

Why Rural Matters 2003: The Continuing Need for Every State to Take Action on Rural Education

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Nearly one in three of America's school-age children attend public schools in rural areas or small towns of less than 25,000, and more than one in six go to school in the very smallest communities, those with populations under 2,500. These children, their schools, and their communities matter, and they deserve more consideration than they get in the national debate over education policy. This report presents and analyzes descriptive data about the rural schools that serve the 21% of our students who go to school in communities of under 2,500.

Two years ago, we published *Why Rural Matters*, our first report analyzing the relative importance of rural education in each of the 50 states and documenting the urgency with which policymakers in each state should address the needs of rural schools and communities. This report updates and enlarges on that one.

In that first report, we concluded that talking and thinking seriously about rural education as a public policy issue is something that our society simply does not do very often.

We are pleased to say that rural education is a little less marginalized today than it was then, as these developments attest:

- Congress adopted a Rural Education Achievement Program to help rural districts compete for and make more effective use of federal grants. The program is woefully underfunded, and may be cut out completely, but for the first time in a long time rural education was the subject of significant debate in Congress.
- Three state Supreme Courts (Arkansas, Ohio, and Tennessee) have ruled their states' school finance systems unconstitutional because they fund rural schools inadequately and inequitably.
- New federal legislation includes provision for eight federal educational research and development centers on topics of national significance, including one for rural education.
- The National Center for Education Statistics made major improvements in the system by which it classifies schools by locale, making it possible to take a much sharper look at rural education. The NCES also established a significant rural education data section on its web site, called "Navigating Resources for Rural Schools."
- The National Association of State Boards of Education has assigned a staff person to focus on rural education policy.
- *Education Week*, America's leading education newspaper, has a reporter assigned to cover rural education who has filed numerous stories in the past 2 years on rural education policy issues. Major stories on rural schools are now a regular part of the coverage.
- The U.S. Department of Education has established an interdepartmental working group to focus on the problems of rural education.
- Leading national organizations as diverse as the Rural Sociological Society, Save the Children, the National School Boards Association, and the Council on Foundations have featured rural schools or rural children in major reports or events.

This attention is welcome. Rural America has gone unnoticed for too long. Its people are real, their problems significant, their prospects worthy.

While the scale of the schools in rural America is, on the whole, small compared to urban schools, the scope of the rural education enterprise is not. Forty-three percent of the nation's public schools are in rural communities or small

towns of fewer than 25,000 people, and 31% of the nation's children attend these schools.

Some of the communities at the upper end of this size interval would be considered by many to be small cities rather than small towns. So we adopt the most conservative definition of rural throughout this report, including only open country and those communities with fewer than 2,500 people. Using this stringent definition, nearly one third of America's public schools are in rural places, and more than 21% of our public school students attend these schools. And in 20 states, mostly in the South, Appalachia, Northern New England, and the Great Plains, more than 30% of the students go to school in these most rural communities.

Many of the children in these schools and communities are at risk of failing to get a quality education. Poverty is a central factor. In general, poverty rates in rural America remain as high as they are in urban centers, although poverty is not evenly distributed throughout rural America.

The Data

The data we use in this report are primarily from the National Center for Education Statistics (NCES), which uses the Common Core of Data and the School and Staffing Survey to collect education data at the school, district, and state levels, and the U.S. Census Bureau's 2000 Census and Census of Local Governments. Both the Census and the NCES are widely accepted as sources of reliable data for both rigorous research and general analysis. Most of the data in this report are from the years 1999-2000 and 2000-2001.

Since our last report, the NCES has changed the way it defines "rural" and classifies schools according to locale, thus reflecting the growing importance and urgency of addressing the needs of rural education. For this reason, comparisons of the data contained in our previous report and data reported in this one are generally not advisable.

