil	$5,170	11
Ratio of instructional to transportation expenditures	$10.14	26
Median organizational scale (x 100)	$1,323	39
State revenue to schools per local dollar	$0.81	12
Rural salary expenditures per instructional FTE	$44,117	2

Rural salary expenditures per instructional FTE



Rural Grade 4 NAEP performace (math)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

28

	MO	Rank*
Rural Grade 4 NAEP performance (math)	243.30	22
Rural Grade 4 NAEP performance (reading)	224.83	27
Rural Grade 8 NAEP performance (math)	287.48	27
Rural Grade 8 NAEP performance (reading)	270.78	33
Rural Grade 8 NAEP performance (science)	159.15	27

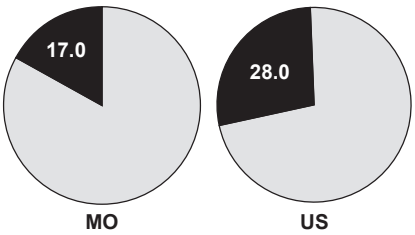
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

37

	MO	Rank*
Overall graduation rate in rural districts	92.2%	45
Graduation rate for rural minority students	89.7%	41
Graduation rate for rural free or reduced lunch eligible students	86.7%	44
Percent rural Juniors and Seniors taking at least one AP course	17.0%	8
Percent rural Juniors and Seniors who took the ACT or SAT	45.1%	24

Percent rural Juniors and Seniors taking at least one AP course



*** A rank of 1 is most crucial or most urgent**

MONTANA - No state has a higher percentage of rural schools or small rural districts, and nearly one in three public school students is enrolled in a rural district. Rural student populations show high mobility rates and a large percentage of rural ELL students. Montana's rural schools and districts are the nation's smallest, transportation costs are high relative to instructional spending, and teacher salaries are low, consistent with bordering states. Educational Outcomes are below national averages at grade four and slightly above national averages at grade eight. In terms of college readiness measures, rural graduation rates are among the nation's lowest (only three states have a lower graduation rate among rural minority students), but rural AP participation and ACT/SAT test-taking rates are slightly above the national medians.

PRIORITY RANKING

18

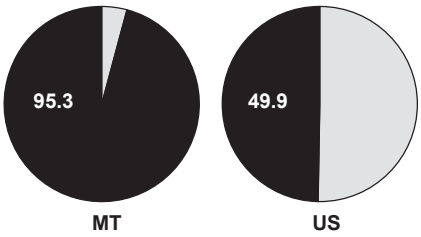
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

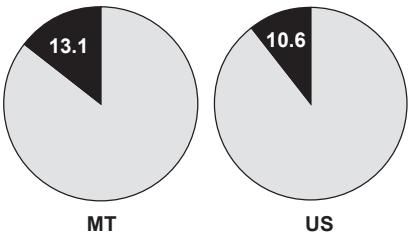
4

	MT	Rank*
Percent rural schools	74.0%	1
Percent small rural school districts	95.3%	1
Percent rural students	32.3%	10
Number of rural students	46,560	41
Percent state education funds to rural districts	38.3%	7

Percent small rural districts



Percent rural mobility



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

22

	MT	Rank*
Percent rural minority students	21.3%	22
Percent rural ELL students	3.4%	15
Percent rural IEP students	11.7%	42
Percent rural students eligible for free or reduced lunches	43.8%	28
Percent rural mobility	13.1%	6

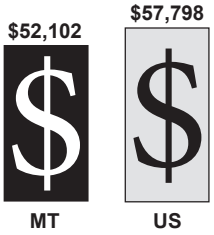
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

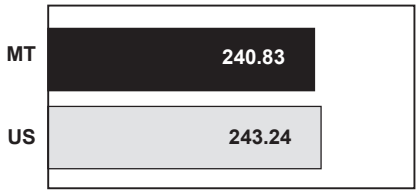
34

	MT	Rank*
Rural instructional expenditures per pupil	$7,160	35
Ratio of instructional to transportation expenditures	$9.68	18
Median organizational scale (x 100)	54	49
State revenue to schools per local dollar	$1.22	26
Rural salary expenditures per instructional FTE	$52,102	14

Rural salary expenditures per instructional FTE



Rural Grade 4 NAEP performace (math)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

32

	MT	Rank*
Rural Grade 4 NAEP performance (math)	240.83	19
Rural Grade 4 NAEP performance (reading)	222.89	21
Rural Grade 8 NAEP performance (math)	288.96	32
Rural Grade 8 NAEP performance (reading)	271.95	36
Rural Grade 8 NAEP performance (science)	163.80	38

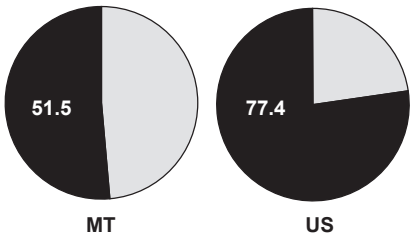
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

15

	MT	Rank*
Overall graduation rate in rural districts	84.7%	15
Graduation rate for rural minority students	51.5%	4
Graduation rate for rural free or reduced lunch eligible students	73.9%	13
Percent rural Juniors and Seniors taking at least one AP course	28.3%	28
Percent rural Juniors and Seniors who took the ACT or SAT	50.5%	32

Graduation rate for rural minority students



*** A rank of 1 is most crucial or most urgent**

NEBRASKA - Nebraska ranks among the highest in the nation on percentage of schools located in rural areas and on the percentage of rural districts that are smaller than the national median. The rural districts are relatively homogeneous with low levels of poverty. Rural teacher salaries are average, but spending on transportation is relatively low, and Nebraska's rural students receive higher per pupil amounts on instruction than their rural counterparts in most other states. NAEP assessment scores are strong, and graduation rates are high, except for among students of poverty.

PRIORITY RANKING

37

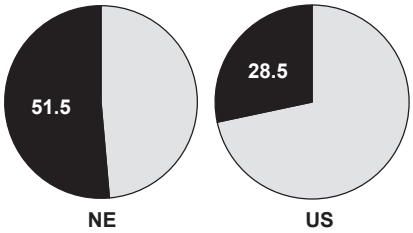
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

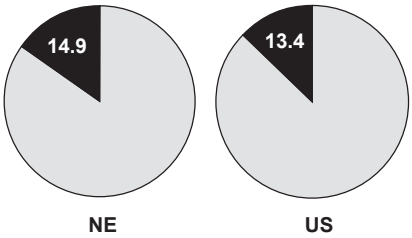
14

	NE	Rank*
Percent rural schools	51.5%	7
Percent small rural school districts	80.3%	4
Percent rural students	22.7%	17
Number of rural students	69,863	30
Percent state education funds to rural districts	19.0%	28

Percent rural schools



Percent rural IEP students



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

32

	NE	Rank*
Percent rural minority students	12.5%	31
Percent rural ELL students	1.2%	33
Percent rural IEP students	14.9%	17
Percent rural students eligible for free or reduced lunches	37.4%	40
Percent rural mobility	10.6%	24

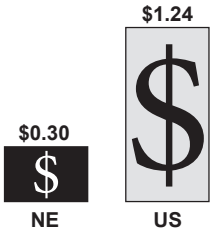
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

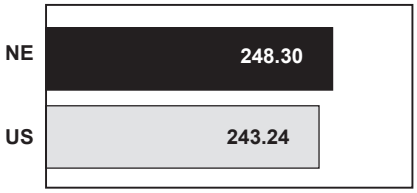
44

	NE	Rank*
Rural instructional expenditures per pupil	$8,342	41
Ratio of instructional to transportation expenditures	$16.21	47
Median organizational scale (x 100)	373	45
State revenue to schools per local dollar	$0.30	2
Rural salary expenditures per instructional FTE	$56,593	24

State revenue to schools per local dollar



Rural Grade 4 NAEP performace (math)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

36

	NE	Rank*
Rural Grade 4 NAEP performance (math)	248.30	38
Rural Grade 4 NAEP performance (reading)	226.17	29
Rural Grade 8 NAEP performance (math)	289.30	33
Rural Grade 8 NAEP performance (reading)	270.14	30
Rural Grade 8 NAEP performance (science)	163.15	37

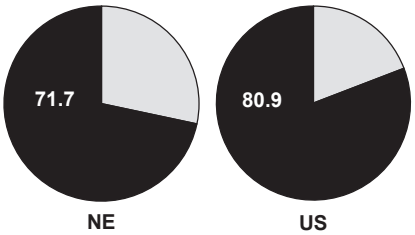
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

26

	NE	Rank*
Overall graduation rate in rural districts	90.6%	34
Graduation rate for rural minority students	86.7%	35
Graduation rate for rural free or reduced lunch eligible students	71.7%	11
Percent rural Juniors and Seniors taking at least one AP course	23.5%	17
Percent rural Juniors and Seniors who took the ACT or SAT	53.4%	36

Graduation rate for rural free or reduced lunch eligible students



*** A rank of 1 is most crucial or most urgent**

NEVADA - Even though one in six of Nevada's schools are located in a rural area, most of Nevada's students attend school in a non-rural district. Poverty levels are high, and the state has one of the most diverse student populations, both racially and linguistically. Teacher salaries and per pupil instructional spending are high, but the funding streams are inequitable and transportation costs are substantial. Educational outcomes are all below the national average, especially in science, and graduation rates are among the lowest in the U.S., especially among students of poverty.

PRIORITY RANKING

7

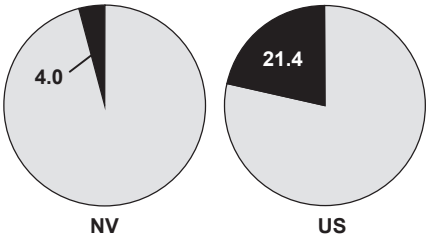
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

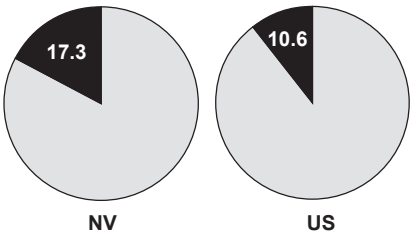
47

	NV	Rank*
Percent rural schools	17.3%	40
Percent small rural school districts	50.0%	22
Percent rural students	1.7%	49
Number of rural students	7,619	48
Percent state education funds to rural districts	4.0%	46

Percent state education funds to rural districts



Percent rural mobility



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

1

	NV	Rank*
Percent rural minority students	32.3%	15
Percent rural ELL students	5.9%	8
Percent rural IEP students	15.8%	9
Percent rural students eligible for free or reduced lunches	57.4%	14
Percent rural mobility	17.3%	1

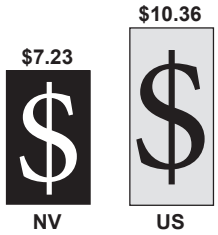
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

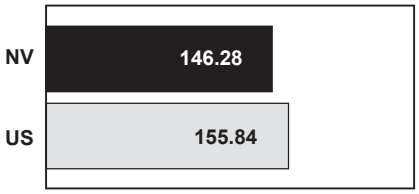
13

	NV	Rank*
Rural instructional expenditures per pupil	$6,365	28
Ratio of instructional to transportation expenditures	$7.23	3
Median organizational scale (x 100)	5,058	19
State revenue to schools per local dollar	$0.86	14
Rural salary expenditures per instructional FTE	$72,425	41

Ratio of instructional to transportation expenditures



Rural Grade 8 NAEP performace (science)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

14

	NV	Rank*
Rural Grade 4 NAEP performance (math)	240.35	16
Rural Grade 4 NAEP performance (reading)	222.44	20
Rural Grade 8 NAEP performance (math)	283.81	18
Rural Grade 8 NAEP performance (reading)	265.93	14
Rural Grade 8 NAEP performance (science)	146.28	7

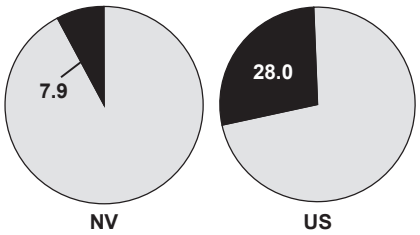
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

2

	NV	Rank*
Overall graduation rate in rural districts	75.1%	4
Graduation rate for rural minority students	69.0%	16
Graduation rate for rural free or reduced lunch eligible students	67.0%	4
Percent rural Juniors and Seniors taking at least one AP course	7.9%	2
Percent rural Juniors and Seniors who took the ACT or SAT	26.8%	4

Percent rural Juniors and Seniors taking at least one AP course



*** A rank of 1 is most crucial or most urgent**

NEW HAMPSHIRE - With a third of its students and over half of its schools in rural areas, New Hampshire ranks high on the Importance Gauge. The state is a low priority overall, however, because it has relatively little student diversity and a generally favorable educational policy context, and because its schools produce consistently positive educational outcomes. The state's rural students are no more likely to take the ACT or SAT than rural students nationwide, but they are more likely to enroll in AP coursework, and they graduate high school at higher rates.