In our previous report, we used data for rural schools and districts that had been designated as rural and assigned a "locale code" of 7 by NCES.¹ In general, this includes schools in open rural areas or in places with a population of fewer than 2,500. However, this excludes schools in even such small places if they lie within the boundaries of a county located in a Metropolitan Statistical Area (small cities) or a Central Metropolitan Statistical Area (big cities). There are many such schools, especially in small communities on the fringe of small cities. Furthermore, NCES based a school's location on its mailing address rather than its actual geographic location. A lot of small rural schools pick up their mail in nearby post offices located in larger towns.

In 1998-1999, NCES established a new locale code (8) for schools in places of under 2,500 within Metropolitan Statistical Areas or Central Metropolitan Statistical

Areas. This increased the percentage of schools considered rural from 24.6% in 1997-1998 to 30.3% in 1999-2000 (19.2% of schools were rural and not in the urban fringe, while 11.1% were rural and in the urban fringe).

In addition, NCES now uses the actual geographic location rather than the mailing address as the basis for determining locale classification of a school. This increased the number of schools coded as "rural" from 6,879 to 9,844, an increase of 43%.

This more realistically portrays the extent to which rural education matters in each state. The data in this report is based on locale codes 7 and 8.

The net result of the changes in how data are collected and reported is that it appears that states are actually increasing the numbers of rural schools and students in rural schools. That isn't necessarily true. The declining enrollment figures should reflect the real story (although this is a challenge to do right now, since so many schools that are considered rural now were not considered rural schools 5 years ago.)

We only use data for regular schools, defined as public elementary/secondary schools that do not focus primarily on vocational, special, or alternative education. In the first report, we used the entire universe of rural schools. But there are more charter schools and special education schools now than when we prepared the first report, and many of these do not report on the same categories of data or have incomplete records. So we did not include them here.

¹There are eight locale codes used by the National Center for Education Statistics. They are:

1. Central city of a Consolidated Metropolitan Statistical Area (CMSA) or Metropolitan Statistical Area (MSA) with population of 250,000 or more or a population.
2. Central city of a CMSA or MSA but not designated as a large central city.
3. Place within the CMSA or MSA of a large central city.
4. Place within the CMSA or MSA of a mid-size central city.
5. Place not within a CMSA or MSA but with population of 25,000 or more and defined as urban.
6. Place not within a CMSA or MSA with a population of at least 2,500 but less than 25,000.
7. Place not within a CMSA or MSA and designated as rural.
8. Place within a CMSA or MSA designated as rural (this code not available prior to 1998).

Gauging Rural Education in the 50 States

This report is framed around two gauges. The “importance” gauge consists of 7 statistical indicators of the relative scale and scope of rural education in the state. The “urgency” gauge consists of 12 statistical indicators of the conditions faced by students, teachers, leaders, and others in rural schools and communities, plus one of the indicators from the “importance” gauge, the percentage of rural population. Each indicator carries the same weight. For each of the indicators in each gauge, the states are ranked from “1” to “50” with 1 being the most important or most urgent, and 50 being least important or least urgent. For each gauge, the average ranking for all indicators is calculated to arrive at the overall rank for that gauge. The indicators used in the gauges are presented in Table 1.

Since the last report, we have added some new indicators and omitted some old ones. Due to reliability issues and the lack of new data, we have omitted indicators on the education climate index, Internet access, and education levels of rural householders. We have added indicators on computer usage, school administration costs, rural per capita income, and transportation expenditures.

All of the state rankings were added and then divided by the number of indicators to give a cumulative ranking for each state. For each gauge, states were ordered by their average ranking and then divided into quartiles that generally describe the relative importance of rural education in that state compared to other states, and the relative urgency with which policymakers in the state should be concerned about rural education. The four quartiles ranging from least to most important are “Useful,” “Important,” “Very Important,” and “Crucial.” The four urgency quartiles are “Fair,” “Serious,” “Critical,” and “Urgent” (see Tables 2 and 3).

Finally, we combined the two rankings and averaged them to arrive at an overall ranking, which we term the *Rural Education Priority Gauge*. Taking an average of the two gauge rankings rather than simply averaging the 19 cumulative indicators gives greater weight to the indicators in the “importance” gauge since its 7 indicators get equal weight with the 13 indicators in the “urgency gauge.”