PRIORITY RANKING

44

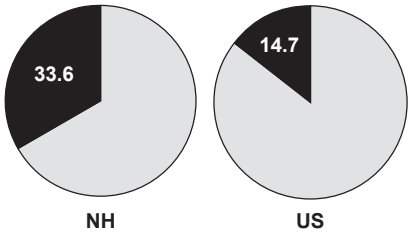
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

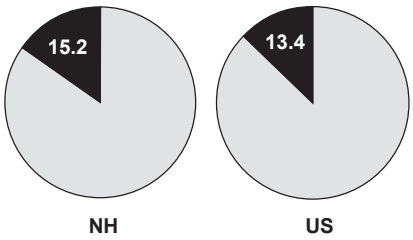
9

	NH	Rank*
Percent rural schools	50.3%	12
Percent small rural school districts	60.5%	16
Percent rural students	33.6%	8
Number of rural students	62,151	32
Percent state education funds to rural districts	36.7%	9

Percent rural students



Percent rural IEP students



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

47

	NH	Rank*
Percent rural minority students	5.5%	46
Percent rural ELL students	0.4%	47
Percent rural IEP students	15.2%	15
Percent rural students eligible for free or reduced lunches	22.9%	47
Percent rural mobility	9.0%	37

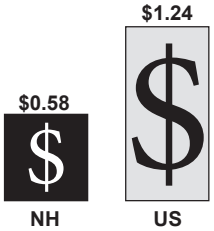
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

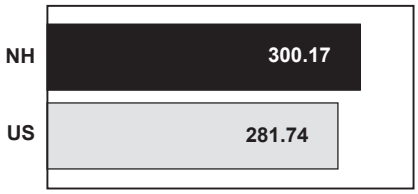
41

	NH	Rank*
Rural instructional expenditures per pupil	$8,609	43
Ratio of instructional to transportation expenditures	$11.76	35
Median organizational scale (x 100)	1,817	31
State revenue to schools per local dollar	$0.58	6
Rural salary expenditures per instructional FTE	$69,466	39

State revenue to schools per local dollar



Rural Grade 8 NAEP performace (math)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

46

	NH	Rank*
Rural Grade 4 NAEP performance (math)	253.00	43
Rural Grade 4 NAEP performance (reading)	232.57	42
Rural Grade 8 NAEP performance (math)	300.17	46
Rural Grade 8 NAEP performance (reading)	277.68	42
Rural Grade 8 NAEP performance (science)	166.29	44

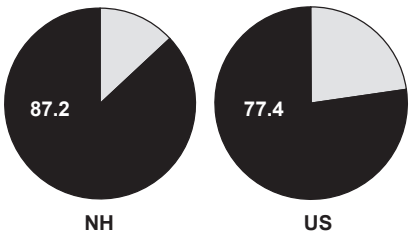
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

41

	NH	Rank*
Overall graduation rate in rural districts	90.8%	36
Graduation rate for rural minority students	87.2%	37
Graduation rate for rural free or reduced lunch eligible students	83.8%	36
Percent rural Juniors and Seniors taking at least one AP course	31.4%	36
Percent rural Juniors and Seniors who took the ACT or SAT	47.5%	26

Graduation rate for rural minority students



*** A rank of 1 is most crucial or most urgent**

NEW JERSEY - Although only 1 in 16 New Jersey students are enrolled in a rural school district, the total number of rural students is over 87,000—just short of the national median. Although one in four of these rural students is from a racial minority, the state has few English language learners (0.6% of the rural student population). More than any other state, New Jersey has a stable rural population with only 6.5% of the students having moved residences in the past year. The educational policy context is mixed—expenditures on student instruction exceed the national average by more than 70% and rural teachers earn over $20,000 more than the national average, but transportation costs are high and there are substantial funding inequities. NAEP scores are excellent in math and English, but relatively poor in science, and more than nine in ten students who begin high school in a rural district successfully graduate.

PRIORITY RANKING

45

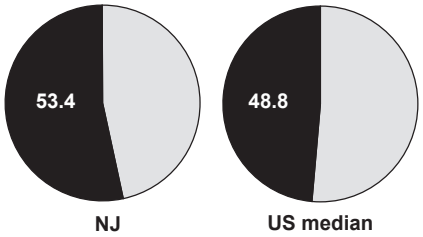
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

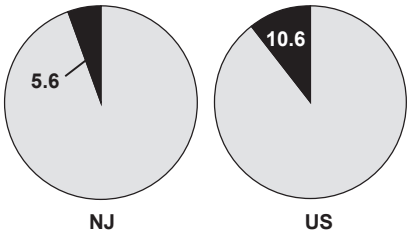
42

	NJ	Rank*
Percent rural schools	8.7%	48
Percent small rural school districts	53.4%	21
Percent rural students	6.6%	41
Number of rural students	87,691	27
Percent state education funds to rural districts	6.5%	43

Percent small rural districts



Percent rural mobility



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

39

	NJ	Rank*
Percent rural minority students	24.1%	20
Percent rural ELL students	0.6%	43
Percent rural IEP students	16.3%	5
Percent rural students eligible for free or reduced lunches	23.7%	46
Percent rural mobility	5.6%	50

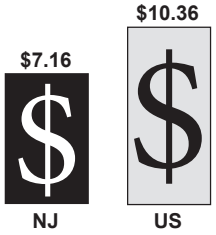
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

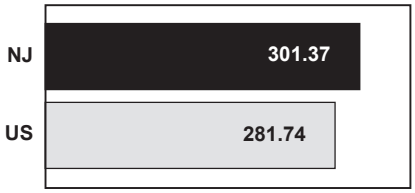
27

	NJ	Rank*
Rural instructional expenditures per pupil	$10,279	46
Ratio of instructional to transportation expenditures	$7.16	2
Median organizational scale (x 100)	4,155	22
State revenue to schools per local dollar	$0.55	4
Rural salary expenditures per instructional FTE	$79,734	46

Ratio of instructional to transportation expenditures



Rural Grade 8 NAEP performace (math)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

42

	NJ	Rank*
Rural Grade 4 NAEP performance (math)	257.93	47
Rural Grade 4 NAEP performance (reading)	234.90	45
Rural Grade 8 NAEP performance (math)	301.37	47
Rural Grade 8 NAEP performance (reading)	280.27	46
Rural Grade 8 NAEP performance (science)	157.60	19

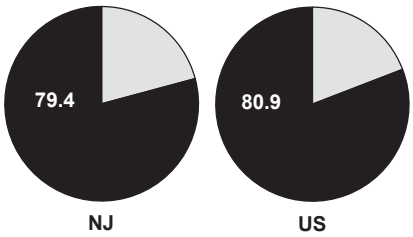
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

39

	NJ	Rank*
Overall graduation rate in rural districts	90.8%	36
Graduation rate for rural minority students	86.5%	34
Graduation rate for rural free or reduced lunch eligible students	79.4%	24
Percent rural Juniors and Seniors taking at least one AP course	32.4%	40
Percent rural Juniors and Seniors who took the ACT or SAT	52.0%	35

Graduation rate for rural free or reduced lunch eligible students



*** A rank of 1 is most crucial or most urgent**

NEW MEXICO - New Mexico's rural student population has the nation's highest rates of rural minority students (more than 8 in 10 students), rural English language learners (one in four), and rural students in poverty (more than 8 in 10). School districts receive more than $4 from the state for each dollar raised locally. Although reliable graduation data are not available, NAEP scores are the lowest in the U.S. for rural students.

PRIORITY RANKING

14

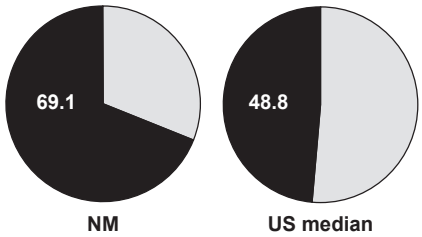
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

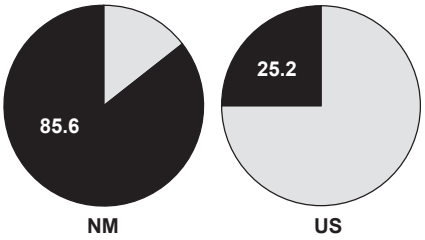
23

	NM	Rank*
Percent rural schools	37.5%	22
Percent small rural school districts	69.1%	9
Percent rural students	18.4%	26
Number of rural students	60,012	33
Percent state education funds to rural districts	19.8%	27

Percent small rural districts



Percent rural minority students



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

6

	NM	Rank*
Percent rural minority students	85.6%	1
Percent rural ELL students	24.4%	1
Percent rural IEP students	13.1%	34
Percent rural students eligible for free or reduced lunches	84.7%	1
Percent rural mobility	9.7%	32

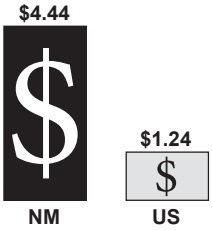
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

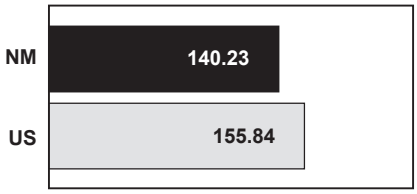
45

	NM	Rank*
Rural instructional expenditures per pupil	$5,954	25
Ratio of instructional to transportation expenditures	$11.42	32
Median organizational scale (x 100)	1,691	34
State revenue to schools per local dollar	$4.44	48
Rural salary expenditures per instructional FTE	$55,519	23

Ratio of instructional to transportation expenditures



Rural Grade 8 NAEP performace (science)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

1

	NM	Rank*
Rural Grade 4 NAEP performance (math)	232.98	3
Rural Grade 4 NAEP performance (reading)	205.95	1
Rural Grade 8 NAEP performance (math)	272.44	2
Rural Grade 8 NAEP performance (reading)	252.82	1
Rural Grade 8 NAEP performance (science)	140.23	2

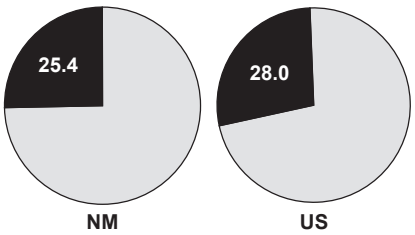
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

NA

	NM	Rank*
Overall graduation rate in rural districts	NA	NA
Graduation rate for rural minority students	NA	NA
Graduation rate for rural free or reduced lunch eligible students	NA	NA
Percent rural Juniors and Seniors taking at least one AP course	25.4%	25
Percent rural Juniors and Seniors who took the ACT or SAT	NA	NA

Percent rural Juniors and Seniors taking at least one AP course



*** A rank of 1 is most crucial or most urgent**

NEW YORK - New York's rural schools provide educational services to over 290,000 children—the fifth largest rural school population in the nation. Diversity among students is limited, both in terms of racial minorities and English language learners. Rural teachers earn more than in any other state except Alaska, and per pupil instructional spending is the second highest in the nation. New York's rural students score reasonably well on the NAEP assessments and eight out of every nine students who begin high school in a rural district go on to graduate.

PRIORITY RANKING

42

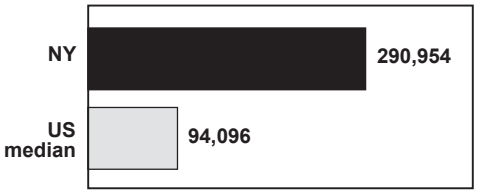
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

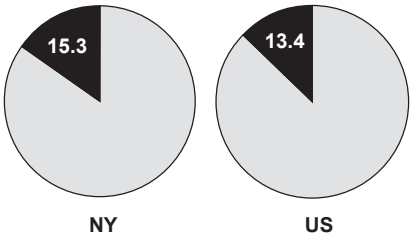
32

	NY	Rank*
Percent rural schools	16.8%	41
Percent small rural school districts	30.1%	31
Percent rural students	11.1%	35
Number of rural students	290,954	5
Percent state education funds to rural districts	22.0%	24

Number of rural students



Percent rural IEP students



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

43

	NY	Rank*
Percent rural minority students	11.2%	36
Percent rural ELL students	0.7%	40
Percent rural IEP students	15.3%	13
Percent rural students eligible for free or reduced lunches	33.5%	43
Percent rural mobility	8.6%	40

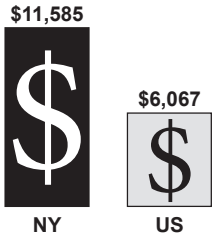
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

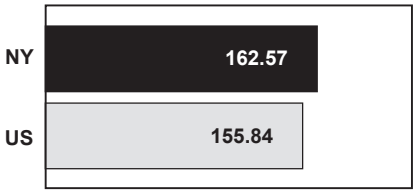
38

	NY	Rank*
Rural instructional expenditures per pupil	$11,585	48
Ratio of instructional to transportation expenditures	$8.66	12
Median organizational scale (x 100)	3,680	23
State revenue to schools per local dollar	$1.17	21
Rural salary expenditures per instructional FTE	$86,643	48

Rural instructional expenditures per pupil



Rural Grade 8 NAEP performace (science)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

22

	NY	Rank*
Rural Grade 4 NAEP performance (math)	242.52	20
Rural Grade 4 NAEP performance (reading)	222.90	22
Rural Grade 8 NAEP performance (math)	289.91	34
Rural Grade 8 NAEP performance (reading)	267.16	19
Rural Grade 8 NAEP performance (science)	162.57	35

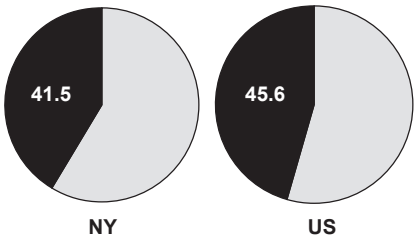
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

32

	NY	Rank*
Overall graduation rate in rural districts	88.8%	31
Graduation rate for rural minority students	85.0%	30
Graduation rate for rural free or reduced lunch eligible students	80.8%	29
Percent rural Juniors and Seniors taking at least one AP course	33.1%	41
Percent rural Juniors and Seniors who took the ACT or SAT	41.5%	19

Percent rural Juniors and Seniors who took the ACT or SAT



*** A rank of 1 is most crucial or most urgent**

NORTH CAROLINA - With a total of almost 570,000 students enrolled in rural school districts—four out of every ten students in the state—North Carolina ranks as one of the top ten most rural states. This rural student population is poorer and more diverse both racially and linguistically than that of most other states. The educational policy context is one of extremes: Funding is extremely equitable and relatively little money needs to be spent on transportation costs, but schools and districts are large, rural teachers are paid below the national average, and less money is spent instructing each rural student than in most other states. NAEP scores are low across the board, and about one in six rural students who start high school in North Carolina do not graduate. graduate.

PRIORITY RANKING

11

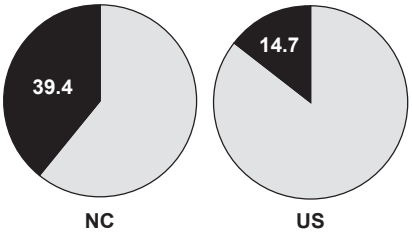
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

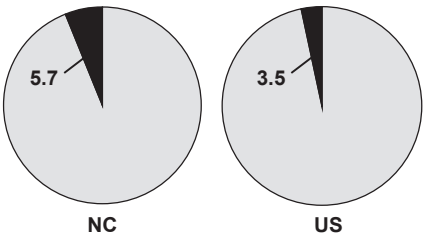
8

	NC	Rank*
Percent rural schools	42.4%	18
Percent small rural school districts	0.0%	43
Percent rural students	39.4%	5
Number of rural students	568,161	2
Percent state education funds to rural districts	42.4%	5

Percent rural students



Percent rural ELL students



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

11

	NC	Rank*
Percent rural minority students	40.5%	10
Percent rural ELL students	5.7%	9
Percent rural IEP students	13.5%	29
Percent rural students eligible for free or reduced lunches	58.4%	13
Percent rural mobility	10.3%	26

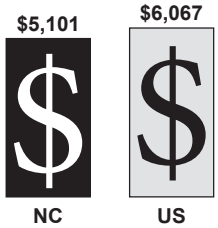
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

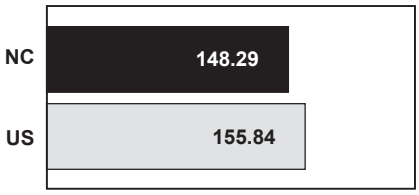
25

	NC	Rank*
Rural instructional expenditures per pupil	$5,101	9
Ratio of instructional to transportation expenditures	$14.91	45
Median organizational scale (x 100)	48,469	3
State revenue to schools per local dollar	$3.00	45
Rural salary expenditures per instructional FTE	$54,052	17

Rural instructional expenditures per pupil



Rural Grade 8 NAEP performace (science)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

16

	NC	Rank*
Rural Grade 4 NAEP performance (math)	243.35	23
Rural Grade 4 NAEP performance (reading)	221.04	18
Rural Grade 8 NAEP performance (math)	285.42	20
Rural Grade 8 NAEP performance (reading)	264.16	12
Rural Grade 8 NAEP performance (science)	148.29	8

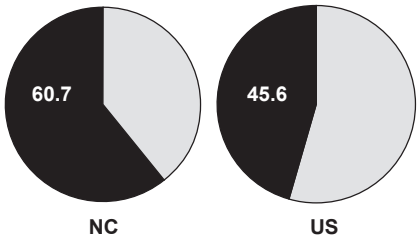
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

26

	NC	Rank*
Overall graduation rate in rural districts	85.0%	16
Graduation rate for rural minority students	80.8%	24
Graduation rate for rural free or reduced lunch eligible students	80.3%	27
Percent rural Juniors and Seniors taking at least one AP course	24.0%	20
Percent rural Juniors and Seniors who took the ACT or SAT	60.7%	46

Percent rural Juniors and Seniors who took the ACT or SAT



*** A rank of 1 is most crucial or most urgent**

NORTH DAKOTA - With over two out of three schools located in a rural area and 37% of the state's students attending school in a rural district, North Dakota is the nation's fifth most rural state. North Dakota has relatively low amounts of student diversity and one of the lowest poverty rates nationwide. Average teacher salaries are more than $10,000 below the national average for rural teachers, but expenditures on rural student instruction are moderately high. The state's rural students perform slightly below average for rural students on English NAEP assessments, but above average in math and science. Although the overall graduation rate among rural students is on par with the national average, the graduation rates among rural minority students and rural students living in poverty are shockingly low.

PRIORITY RANKING

21

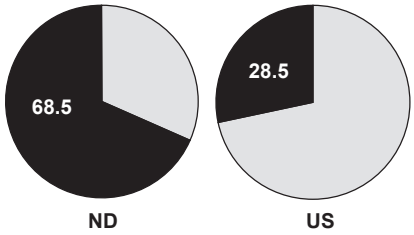
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

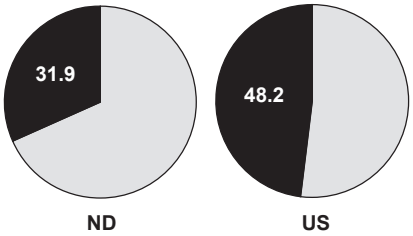
5

	ND	Rank*
Percent rural schools	68.5%	4
Percent small rural school districts	90.6%	3
Percent rural students	37.5%	6
Number of rural students	38,891	42
Percent state education funds to rural districts	39.0%	6

Percent rural schools



Percent rural students eligible for free or reduced lunches



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

39

	ND	Rank*
Percent rural minority students	20.2%	25
Percent rural ELL students	1.9%	25
Percent rural IEP students	12.4%	37
Percent rural students eligible for free or reduced lunches	31.9%	44
Percent rural mobility	9.6%	33

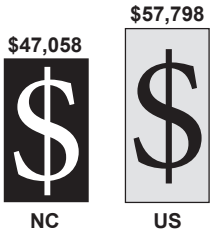
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

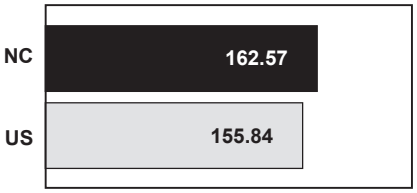
25

	ND	Rank*
Rural instructional expenditures per pupil	$6,757	33
Ratio of instructional to transportation expenditures	$8.42	10
Median organizational scale (x 100)	219	47
State revenue to schools per local dollar	$1.19	22
Rural salary expenditures per instructional FTE	$47,058	7

Rural salary expenditures per instructional FTE



Rural Grade 8 NAEP performace (science)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

27

	ND	Rank*
Rural Grade 4 NAEP performance (math)	245.26	28
Rural Grade 4 NAEP performance (reading)	221.94	19
Rural Grade 8 NAEP performance (math)	289.91	34
Rural Grade 8 NAEP performance (reading)	267.16	19
Rural Grade 8 NAEP performance (science)	162.57	35

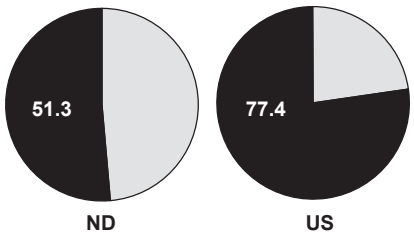
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

16

	ND	Rank*
Overall graduation rate in rural districts	87.7%	26
Graduation rate for rural minority students	51.3%	3
Graduation rate for rural free or reduced lunch eligible students	57.4%	2
Percent rural Juniors and Seniors taking at least one AP course	30.8%	35
Percent rural Juniors and Seniors who took the ACT or SAT	53.6%	37

Graduation rate for rural minority students



*** A rank of 1 is most crucial or most urgent**

OHIO - Ohio has the fourth largest rural student population in the nation at over 360,000. Compared to rural students in other states, Ohio's rural students are less racially diverse and are more likely to speak English fluently. Despite having one of the worst educational policy contexts in the U.S., Ohio's rural students perform well on English, math, and science assessments. Rural students graduate high school at rates above the national average. Ohio is the only state where more than half of the juniors and seniors in rural schools are enrolled in an AP course; the next-highest state is Maryland, which is 12 percentage points behind Ohio.