Results

The results are summarized and discussed below. For comparison purposes, the national level data for each indicator is presented in Table 1.

Seven Indicators of the Relative Importance of Rural Education in Each State

Each of the indicators in the Importance Gauge presents some regional pattern, though not consistent from

indicator to indicator. We define each indicator below and summarize the state and regional patterns in the data.

- The *percentage of state's population that is rural* is the percentage of people living in areas that are classified as rural by the U.S. Census Bureau and generally have fewer than 2,500 people. The higher the percentage, the higher the state ranks on the Importance Gauge.

Only four states (Maine, Mississippi, Vermont, and West Virginia) have a majority of their population living in rural areas. South Dakota and Arkansas come close. Generally, this percentage varies with sparseness and there is a distinct regional pattern to the states that rank high on this indicator. They are in northern New England, Appalachia, the Southeast or Mid-South, and the Great Plains. Mostly, they are moderately populated overall, with small urban centers. States in the Northeast, Southwest, and Far West are generally ranked low. Although there is a lot of open space in the West, demographically this region is as urban as the Northeast. The top 12 states on this indicator average about 1.1 million rural people, and cumulatively account for about one quarter of the nation's total rural population. Most of the states with the largest numbers of rural people do not rank high on this list. Of the top 20 states on this indicator, only 6 are also among the top 20 in the number of rural people (primarily in the Southeast). Some states with a large rural population appear very low on this ranking because they are demographically dominated by very large urban centers, notably Michigan, New York, Ohio, Pennsylvania, and Texas, all with more than 2 million rural residents. Between them, they are home to nearly one quarter of the U.S. rural population, but they rank from 31st (PA) to 50th (CA) on this indicator.

- The *number of rural people* is the number of people living in rural places, as designated by the U.S. Census Bureau. The higher the number of rural people, the higher the state scores on the Importance Gauge.

Over half the rural population in the U.S. lives in 13 states, which include our most populous states and some of our most urban states—California, Michigan, New York, Ohio, and Texas, for example. Only a handful of these most rural-populous states also have at least one third of their population in rural areas—Alabama, Kentucky, North Carolina, and Tennessee—and are often thought of as “rural” states. By contrast, some of the states with the fewest rural people are characteristically considered rural, especially in the Northern Plains where the *combined* rural population of 5 states (Nebraska, Montana, North Dakota, South Da-

Table 1
National Rural Statistics

Importance Gauge	U.S.
Percentage of state's population that is rural	21.0%
Number of rural people	59,061,367
Percentage of public schools in rural areas	31.3%
Percentage of public school students enrolled in rural schools	21.0%
Percentage of students enrolled in rural schools who are minorities	18.6%
Percentage of all students attending small rural schools	7.9%
Percentage of rural children in poverty	13.8%
Urgency Gauge	U.S.
Average rural teacher's salary	\$32,693.87
Ratio of rural to nonrural teacher salary	0.86
Percentage of rural students who are free or reduced-price lunch eligible	33.8%
Average rural student to teacher ratio	14.9
Percentage of rural teachers using computers in class	72.1%
Percentage of rural expenditures on school administration costs, difference from median	4.7% (median)
Rural per capita income	\$19,285
Percentage of rural teachers reporting parental support	60.9%
Percentage of rural expenditures on transportation	4.2%
Percentage of rural expenditures on instruction and pupil support	57.2%
Average number of students per grade	61.3
Percentage of rural schools with declining enrollments of at least 10%, 1996-2000	37.9%

kota, and Wyoming) would not make the top 13 in total population.

- The *percentage of public schools in rural areas* is the percentage of regular elementary and secondary public schools in places classified as rural by the U.S. Census Bureau. The bigger the percentage of rural schools that a state has, the higher the state ranks on the Importance Gauge.