PRIORITY RANKING

40

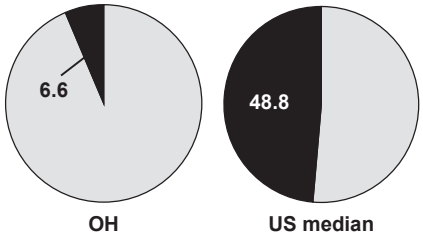
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

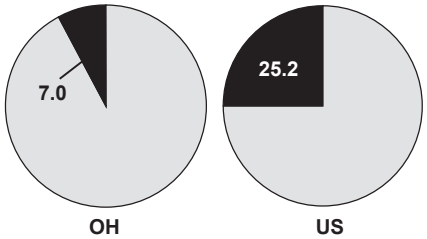
22

	OH	Rank*
Percent rural schools	29.1%	31
Percent small rural school districts	6.6%	34
Percent rural students	22.5%	18
Number of rural students	360,582	4
Percent state education funds to rural districts	23.2%	23

Percent small rural districts



Percent rural minority students



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

43

	OH	Rank*
Percent rural minority students	7.0%	44
Percent rural ELL students	0.7%	40
Percent rural IEP students	14.1%	23
Percent rural students eligible for free or reduced lunches	41.9%	30
Percent rural mobility	9.2%	35

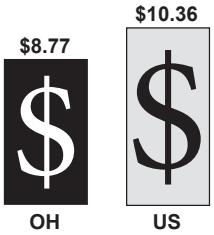
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

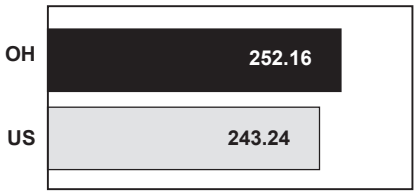
11

	OH	Rank*
Rural instructional expenditures per pupil	$5,478	20
Ratio of instructional to transportation expenditures	$8.77	13
Median organizational scale (x 100)	5,206	18
State revenue to schools per local dollar	$1.06	19
Rural salary expenditures per instructional FTE	$60,920	31

Ratio of instructional to transportation expenditures



Rural Grade 4 NAEP performace (math)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

41

	OH	Rank*
Rural Grade 4 NAEP performance (math)	252.16	42
Rural Grade 4 NAEP performance (reading)	230.94	39
Rural Grade 8 NAEP performance (math)	293.79	40
Rural Grade 8 NAEP performance (reading)	273.73	39
Rural Grade 8 NAEP performance (science)	163.94	39

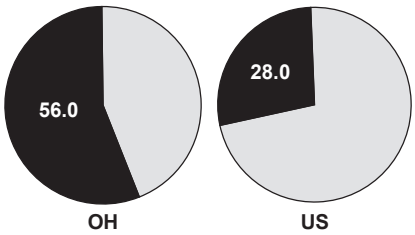
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

46

	OH	Rank*
Overall graduation rate in rural districts	91.5%	40
Graduation rate for rural minority students	85.4%	31
Graduation rate for rural free or reduced lunch eligible students	86.0%	41
Percent rural Juniors and Seniors taking at least one AP course	56.0%	49
Percent rural Juniors and Seniors who took the ACT or SAT	50.0%	29

Percent rural Juniors and Seniors taking at least one AP course



*** A rank of 1 is most crucial or most urgent**

OKLAHOMA - Half of all of Oklahoma's public schools are located in rural areas, enrolling almost three out of ten public school students in the state. Over 60% of all rural students qualify for subsidized meals and over 40% are of a race other than White. The percentage of students eligible for individualized education services is the third highest in the country. Compounding challenges are the nation's second lowest rural per pupil instructional expenditures and the fifth lowest instructional salaries in the country. NAEP scores are relatively low, although graduation rates are on par with the national average for rural students.

PRIORITY RANKING

9

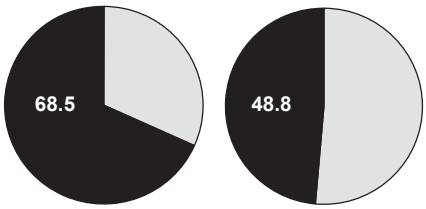
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

6

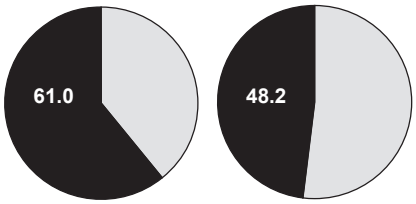
	OK	Rank*
Percent rural schools	50.8%	9
Percent small rural school districts	68.5%	12
Percent rural students	28.6%	13
Number of rural students	190,800	15
Percent state education funds to rural districts	31.3%	14

Percent small rural districts



OK US median

Percent rural students eligible for free or reduced lunches



OK US

GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

3

	OK	Rank*
Percent rural minority students	40.7%	9
Percent rural ELL students	2.3%	21
Percent rural IEP students	17.3%	3
Percent rural students eligible for free or reduced lunches	61.0%	9
Percent rural mobility	12.0%	15

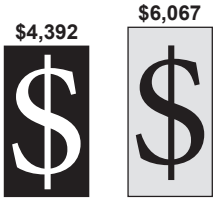
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

31

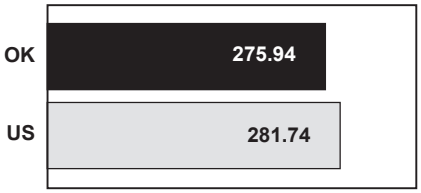
	OK	Rank*
Rural instructional expenditures per pupil	$4,392	2
Ratio of instructional to transportation expenditures	$14.79	44
Median organizational scale (x 100)	769	44
State revenue to schools per local dollar	$1.57	33
Rural salary expenditures per instructional FTE	$45,069	5

Rural instructional expenditures per pupil



OK US

Rural Grade 8 NAEP performace (math)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

11

	OK	Rank*
Rural Grade 4 NAEP performance (math)	240.70	18
Rural Grade 4 NAEP performance (reading)	219.86	15
Rural Grade 8 NAEP performance (math)	275.94	6
Rural Grade 8 NAEP performance (reading)	263.35	11
Rural Grade 8 NAEP performance (science)	150.64	13

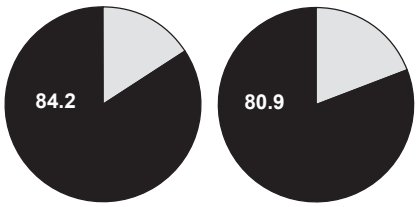
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

30

	OK	Rank*
Overall graduation rate in rural districts	86.6%	21
Graduation rate for rural minority students	82.6%	26
Graduation rate for rural free or reduced lunch eligible students	84.2%	38
Percent rural Juniors and Seniors taking at least one AP course	28.5%	29
Percent rural Juniors and Seniors who took the ACT or SAT	50.1%	30

Graduation rate for rural free or reduced lunch eligible students



OK US

*** A rank of 1 is most crucial or most urgent**

OREGON - Serving almost 50,000 students, Oregon's rural schools make up more than one-fourth of all public schools in the state. A majority of the state's rural students live in or near poverty, and one in seven rural students has changed residences within the previous year. Per pupil spending on instruction is among the lowest third of states, and a substantial amount of money is required to cover transportation costs. Educational outcomes in math and English are low in the early grades but increase relative to other states by middle school. Fewer than three out of four students from Oregon's rural districts complete high school; only Alaska and Florida have lower graduation rates among the rural student population.

PRIORITY RANKING

11

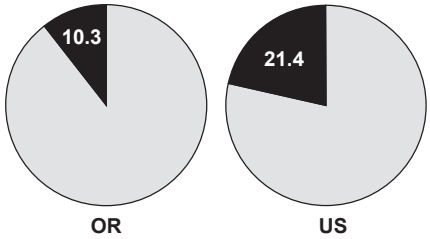
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

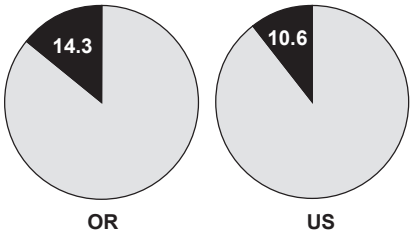
35

	OR	Rank*
Percent rural schools	25.7%	33
Percent small rural school districts	65.5%	13
Percent rural students	8.8%	37
Number of rural students	49,351	39
Percent state education funds to rural districts	10.3%	36

Percent state education funds to rural districts



Percent rural mobility



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

13

	OR	Rank*
Percent rural minority students	21.2%	24
Percent rural ELL students	2.8%	20
Percent rural IEP students	13.5%	29
Percent rural students eligible for free or reduced lunches	55.9%	16
Percent rural mobility	14.3%	2

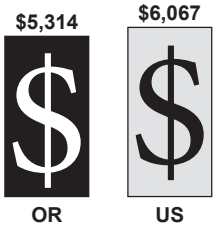
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

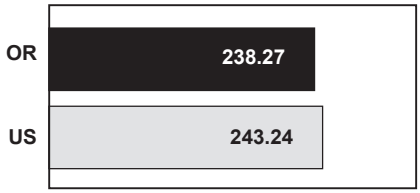
15

	OR	Rank*
Rural instructional expenditures per pupil	$5,314	16
Ratio of instructional to transportation expenditures	$7.78	5
Median organizational scale (x 100)	2,834	25
State revenue to schools per local dollar	$1.53	32
Rural salary expenditures per instructional FTE	$59,657	30

Rural instructional expenditures per pupil



Rural Grade 4 NAEP performace (math)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

14

	OR	Rank*
Rural Grade 4 NAEP performance (math)	238.27	8
Rural Grade 4 NAEP performance (reading)	217.28	10
Rural Grade 8 NAEP performance (math)	279.92	12
Rural Grade 8 NAEP performance (reading)	269.01	24
Rural Grade 8 NAEP performance (science)	158.30	21

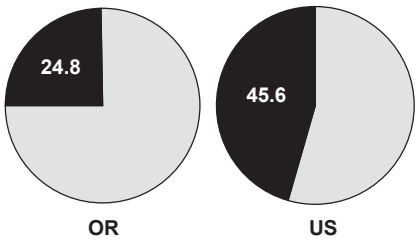
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

9

	OR	Rank*
Overall graduation rate in rural districts	74.7%	3
Graduation rate for rural minority students	68.9%	15
Graduation rate for rural free or reduced lunch eligible students	71.2%	9
Percent rural Juniors and Seniors taking at least one AP course	40.4%	47
Percent rural Juniors and Seniors who took the ACT or SAT	24.8%	2

Percent rural Juniors and Seniors who took the ACT or SAT



*** A rank of 1 is most crucial or most urgent**

PENNSYLVANIA - Only one fourth of Pennsylvania's schools are rural, but they serve more than 280,000 students (6th highest in the U.S.). Student family and diversity indicators are all at or below the national median, with the exception of the percentage of students who receive a specialized education plan, which is higher than the national figure of 13.4%. Instructional spending is high, but funding distributions are inequitable and pupil transportation costs are inordinately high relative to instructional spending. NAEP scores are high across the board, as are graduation rates. However, Pennsylvania's rural students are less likely to enroll in AP courses or take a university entrance exam than rural students in the majority of states.

PRIORITY RANKING

36

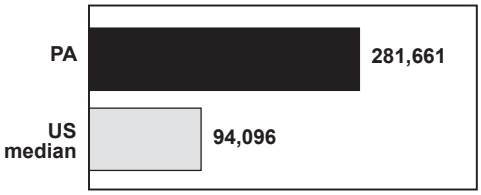
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

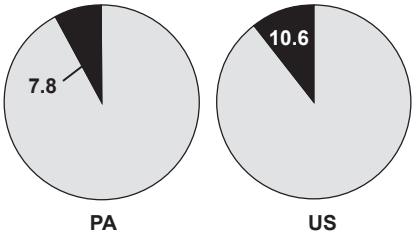
27

	PA	Rank*
Percent rural schools	26.1%	32
Percent small rural school districts	5.3%	36
Percent rural students	17.5%	28
Number of rural students	281,661	6
Percent state education funds to rural districts	21.3%	26

Number of rural students



Percent rural mobility



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

36

	PA	Rank*
Percent rural minority students	9.0%	39
Percent rural ELL students	0.6%	43
Percent rural IEP students	17.5%	2
Percent rural students eligible for free or reduced lunches	39.9%	33
Percent rural mobility	7.8%	46

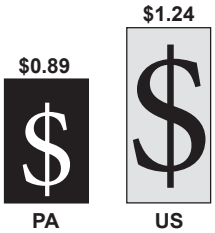
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

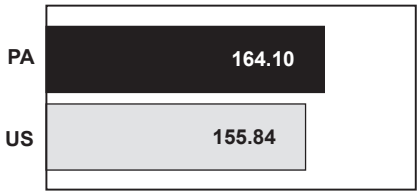
18

	PA	Rank*
Rural instructional expenditures per pupil	$7,249	37
Ratio of instructional to transportation expenditures	$7.90	6
Median organizational scale (x 100)	7,724	16
State revenue to schools per local dollar	$0.89	16
Rural salary expenditures per instructional FTE	$65,941	37

State revenue to schools per local dollar



Rural Grade 8 NAEP performace (science)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

39

	PA	Rank*
Rural Grade 4 NAEP performance (math)	247.84	37
Rural Grade 4 NAEP performance (reading)	229.72	38
Rural Grade 8 NAEP performance (math)	290.64	35
Rural Grade 8 NAEP performance (reading)	275.18	40
Rural Grade 8 NAEP performance (science)	164.10	41

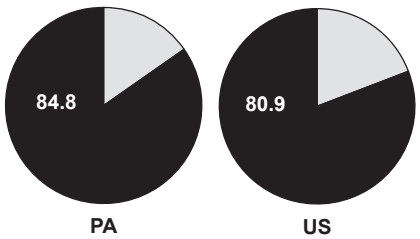
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

31

	PA	Rank*
Overall graduation rate in rural districts	90.6%	34
Graduation rate for rural minority students	86.8%	36
Graduation rate for rural free or reduced lunch eligible students	84.8%	40
Percent rural Juniors and Seniors taking at least one AP course	23.7%	18
Percent rural Juniors and Seniors who took the ACT or SAT	39.2%	18

Graduation rate for rural free or reduced lunch eligible students



*** A rank of 1 is most crucial or most urgent**

RHODE ISLAND - With less than 4% of its students and 9% of its schools in rural areas, Rhode Island is among the least rural states in the U.S. That student population is characterized by little diversity, with few rural minority and ELL students, but one of the nation's highest percentages of students qualifying for special education services. Although the only state with a lower poverty rate among rural students is Connecticut, one in five rural students in Rhode Island is eligible for free or reduced lunches. The policy context is positive in terms of instructional spending and teacher salaries, but inequity in the distribution of funding suggests that the policy structure does not benefit all districts equally. Rural NAEP performance is strong, especially in the earlier years, but there are wider than average discrepancies between the overall graduation rate for rural students and the graduation rate among students in poverty.

PRIORITY RANKING

47

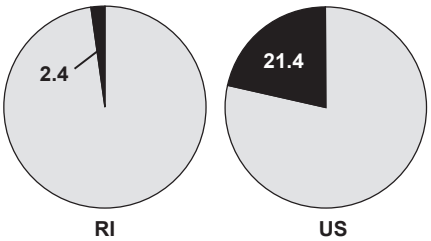
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

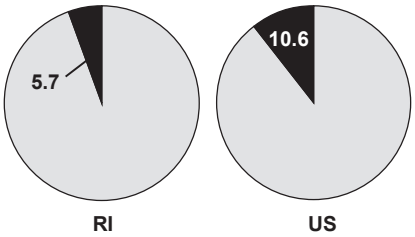
49

	RI	Rank*
Percent rural schools	8.7%	48
Percent small rural school districts	50.0%	22
Percent rural students	3.6%	46
Number of rural students	4,496	49
Percent state education funds to rural districts	2.4%	49

Percent state education funds to rural districts



Percent rural mobility



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

48

	RI	Rank*
Percent rural minority students	3.7%	49
Percent rural ELL students	0.2%	48
Percent rural IEP students	16.8%	4
Percent rural students eligible for free or reduced lunches	21.0%	48
Percent rural mobility	5.7%	49

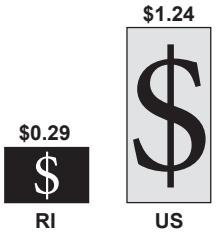
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

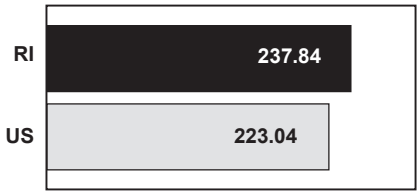
27

	RI	Rank*
Rural instructional expenditures per pupil	$9,903	44
Ratio of instructional to transportation expenditures	$9.77	20
Median organizational scale (x 100)	6,952	17
State revenue to schools per local dollar	$0.29	1
Rural salary expenditures per instructional FTE	$68,920	38

State revenue to schools per local dollar



Rural Grade 4 NAEP performace (reading)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

42

	RI	Rank*
Rural Grade 4 NAEP performance (math)	255.35	45
Rural Grade 4 NAEP performance (reading)	237.85	47
Rural Grade 8 NAEP performance (math)	293.44	38
Rural Grade 8 NAEP performance (reading)	277.97	44
Rural Grade 8 NAEP performance (science)	160.72	30

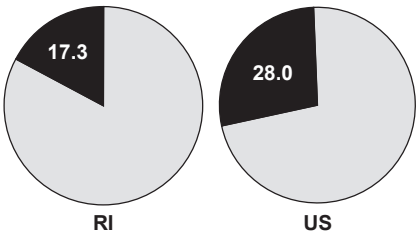
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

33

	RI	Rank*
Overall graduation rate in rural districts	91.9%	42
Graduation rate for rural minority students	92.1%	45
Graduation rate for rural free or reduced lunch eligible students	79.2%	23
Percent rural Juniors and Seniors taking at least one AP course	17.3%	10
Percent rural Juniors and Seniors who took the ACT or SAT	50.6%	33

Percent rural Juniors and Seniors taking at least one AP course



*** A rank of 1 is most crucial or most urgent**

SOUTH CAROLINA - More than any other state over the past decade, South Carolina's rural areas have been disappearing due to suburban sprawl. Although fewer than one in six students in South Carolina now attends school in a rural district, these students face substantial challenges. Half of all rural students are minorities, and two thirds are eligible for free or reduced lunches. Instructional spending is low overall and teachers are paid at a rate below the national average for rural teachers. Achievement scores are among the nation's lowest, and graduation rates are low compared to rural districts in other states.

PRIORITY RANKING

4

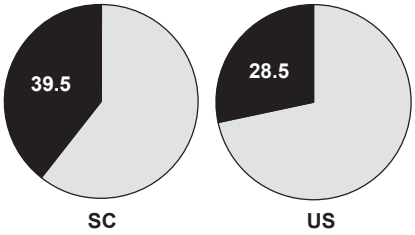
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

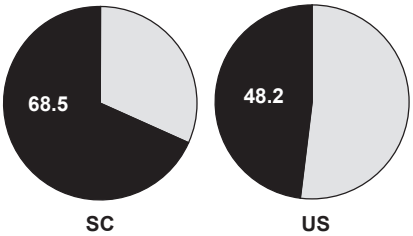
33

	SC	Rank*
Percent rural schools	39.5%	21
Percent small rural school districts	2.6%	41
Percent rural students	15.9%	32
Number of rural students	115,889	22
Percent state education funds to rural districts	17.5%	30

Percent rural schools



Percent rural students eligible for free or reduced lunches



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

4

	SC	Rank*
Percent rural minority students	49.5%	5
Percent rural ELL students	4.0%	13
Percent rural IEP students	14.8%	20
Percent rural students eligible for free or reduced lunches	68.5%	4
Percent rural mobility	11.3%	21

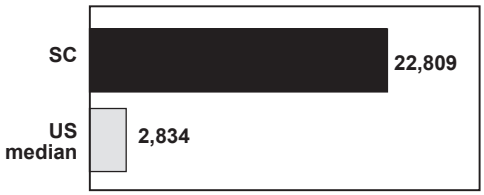
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

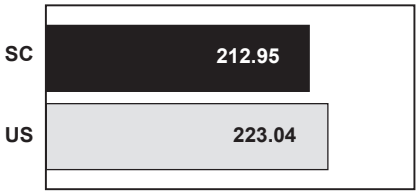
12

	SC	Rank*
Rural instructional expenditures per pupil	$5,203	12
Ratio of instructional to transportation expenditures	$12.71	41
Median organizational scale (x 100)	35,774	6
State revenue to schools per local dollar	$1.19	22
Rural salary expenditures per instructional FTE	$55,118	22

Median organizational scale (x 100)



Rural Grade 4 NAEP performace (reading)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

9

	SC	Rank*
Rural Grade 4 NAEP performance (math)	235.16	6
Rural Grade 4 NAEP performance (reading)	212.95	6
Rural Grade 8 NAEP performance (math)	281.74	14
Rural Grade 8 NAEP performance (reading)	261.20	8
Rural Grade 8 NAEP performance (science)	150.62	12

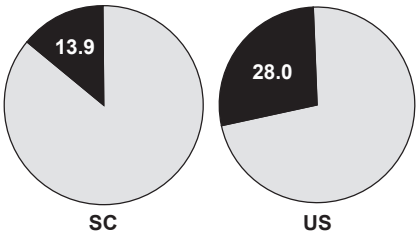
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

6

	SC	Rank*
Overall graduation rate in rural districts	80.6%	11
Graduation rate for rural minority students	72.2%	19
Graduation rate for rural free or reduced lunch eligible students	75.5%	14
Percent rural Juniors and Seniors taking at least one AP course	13.9%	6
Percent rural Juniors and Seniors who took the ACT or SAT	35.1%	12

Percent rural Juniors and Seniors taking at least one AP course



*** A rank of 1 is most crucial or most urgent**

SOUTH DAKOTA - South Dakota has the 5th highest rural education priority ranking among the 50 states. Three of four of the state's schools are rural, and 78% of rural schools are part of small rural districts. The student population is near the national average on measures of diversity and on most educational outcomes. The educational policy context is mixed—schools and districts are small, but the revenue distribution is inequitable and teacher salaries are low. Fewer than one in five rural students enrolls in an AP course, and South Dakota's rural students graduate at lower rates than rural students in most other states.