This indicator tells us how prevalent schools based in rural communities are. The range is striking, from only 12.4% in California to 77.3% in South Dakota. Because rural schools tend to be smaller, the proportion of schools in rural communities tends to be larger in most states than the proportion of rural students, but not in proportion to rural population, because many rural students are transported to schools in nonrural locales. The highest percentages of rural schools are in states where the rural population is very sparse or where terrain is difficult, or both (Appalachia, the Great Plains, Northern New England, the Inter-Mountain West, and Alaska, for example). The smallest percentage of rural schools are in urban states on the East and West coasts.

- The *percentage of public school students enrolled in rural schools* is the percentage of all public school students who are enrolled in regular elementary and secondary schools in rural areas. The higher the percentage of rural school students, the higher the state scores on the Importance Gauge.

This indicator tells us to what extent the students in a state go to a school that is in a rural place, whether they live in a rural place or not. Many states that score very high or very low on percentage of rural population also score high or low respectively on this indicator, but there are important differences. The higher the percentage of a state's population that lives in rural communities, the more likely that the percentage of students attending schools in rural places will be lower. The 21 states with the highest percentage of people living in rural places all have a lower percentage of students in rural schools. They are in Appalachia, the Great Plains, Northern New England, and the Southeast. The 14 states with the lowest percentage of rural people (and 18 of the bottom 20) have proportionally higher percentages of rural students (primarily in the far East and far West). This may be a combination of factors, including age-level profiles of the respective rural areas,

pressure to build rural schools in states with sprawling urban areas, and a tendency in sparsely settled rural areas to locate schools in small cities and towns that are just big enough to be classified other than "rural."

- The *percentage of students enrolled in rural schools who are minorities* is the number of minority students in rural public schools as a percentage of all students in rural public schools. The higher the percentage of rural minority students, the higher the state scores on the Importance Gauge.

Typically, a high percentage of rural minority students indicates a large at-risk population in a state's rural schools. Over half the students in Hawaii, New Mexico, and Alaska are nonwhite. In general, Pacific states (Hawaii, Alaska, and California), the entire Southwest (Arizona, New Mexico, Oklahoma, and Texas), and the Deep South (Florida, Georgia, Louisiana, Mississippi, North Carolina, and South Carolina) rank high. Montana, North Dakota, and South Dakota rank fairly high, too, due mainly to Native American populations. States in Appalachia, New England, the Prairie, and the Great Lakes rank low.

- The *percentage of all students attending small rural schools* is the number of students attending rural public schools with enrollments below the state median, as a percentage of all public school students in the state. The higher the percentage of students in small, rural schools, the higher the state scores on the Importance Gauge.

This indicator tells us to what extent students in a state go to schools that are both small and rural. Since the median size of schools varies by state, this is a relative measure of size as it is perceived in the context of each state's school size distribution. While this is not a highly differentiated indicator, ranging from 3% (New Jersey) to 18.3% (Iowa), it does differentiate states within a region. The top six states on this indicator are located in five different regions (The Prairie, the Mid-South, New England, Appalachia, and the Great Plains). For the most part, the leading states are those with high levels of local control and large numbers of independent school districts.

- The *percentage of rural children in poverty* is the percentage of children under the age of 18 who were below the poverty level in 1999 and lived in rural places, as determined by the U.S. Census Bureau. The higher the percentage of children in poverty, the higher the state scores on the Importance Gauge.

Poverty is the largest persistent challenge faced by education anywhere. The highest rates of rural child poverty are in the Southwest, Appalachia, the Mississippi Delta, the Southeast, and the Great Plains. All of these regions are represented among the top 10 states on this indicator. Poverty rates here run from 50% to 100% higher than the national average rural child poverty rate (13.8%). The lowest rates of rural poverty are in the Northeast, the Prairie, and the Great Lakes.

Importance Gauge

To gauge the overall relative importance of rural education to the educational performance of each state, we average each state's ranking on these seven indicators, giving equal weight to each of the indicators. The results are presented in Table 2.

Five quintessentially rural regions, each with well-established cultural and social identities, contain all of the states in the "crucial" category (the top quartile on the Importance Gauge). These are the Mid-South Delta (Alabama, Arkansas and Mississippi), the Southeast (North Carolina and South Carolina), the Great Plains (Montana, North Dakota, Oklahoma and South Dakota), Central Appalachia (Kentucky and West Virginia), and Northern New England (Maine and Vermont). Six of the 13 states in the Very Important category (second quartile) are also in these regions.

The Very Important category disperses to include states in the Northwest, the Prairie, the Southwest and the Far West. The Important category (third quartile) includes six largely urban states with large rural populations in the Great Lakes, Mid-East, and Mid-West area (Indiana, Michigan, Minnesota, Ohio, Pennsylvania, and Wisconsin). The Useful category (fourth quartile) includes states with few rural people or a small percentage of rural people. Nine of the 13 states in this quartile are on the East or West Coast, and two (Nevada and Utah) are in the arid West where most people live in cities.

Kentucky ranks in the top quartile on six of the seven indicators in the Importance Gauge (it is not in the top quartile only in the percentage of minority students, where it ranks 42nd), and Mississippi, South Carolina, and West Virginia rank in the top quartile on five indicators. Alabama and Oklahoma rank in the top quartile on only three indicators, but each of these states ranks fairly high on all indicators.

The indicator that most frequently contributes to a high overall ranking for states is the percentage of the population living in rural areas (because some of the other indicators are a function of this indicator). The factor that contributes least often to a high overall ranking is the number of rural people, because none of the other indicators is a function of this indicator. Our indicators favor high scores

Table 2
Importance Gauge Cumulative Rankings

Crucial		Very Important		Important		Useful	
MS	9.9	TN	19.3	WY	24.9	FL	31.4
NC	12.1	GA	19.4	WI	25.4	CA	33.0
SC	13.3	ID	19.6	IN	26.0	CO	33.0
SD	13.3	LA	20.7	TX	26.1	NY	34.4
KY	13.7	AK	20.9	MN	27.3	DE	35.6
AR	14.1	MO	21.7	OR	28.4	IL	36.1
WV	14.3	IA	21.9	WA	28.4	MD	36.7
ND	14.6	NM	22.1	NH	28.6	UT	38.3
AL	15.1	VA	22.6	PA	29.0	NV	39.4
OK	16.7	KS	22.7	MI	29.1	CT	40.1
ME	16.9	NE	23.0	AZ	30.1	MA	42.3
MT	16.9	HI	23.6	OH	30.6	NJ	43.1
VT	18.7					RI	45.7

Note. These rankings are the average of each state's scores on seven indicators. The lower the number, the more important it is that policymakers address rural school issues in that state. Numbers are rounded.

for states where rural life is characteristic of a large portion of the population, no matter how large the population is.

Thirteen Indicators of the Urgency with which Policymakers Should Give Attention to Rural Education in Each State

We use 12 unique indicators to measure the Urgency Gauge, plus one indicator from the Importance Gauge—the percentage of population living in rural areas. These indicators produce certain regional patterns as well.

- The *average rural teacher's salary* is the average salary for teachers in rural public elementary and secondary schools, as reported by the teachers. In some states, especially in the South, this includes both state mandated pay-scale salaries and local supplements, but nowhere do they include fringe benefits. The lower the salary, the higher the state ranks on the Urgency Gauge. The lowest average salary earns a ranking of one.

Teacher pay is looming as a central issue in educational policy as schools compete for the highly qualified teachers necessary to meet state and federal standards, and as courts examine school funding systems in light of the way they position schools to compete for highly qualified teachers. Average salaries for rural teachers range from a low of \$24,234 in South Dakota to a high of \$49,872 in New Jersey, a 100% differential. The four lowest average salaries are all in Northern Plains states. In general, the

highest rural salaries are in large urban states (excepting Alaska)

- The *ratio of rural to nonrural teacher salary* is the ratio of the average rural teacher salary to the average nonrural teacher salary. The lower the ratio, the higher a state ranks on the Urgency Gauge.