PRIORITY RANKING

5

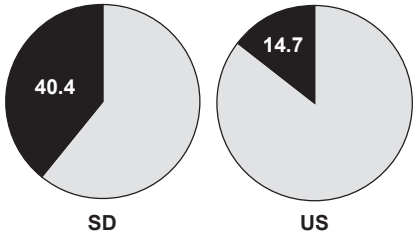
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

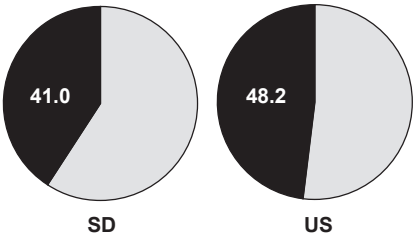
3

	SD	Rank*
Percent rural schools	73.8%	2
Percent small rural school districts	78.0%	5
Percent rural students	40.4%	4
Number of rural students	52,769	36
Percent state education funds to rural districts	45.0%	4

Percent rural students



Percent rural students eligible for free or reduced lunches



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

26

	SD	Rank*
Percent rural minority students	22.4%	21
Percent rural ELL students	2.1%	24
Percent rural IEP students	14.1%	23
Percent rural students eligible for free or reduced lunches	41.0%	31
Percent rural mobility	10.6%	24

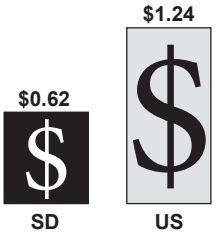
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

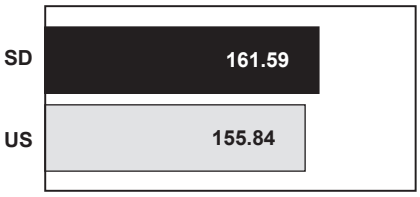
17

	SD	Rank*
Rural instructional expenditures per pupil	$5,429	18
Ratio of instructional to transportation expenditures	$11.45	33
Median organizational scale (x 100)	214	48
State revenue to schools per local dollar	$0.62	7
Rural salary expenditures per instructional FTE	$44,741	4

State revenue to schools per local dollar



Rural Grade 8 NAEP performace (science)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

18

	SD	Rank*
Rural Grade 4 NAEP performance (math)	240.58	17
Rural Grade 4 NAEP performance (reading)	215.45	9
Rural Grade 8 NAEP performance (math)	287.57	28
Rural Grade 8 NAEP performance (reading)	267.69	20
Rural Grade 8 NAEP performance (science)	161.59	33

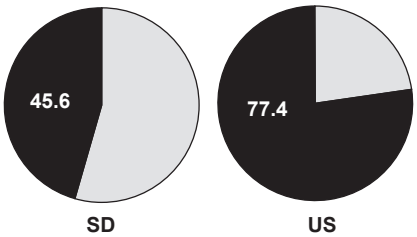
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

3

	SD	Rank*
Overall graduation rate in rural districts	84.0%	13
Graduation rate for rural minority students	45.6%	2
Graduation rate for rural free or reduced lunch eligible students	58.2%	3
Percent rural Juniors and Seniors taking at least one AP course	17.8%	11
Percent rural Juniors and Seniors who took the ACT or SAT	43.8%	21

Graduation rate for rural minority students



*** A rank of 1 is most crucial or most urgent**

TENNESSEE - Over one third of Tennessee's schools are rural, but less than 5% of rural districts have enrollments below the national median. Rural student and family diversity is about average for the nation, with the exception of a very high rate of students eligible for free or reduced lunches. Education policy indicators are average to very positive, excepting teacher salaries which are among the nation's lowest. Funding distribution is equitable and the state's rural districts bear few transportation expenditures, but schools are large, teachers are paid relatively poorly, and the amount spent on instruction per rural pupil is the seventh lowest in the nation. Rural Tennessee students perform poorly on NAEP assessments and only one in ten enroll in an AP course, but their graduation rate exceeds 90%.

PRIORITY RANKING

19

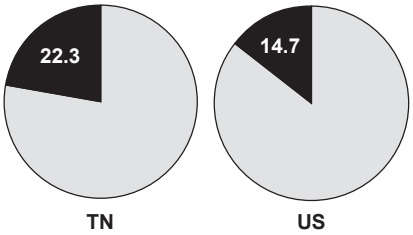
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

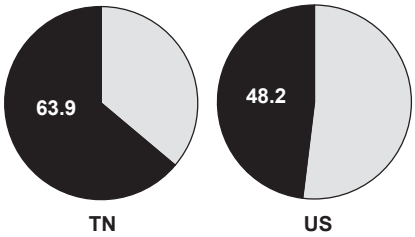
19

	TN	Rank*
Percent rural schools	34.6%	25
Percent small rural school districts	4.6%	38
Percent rural students	22.3%	19
Number of rural students	221,221	11
Percent state education funds to rural districts	32.4%	13

Percent rural students



Percent rural students eligible for free or reduced lunches



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

24

	TN	Rank*
Percent rural minority students	11.6%	33
Percent rural ELL students	1.0%	35
Percent rural IEP students	13.9%	25
Percent rural students eligible for free or reduced lunches	63.9%	7
Percent rural mobility	11.6%	17

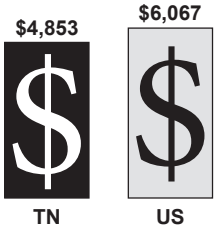
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

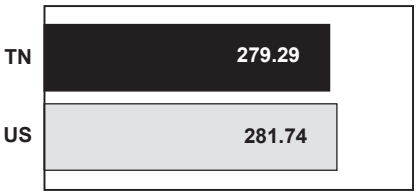
16

	TN	Rank*
Rural instructional expenditures per pupil	$4,853	7
Ratio of instructional to transportation expenditures	$13.86	43
Median organizational scale (x 100)	21,531	10
State revenue to schools per local dollar	$2.11	40
Rural salary expenditures per instructional FTE	$48,068	9

Rural instructional expenditures per pupil



Rural Grade 8 NAEP performace (math)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

12

	TN	Rank*
Rural Grade 4 NAEP performance (math)	239.95	14
Rural Grade 4 NAEP performance (reading)	220.91	16
Rural Grade 8 NAEP performance (math)	279.29	10
Rural Grade 8 NAEP performance (reading)	266.53	16
Rural Grade 8 NAEP performance (science)	154.85	16

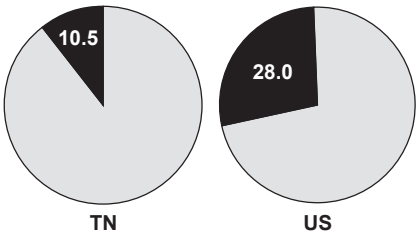
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

38

	TN	Rank*
Overall graduation rate in rural districts	91.5%	40
Graduation rate for rural minority students	88.5%	38
Graduation rate for rural free or reduced lunch eligible students	88.8%	46
Percent rural Juniors and Seniors taking at least one AP course	10.5%	3
Percent rural Juniors and Seniors who took the ACT or SAT	56.1%	40

Percent rural Juniors and Seniors taking at least one AP course



*** A rank of 1 is most crucial or most urgent**

TEXAS - At nearly 610,000 total students, Texas has the nation's largest rural student enrollment. Rural poverty rates are higher than average, as are the percentage of minority students and the percentage of English language learners. Instructional spending per pupil is very low, and funding is among the most inequitable in the nation. Although NAEP scores hover around the median, Texas has high graduation rates among rural students, both in general and among minorities and those living in poverty. Rural Texan students are more likely than their counterparts in other states to enroll in an AP course, but less likely to take the ACT or SAT.

PRIORITY RANKING

30

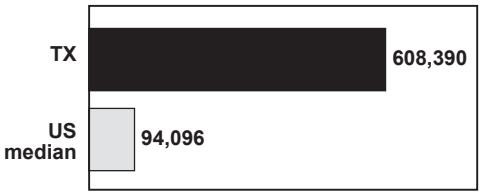
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

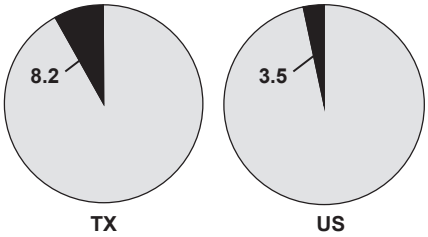
27

	TX	Rank*
Percent rural schools	25.5%	34
Percent small rural school districts	48.8%	25
Percent rural students	12.3%	34
Number of rural students	608,390	1
Percent state education funds to rural districts	14.2%	34

Number of rural students



Percent rural ELL students



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

12

	TX	Rank*
Percent rural minority students	44.7%	6
Percent rural ELL students	8.2%	5
Percent rural IEP students	8.9%	47
Percent rural students eligible for free or reduced lunches	53.3%	19
Percent rural mobility	12.4%	13

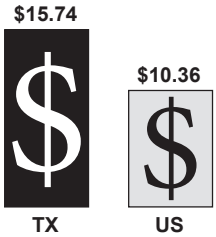
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

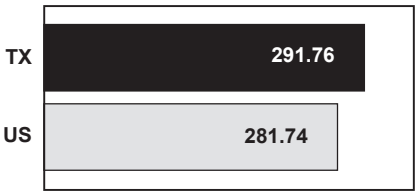
21

	TX	Rank*
Rural instructional expenditures per pupil	$5,204	13
Ratio of instructional to transportation expenditures	$15.74	46
Median organizational scale (x 100)	2,517	27
State revenue to schools per local dollar	$0.83	13
Rural salary expenditures per instructional FTE	$53,160	15

Ratio of instructional to transportation expenditures



Rural Grade 8 NAEP performace (math)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

28

	TX	Rank*
Rural Grade 4 NAEP performance (math)	246.51	31
Rural Grade 4 NAEP performance (reading)	221.01	17
Rural Grade 8 NAEP performance (math)	291.76	37
Rural Grade 8 NAEP performance (reading)	271.50	34
Rural Grade 8 NAEP performance (science)	155.19	17

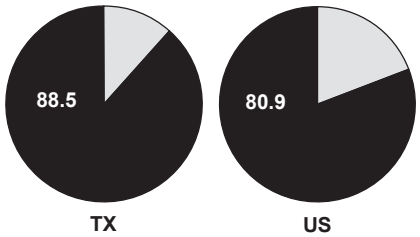
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

42

	TX	Rank*
Overall graduation rate in rural districts	93.1%	46
Graduation rate for rural minority students	89.2%	40
Graduation rate for rural free or reduced lunch eligible students	88.5%	45
Percent rural Juniors and Seniors taking at least one AP course	31.9%	38
Percent rural Juniors and Seniors who took the ACT or SAT	35.6%	13

Graduation rate for rural free or reduced lunch eligible students



*** A rank of 1 is most crucial or most urgent**

UTAH - Utah is among the nation's least rural states, with less than 5% of students attending schools located in rural places. The state's rural schools serve a student population with above average poverty levels and a substantial number of English language learners. Rural schools and districts are among the nation's largest, and instructional spending per rural student is among the lowest in the country. Educational outcomes are mostly above average, particularly in middle school science where NAEP scores are third only to Connecticut and Massachusetts. Fewer students are enrolled in AP courses than in other states, and graduation rates are low, but over half of Utah's rural students take a standardized college entrance exam.

PRIORITY RANKING

23

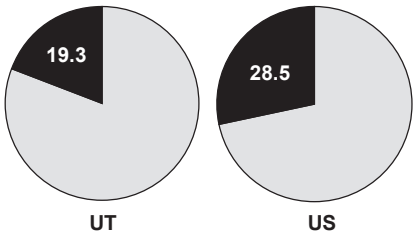
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

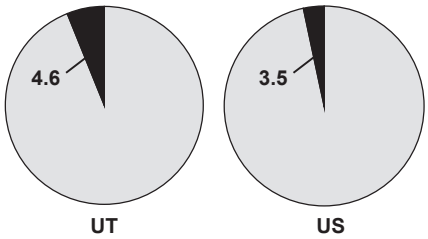
45

	UT	Rank*
Percent rural schools	19.3%	38
Percent small rural school districts	21.4%	32
Percent rural students	4.7%	44
Number of rural students	26,579	44
Percent state education funds to rural districts	6.2%	44

Percent rural schools



Percent rural ELL students



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

17

	UT	Rank*
Percent rural minority students	17.7%	28
Percent rural ELL students	4.6%	12
Percent rural IEP students	14.4%	22
Percent rural students eligible for free or reduced lunches	51.1%	22
Percent rural mobility	11.0%	22

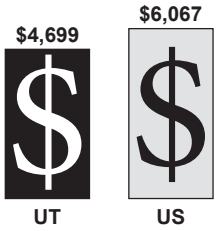
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

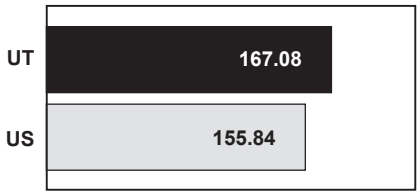
5

	UT	Rank*
Rural instructional expenditures per pupil	$4,699	5
Ratio of instructional to transportation expenditures	$9.75	19
Median organizational scale (x 100)	8,862	14
State revenue to schools per local dollar	$1.49	31
Rural salary expenditures per instructional FTE	$53,445	16

Rural instructional expenditures per pupil



Rural Grade 8 NAEP performace (science)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

35

	UT	Rank*
Rural Grade 4 NAEP performance (math)	247.13	33
Rural Grade 4 NAEP performance (reading)	229.04	36
Rural Grade 8 NAEP performance (math)	286.18	23
Rural Grade 8 NAEP performance (reading)	269.83	27
Rural Grade 8 NAEP performance (science)	167.08	46

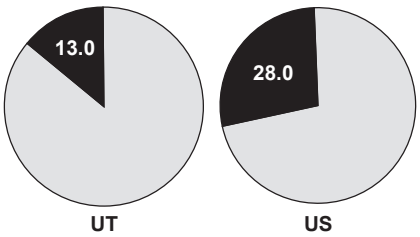
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

11

	UT	Rank*
Overall graduation rate in rural districts	84.0%	13
Graduation rate for rural minority students	60.3%	7
Graduation rate for rural free or reduced lunch eligible students	76.2%	15
Percent rural Juniors and Seniors taking at least one AP course	13.0%	5
Percent rural Juniors and Seniors who took the ACT or SAT	54.9%	39

Percent rural Juniors and Seniors taking at least one AP course



*** A rank of 1 is most crucial or most urgent**

VERMONT - Nearly three in four Vermont schools are classified as rural, and these schools serve a student population characterized by low poverty rates, few minority students, and very low rates of English language learners. Instructional spending and teacher salaries are high, and funding distributions are the most equitable in the US. Among the few challenges, the percentage of rural students qualifying for special education services is well above the national average.s.

PRIORITY RANKING

35

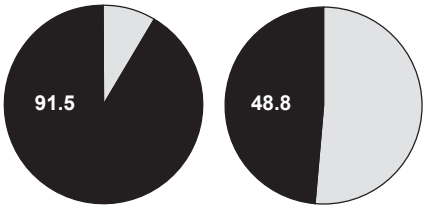
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

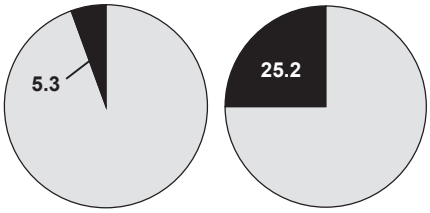
2

	VT	Rank*
Percent rural schools	72.0%	3
Percent small rural school districts	91.5%	2
Percent rural students	54.7%	1
Number of rural students	48,275	40
Percent state education funds to rural districts	54.3%	1

Percent small rural districts



Percent rural minority students



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

46

	VT	Rank*
Percent rural minority students	5.3%	47
Percent rural ELL students	0.0%	49
Percent rural IEP students	15.5%	10
Percent rural students eligible for free or reduced lunches	38.4%	37
Percent rural mobility	8.3%	43

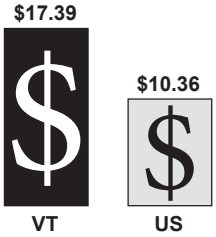
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

48

	VT	Rank*
Rural instructional expenditures per pupil	$8,244	40
Ratio of instructional to transportation expenditures	$17.39	48
Median organizational scale (x 100)	340	46
State revenue to schools per local dollar	$12.47	49
Rural salary expenditures per instructional FTE	$63,937	35

Ratio of instructional to transportation expenditures



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

NA

	VT	Rank*
Rural Grade 4 NAEP performance (math)	NA	NA
Rural Grade 4 NAEP performance (reading)	NA	NA
Rural Grade 8 NAEP performance (math)	NA	NA
Rural Grade 8 NAEP performance (reading)	NA	NA
Rural Grade 8 NAEP performance (science)	NA	NA

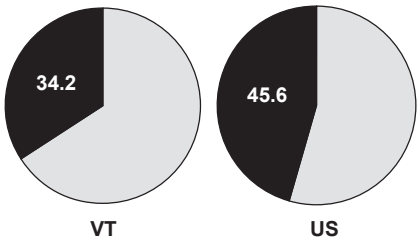
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

24

	VT	Rank*
Overall graduation rate in rural districts	88.2%	28
Graduation rate for rural minority students	78.3%	22
Graduation rate for rural free or reduced lunch eligible students	80.2%	26
Percent rural Juniors and Seniors taking at least one AP course	30.4%	34
Percent rural Juniors and Seniors who took the ACT or SAT	34.2%	9

Percent rural Juniors and Seniors who took the ACT or SAT



*** A rank of 1 is most crucial or most urgent**

VIRGINIA - The approximately 270,000 students enrolled in Virginia's rural school districts have been subjected to some of the least favorable educational policies in the nation. Rural fourth graders score well above the national average on English NAEP assessments, but score lower than rural students in the majority of states by eighth grade. Graduation rates for Virginia's rural students are on par with the national average for rural students, and almost one third of rural Juniors and Seniors are taking an AP course.

PRIORITY RANKING

15

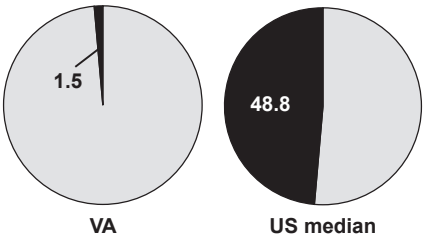
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

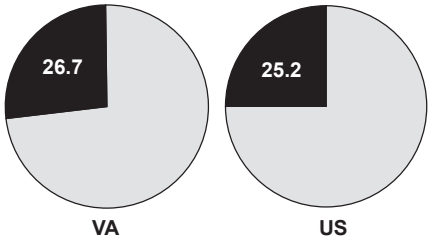
24

	VA	Rank*
Percent rural schools	31.5%	28
Percent small rural school districts	1.5%	42
Percent rural students	21.2%	23
Number of rural students	267,010	7
Percent state education funds to rural districts	24.4%	19

Percent small rural districts



Percent rural minority students



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

27

	VA	Rank*
Percent rural minority students	26.7%	19
Percent rural ELL students	2.3%	21
Percent rural IEP students	12.4%	37
Percent rural students eligible for free or reduced lunches	45.6%	25
Percent rural mobility	10.3%	26

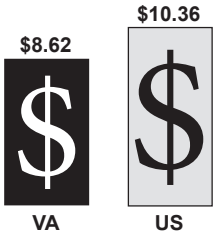
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

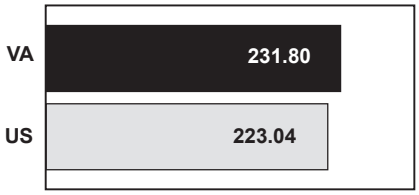
4

	VA	Rank*
Rural instructional expenditures per pupil	$5,706	23
Ratio of instructional to transportation expenditures	$8.62	11
Median organizational scale (x 100)	24,050	9
State revenue to schools per local dollar	$1.10	20
Rural salary expenditures per instructional FTE	$54,071	18

Ratio of instructional to transportation expenditures



Rural Grade 4 NAEP performace (reading)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

26

	VA	Rank*
Rural Grade 4 NAEP performance (math)	244.91	26
Rural Grade 4 NAEP performance (reading)	231.80	41
Rural Grade 8 NAEP performance (math)	285.83	21
Rural Grade 8 NAEP performance (reading)	266.85	18
Rural Grade 8 NAEP performance (science)	159.06	24

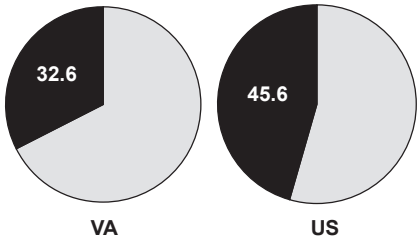
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

16

	VA	Rank*
Overall graduation rate in rural districts	85.9%	18
Graduation rate for rural minority students	82.6%	26
Graduation rate for rural free or reduced lunch eligible students	78.2%	19
Percent rural Juniors and Seniors taking at least one AP course	30.3%	33
Percent rural Juniors and Seniors who took the ACT or SAT	32.6%	7

Percent rural Juniors and Seniors who took the ACT or SAT



*** A rank of 1 is most crucial or most urgent**

WASHINGTON - Although Washington is on par with other states in terms of the absolute number of rural students, these students are much less likely to be White or fluent in English than rural students in other states. The state provides almost $3 to rural districts for each local dollar raised and teachers receive higher than average salaries. Washington's rural students score slightly above average on the standardized assessments, but graduation rates are low for underprivileged populations as well as for rural students in general.

PRIORITY RANKING

27

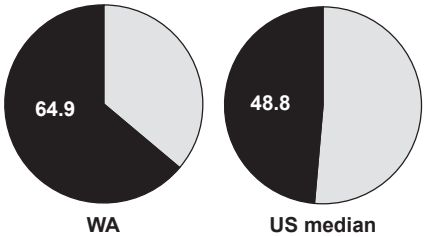
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

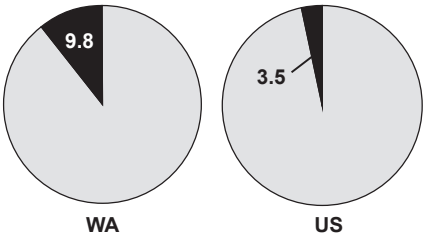
35

	WA	Rank*
Percent rural schools	21.3%	36
Percent small rural school districts	64.9%	14
Percent rural students	7.1%	40
Number of rural students	74,803	29
Percent state education funds to rural districts	9.1%	39

Percent small rural districts



Percent rural ELL students



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

10

	WA	Rank*
Percent rural minority students	33.5%	14
Percent rural ELL students	9.8%	4
Percent rural IEP students	13.5%	29
Percent rural students eligible for free or reduced lunches	56.3%	15
Percent rural mobility	11.7%	16

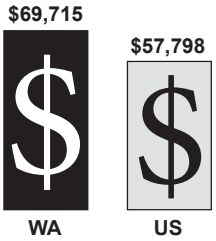
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

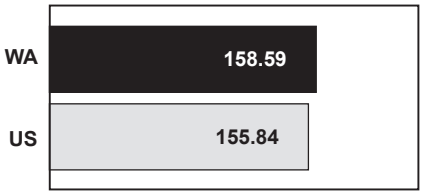
46

	WA	Rank*
Rural instructional expenditures per pupil	$5,998	26
Ratio of instructional to transportation expenditures	$10.03	24
Median organizational scale (x 100)	1,479	36
State revenue to schools per local dollar	$2.85	43
Rural salary expenditures per instructional FTE	$69,715	40

Ratio of instructional to transportation expenditures



Rural Grade 8 NAEP performace (science)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

31

	WA	Rank*
Rural Grade 4 NAEP performance (math)	247.57	35
Rural Grade 4 NAEP performance (reading)	226.46	30
Rural Grade 8 NAEP performance (math)	288.12	29
Rural Grade 8 NAEP performance (reading)	270.12	29
Rural Grade 8 NAEP performance (science)	158.59	22

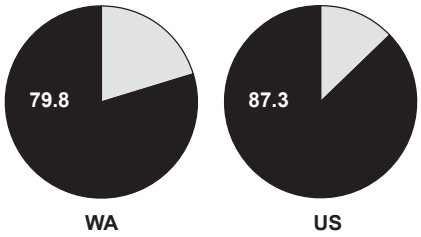
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

4

	WA	Rank*
Overall graduation rate in rural districts	79.8%	9
Graduation rate for rural minority students	58.0%	6
Graduation rate for rural free or reduced lunch eligible students	71.6%	10
Percent rural Juniors and Seniors taking at least one AP course	24.7%	23
Percent rural Juniors and Seniors who took the ACT or SAT	25.2%	32

Overall graduation rate in rural districts



*** A rank of 1 is most crucial or most urgent**

WEST VIRGINIA - With one in three students attending school in a rural district, and over half of the schools located in rural areas, West Virginia continues to be more "rural" than average. The state's rural students are more likely to be White, English-speaking, and on an individualized education plan than the national average. West Virginia's statewide consolidation efforts have resulted in large schools, large districts, and burdensome transportation costs for rural districts. Although West Virginia's rural students are less likely to take AP courses and college entrance exams, there is tentative evidence that minority students and students in poverty graduate at a relatively high rate compared to their counterparts in other states.