Rural schools compete for teachers across state lines, but they also compete with nonrural areas within their state. This indicator measures rural schools' power to compete by calculating the "cents on the dollar" they pay teachers compared to what teachers get in other areas of the same state. There are four states where, on average, rural teachers are paid more than others (Nevada, New Mexico, North Carolina and South Carolina), and three others where they are paid the same (Alaska, Oklahoma, and Washington). In all other states, rural teachers are paid less, going as low as 79 cents on the dollar in Nebraska. The lowest comparative rural teacher salaries are in Northern Plains, Prairie, and Great Lakes states. States in the South (except Arkansas), Southwest, and lower New England are likely to pay closer to (or above) parity salaries.

While these "salary gap" data are valuable overall for general comparison purposes, caution should be exercised in interpreting this statistic in some states. Salaries are sharply influenced by tenure or length of service, which may vary widely between hard-to-staff and other schools within a state. In some schools, teachers may be clustered at two extremes, with some very long-term teachers and

regular rural public elementary and secondary schools. The higher the pupil-teacher ratio, the higher a state ranks on the Urgency Gauge.

This is a rough proxy for class size, a factor in academic achievement. It ranges from 9.9 students per teacher in sparsely populated Wyoming to 18.7 students per teacher in densely populated California. Six out of the eight lowest ratios come from Plains states and all the Southwest and Northern New England states rank in the lower half of the profile. By contrast, most of the Great Lakes and the Southeastern states (including the Delta, except Arkansas) rank in the upper half. Generally, it appears that where schools are smaller, more dispersed, and independently organized in small districts, classes are also smaller. Where schools and districts are larger and systems are more centralized, classes are larger.

- *The percentage of rural teachers using computers in class* is the percentage of rural teachers who report that students use computers during class time. The lower the percentage of teachers reporting student use of computers, the higher the state ranks on the Urgency Gauge.

Does technology reach the rural classroom? As many as 85% (Alaska and Hawaii) and as few as 55% (Delaware and Arkansas) of rural teachers say "yes." In general, rates of usage are lowest in the Southeast (except North Carolina) and Northern New England, and highest in the Great Plains. Remoteness may explain much of this. The five highest users include, in descending order, Hawaii, Alaska, West Virginia, Idaho, and Wyoming. But there are some strange bedfellows on this list. The five lowest users of computers in the rural classroom are, in ascending order, Delaware, Arkansas, Mississippi, Massachusetts and New York.

- *The percentage of rural expenditures on school administration costs, difference from median* is the average percentage of rural district expenditures for school administration expressed as the absolute difference from the median average national expenditure for rural school administration. The bigger the difference from the national median, *either higher or lower*, the higher the state ranks on the Urgency Gauge.

Administration is necessary at the school level, where strong principal leadership is consistently reported as a factor in teaching and achievement. But either too much or

too little, is likely to be counterproductive. So we measure the absolute difference between (1) the average school-level administrative expenditure as a percentage of total spending for the rural schools in a state, and (2) the national median state average for rural schools. The national median is 4.7%, and ten states are at least one percentage point removed from that. Of these, seven states spend at least one percentage point less (in descending order, Arizona, California, New York, Minnesota, Pennsylvania, South Dakota and Kentucky), and three spend at least one percentage point more (Nevada, Oregon, and Kansas). Ten states are either at the national median or within 0.1% of it (in ascending order, Delaware, West Virginia, Alaska, Colorado, Oklahoma, Vermont, Florida, Massachusetts, Missouri, and Michigan). This may be the least regionally sensitive of all the urgency indicators, as neither rural demography or geography, school size distribution, or organizational structure seems to explain these data.

- *Rural per capita income* is the rural per capita income by state, as measured by the U.S. Bureau of Census. The lower the rural per capita income is, the higher the state ranks on the Urgency Gauge.

A measure not just of poverty, but of broader economic distress. The range is from \$15,177 in West Virginia to \$33,428 in Connecticut. Appalachia, the Mid-South Delta, the Southwest, and the Northern Plains account for 12 of the 13 states with the lowest rural per capita income. More than half the states have a rural per capita income of less than \$20,000. All of those above that level are in the North and most are either on the Pacific coast or east of the Mississippi River. The exceptions are Minnesota (to the extent it is east of the Mississippi River), Virginia, and Wyoming.