PRIORITY RANKING

13

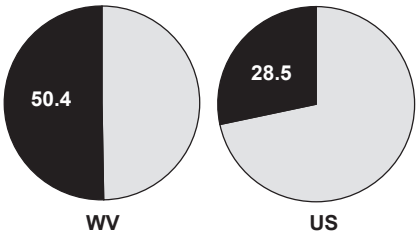
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

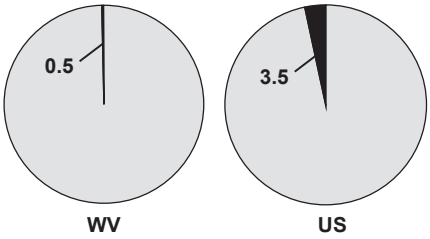
18

	WV	Rank*
Percent rural schools	50.4%	11
Percent small rural school districts	0.0%	43
Percent rural students	32.8%	9
Number of rural students	91,879	26
Percent state education funds to rural districts	33.9%	12

Percent rural schools



Percent rural ELL students



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

35

	WV	Rank*
Percent rural minority students	6.3%	45
Percent rural ELL students	0.5%	46
Percent rural IEP students	15.9%	8
Percent rural students eligible for free or reduced lunches	50.5%	23
Percent rural mobility	9.1%	36

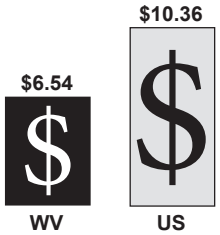
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

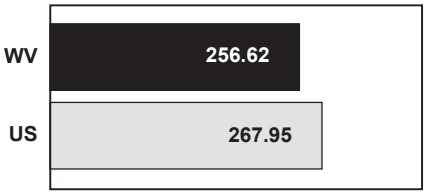
8

	WV	Rank*
Rural instructional expenditures per pupil	$6,705	32
Ratio of instructional to transportation expenditures	$6.54	1
Median organizational scale (x 100)	11,641	13
State revenue to schools per local dollar	$1.41	28
Rural salary expenditures per instructional FTE	$54,142	19

Ratio of instructional to transportation expenditures



Rural Grade 8 NAEP performace (reading)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

6

	WV	Rank*
Rural Grade 4 NAEP performance (math)	236.04	7
Rural Grade 4 NAEP performance (reading)	213.86	8
Rural Grade 8 NAEP performance (math)	273.26	4
Rural Grade 8 NAEP performance (reading)	256.62	3
Rural Grade 8 NAEP performance (science)	148.78	10

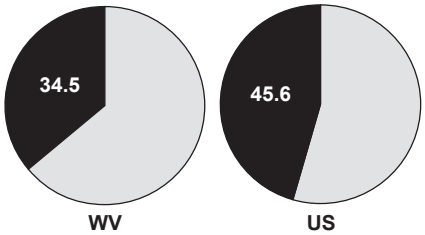
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

22

	WV	Rank*
Overall graduation rate in rural districts	85.3%	17
Graduation rate for rural minority students	93.0%	46
Graduation rate for rural free or reduced lunch eligible students	81.8%	30
Percent rural Juniors and Seniors taking at least one AP course	20.2%	12
Percent rural Juniors and Seniors who took the ACT or SAT	34.5%	10

Percent rural Juniors and Seniors who took the ACT or SAT



*** A rank of 1 is most crucial or most urgent**

WISCONSIN - Just over one in three Wisconsin schools is located in a rural area. Although the state has a lower than average percentage of non-White students in rural districts, the rate is increasing and now more than 10% of rural Wisconsin students are of a different race. Funding is more heavily dependent on local revenue than in most other states, and rural teacher salaries are just above the national average. Wisconsin's rural students are on par with their counterparts in other states on English assessments, but perform significantly better on math and science tests. Nine in ten students who begin high school in a rural district end up graduating, and this rate is only slightly lower for minority students.

PRIORITY RANKING

40

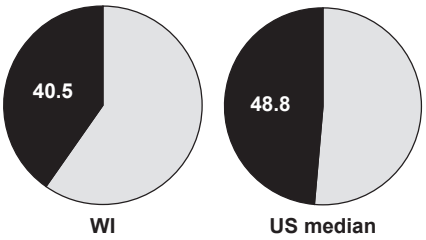
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

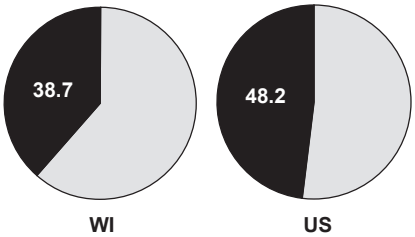
25

	WI	Rank*
Percent rural schools	35.6%	24
Percent small rural school districts	40.5%	27
Percent rural students	18.9%	25
Number of rural students	163,742	18
Percent state education funds to rural districts	19.0%	28

Percent small rural districts



Percent rural students eligible for free or reduced lunches



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

41

	WI	Rank*
Percent rural minority students	10.2%	37
Percent rural ELL students	1.5%	27
Percent rural IEP students	13.7%	27
Percent rural students eligible for free or reduced lunches	38.7%	35
Percent rural mobility	7.9%	45

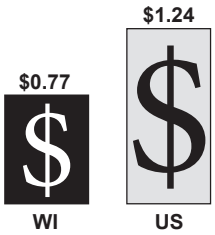
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

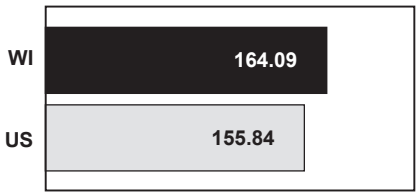
30

	WI	Rank*
Rural instructional expenditures per pupil	$6,379	29
Ratio of instructional to transportation expenditures	$10.30	28
Median organizational scale (x 100)	1,857	30
State revenue to schools per local dollar	$0.77	8
Rural salary expenditures per instructional FTE	$57,990	26

State revenue to schools per local dollar



Rural Grade 8 NAEP performace (science)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

33

	WI	Rank*
Rural Grade 4 NAEP performance (math)	247.55	34
Rural Grade 4 NAEP performance (reading)	224.34	24
Rural Grade 8 NAEP performance (math)	288.75	30
Rural Grade 8 NAEP performance (reading)	268.89	23
Rural Grade 8 NAEP performance (science)	164.09	40

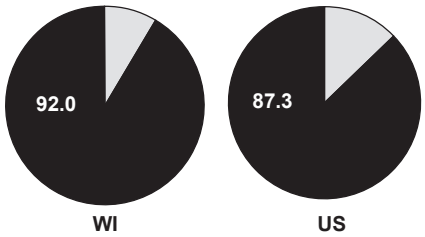
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

34

	WI	Rank*
Overall graduation rate in rural districts	92.0%	42
Graduation rate for rural minority students	88.6%	39
Graduation rate for rural free or reduced lunch eligible students	83.8%	36
Percent rural Juniors and Seniors taking at least one AP course	24.5%	21
Percent rural Juniors and Seniors who took the ACT or SAT	38.5%	17

Overall graduation rate in rural districts



*** A rank of 1 is most crucial or most urgent**

WYOMING - Over half of Wyoming's public schools are located in a rural area, although only one in five Wyoming students attends school in a rural district. One of the biggest changes for Wyoming's rural districts over the past several years has been the increase in geographic mobility; one out of every seven students has changed residences within the past year. Teacher salaries have dropped over the past three years, but the instructional spending per rural pupil has increased slightly. Graduation rates among the state's rural students are below the national average—especially for students living in poverty—and yet Wyoming's rural students are more likely than their counterparts in other states to take AP courses and a college entrance exam.

PRIORITY RANKING

33

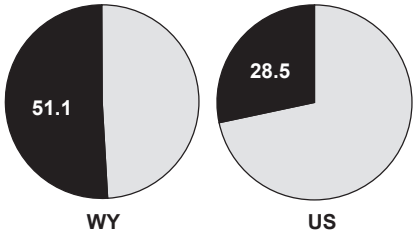
GAUGE 1: Importance

Notable | Important | Very Important | Crucial

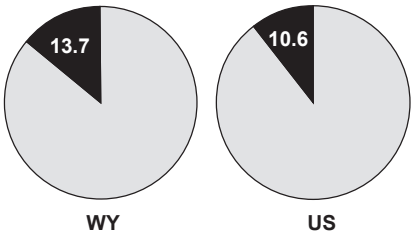
29

	WY	Rank*
Percent rural schools	51.1%	8
Percent small rural school districts	37.0%	29
Percent rural students	19.0%	24
Number of rural students	17,621	47
Percent state education funds to rural districts	23.9%	21

Percent rural schools



Percent rural mobility



GAUGE 2: Student and Family Diversity

Fair | Serious | Critical | Urgent

21

	WY	Rank*
Percent rural minority students	19.3%	26
Percent rural ELL students	2.9%	19
Percent rural IEP students	14.5%	21
Percent rural students eligible for free or reduced lunches	37.1%	41
Percent rural mobility	13.7%	4

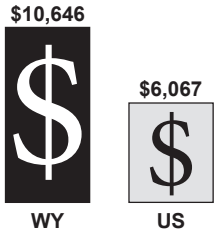
GAUGE 3: Educational Policy Context

Notable | Important | Very Important | Crucial

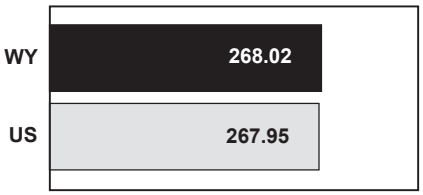
47

	WY	Rank*
Rural instructional expenditures per pupil	$10,646	47
Ratio of instructional to transportation expenditures	$9.99	23
Median organizational scale (x 100)	1,101	40
State revenue to schools per local dollar	$1.47	30
Rural salary expenditures per instructional FTE	$65,328	36

Rural instructional expenditures per pupil



Rural Grade 8 NAEP performace (reading)



GAUGE 4: Educational Outcomes

Fair | Serious | Critical | Urgent

25

	WY	Rank*
Rural Grade 4 NAEP performance (math)	245.63	30
Rural Grade 4 NAEP performance (reading)	225.33	28
Rural Grade 8 NAEP performance (math)	286.64	25
Rural Grade 8 NAEP performance (reading)	268.02	21
Rural Grade 8 NAEP performance (science)	159.09	25

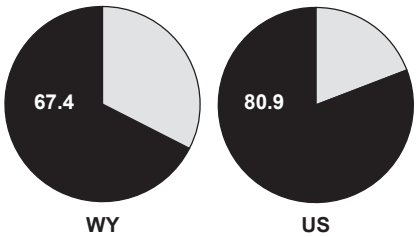
GAUGE 5: College Readiness

Fair | Serious | Critical | Urgent

19

	WY	Rank*
Overall graduation rate in rural districts	80.3%	10
Graduation rate for rural minority students	61.9%	10
Graduation rate for rural free or reduced lunch eligible students	67.4%	5
Percent rural Juniors and Seniors taking at least one AP course	32.2%	39
Percent rural Juniors and Seniors who took the ACT or SAT	57.3%	42

Graduation rate for rural free or reduced lunch eligible students



*** A rank of 1 is most crucial or most urgent**

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