- *The percentage of rural teachers reporting parental support* is the percentage of rural teachers who strongly or somewhat strongly agree with the statement: "I receive a great deal of support from parents for the work I do." The lower the percentage of rural teachers reporting parental support, the higher the state ranks on the Urgency Gauge.

When teachers report that parents don't support their work, there is evidence of a school-community divide. By using this measure, we assume that teachers accurately perceive this divide. We do not assume that parents are to blame for it. In five states (Delaware, Arizona, Florida, Alaska, and Kentucky), fewer than half the rural teachers report feeling strongly or somewhat strongly that they receive a great deal of support from parents. There may be a relationship between states with a high percentage of poor

and minority students in rural schools and a low score on this indicator. But it may be that the pattern is clearer with respect to the relationship between this indicator and local control. Using a classification of states constructed by van Geel (as revised and updated by the Education Commission of the States³), we note that among the 25 states in the upper half of this ranking are 14 of the 17 states with highly centralized decision-making systems. Only 6 of the top 25 states are among the 23 classified by ECS as having a decentralized decision-making system. Five of the 25 are among the 10 states listed by ECS as moderately decentralized.

- The *percentage of rural expenditures on transportation* is the total expenditure for vehicle operation, monitoring riders, and vehicle servicing and maintenance, expressed as a percentage of total elementary-secondary spending in rural districts. The higher the percentage of expenditures for transportation, the higher a state ranks on the Urgency Gauge.

Busing kids to and from school has been a growing phenomenon for 80 years. Nationwide, rural schools spend about 4.2% of their money on transportation, but it runs as high as 6.4% in West Virginia. This spending is partly a matter of terrain and geography, but it is also a matter of policies related to school size (the larger the catchment area, the higher the spending), personnel decisions, and permissible length of the ride. Rural schools in Kentucky, a state similarly situated to West Virginia, spend only 4.4% of their total expenditures on transportation. Likewise, rural schools in Nebraska, a state with terrain similar to Kansas, spend only 3.2% of their money on transportation, while rural schools in Kansas spend 4.5%. Rural schools in Texas spend 2.5%, while those in New Mexico spend 5.9%. Those in North Dakota spend 5.7%; South Dakota, 3.7%. There are, therefore, few regional patterns here. Most states in the Southeast spend toward the lower end of the spectrum (except Louisiana), while most Great Lakes states are near the middle.

- The *percentage of rural expenditures on instruction and pupil support* is the total rural expenditure for activities dealing with the interaction of teachers and students in the classroom plus the total expenditures for pupil support (administrative, guidance, health, and logistical support including social work, accounting, counseling, record maintenance,

nursing, psychological, and speech services) and instructional staff support (supervision of instruction service improvements, curriculum development, instructional staff training, media, library, and computer-assisted instruction service,) as a percentage of total elementary-secondary spending. The lower the rural expenditures on instruction and pupil support, the higher the state scores on the Urgency Gauge.

What percentage of their budgets do rural schools spend on the interaction between students and teachers and services that support students or teachers? We refer to this as "money that gets to the classroom," though it is somewhat broader than that. It excludes school level and central administration, transportation, capital expenses, interest, and food. Rural schools in Colorado get only 48.5% of their money into the classroom and Arizona only 49.3%. At the other end, rural schools in three southern New England states (Connecticut, Massachusetts, and Rhode Island, three of the least rural states in the nation) get about two thirds of their money to the student-teacher level. In general, Southeastern states (except Mississippi) get money to the rural classroom at above median rate, while Southwestern states are below median. Otherwise there is very little regional pattern here.

- The *average number of students per grade* is a ratio of the average number of rural students in rural public schools to the average number of grades in rural public schools. The higher the ratio of students to grades, the higher the state ranks on the Urgency Gauge.

This is a proxy for school size. A rich scholarly literature validates the effectiveness of smaller schools, so the higher this number is, the higher the state's urgency ranking. Southeastern states (except Delta states Arkansas and Louisiana) tend to have bigger rural schools. Georgia, with over 130 kids per grade, has the biggest rural schools. Seven of eight states with more than 100 students per grade in rural schools are on the East Coast (Hawaii is the exception), some of them heavily rural (North Carolina and Georgia) and some of them heavily urban (New Jersey and Rhode Island). By contrast, 9 of the 12 states with the smallest school size are in the Prairie-Plains (from smallest to largest, Nebraska, Montana, South Dakota, North Dakota, Wyoming, Oklahoma, Kansas, Illinois, and Iowa). Alaska, with the most remote schools serving small villages, has the smallest schools.

- The *percentage of rural schools with declining enrollments* of at least 10%, 1996-2000 is

³Mathers, J. K. (1999). *Education accountability systems in 50 states*. Denver CO: Education Commission of the States.

Table 3
Urgency Gauge Cumulative Rankings

Urgent		Critical		Serious		Fair	
MS	16.8	VA	22.0	SC	25.2	NE	28.1
AL	17.7	UT	22.2	NY	25.2	MI	28.6
AZ	18.5	FL	22.7	ME	25.4	WY	29.0
ND	18.5	CA	22.9	MO	25.8	WI	29.3
KY	19.2	TN	23.2	GA	26.2	OK	29.6
PA	20.2	NM	23.2	IN	26.7	NH	29.8
WV	20.2	NC	23.3	KS	27.0	NJ	29.8
LA	20.4	IL	23.6	VT	27.2	WA	30.6
SD	20.5	OR	23.7	NV	27.2	CO	30.8
MN	20.8	ID	24.3	HI	27.3	AK	31.8
OH	21.2	IA	24.7	MD	27.9	MA	33.4
AR	21.7	MT	24.8	TX	28.0	CT	34.1
DE	21.8					RI	34.7

Note. These rankings are the average of each state's scores on 13 indicators. The lower the number, the more urgently the state needs attention paid to rural education policy issues. Numbers are rounded.

the percentage of rural public elementary and secondary schools that have experienced declines in enrollment of at least 10% between the school years 1996 and 2000. The higher the percentage of rural schools with declining enrollments, the higher the state scores on the Urgency Gauge.

Declining enrollment is coincident with depopulation, economic distress, or both. This is an acutely Western problem. The top 14 states in this indicator are all west of the Mississippi. In five of those states, more than half the rural schools are losing enrollment (Alaska, Hawaii, Montana, Nevada, and North Dakota). The Northern Plains region is the epicenter of this problem. All five states are among the top 11. East of the Mississippi, the states of Maine, North Carolina, Vermont and West Virginia—all near the top in percent of people living in rural areas—have high percentages of rural schools that are losing enrollment. Mid-South Delta states cluster near the middle (ranked from 19 to 33), and Great Lakes and Southeastern rural schools tend to have lower rates of declining enrollment. But even in South Carolina, a leading rural state with the lowest rate of declining enrollments, more than 20% of the rural schools are coping with sustained enrollment losses.

The Urgency Gauge

To gauge the urgency with which policymakers in a state should address the special problems of rural education, we averaged each state's ranking on these 12 unique

indicators plus one indicator from the Importance Gauge: the percentage of the population living in rural areas. We added this indicator to give some additional weight to the urgency in states where the rural population is demographically more important and should be politically more significant. We gave equal weight to each of these 13 indicators. The results are presented in Table 3.

The diversity of states in the "Urgent" quartile is impressive. Included are states from the Southeast (Alabama, Mississippi), the Southwest (Arizona), the Great Plains (North Dakota and South Dakota), Central Appalachia (Kentucky and West Virginia), the industrial Mid-Atlantic (Pennsylvania and Delaware), Mid-South Delta (Arkansas and Louisiana), and the Great Lakes (Minnesota and Ohio).

The "Fairly" Urgent (fourth) quartile is diverse, too, but includes a substantial number of states in the Central and Southern Plains and in southern (more urban) New England, and two Great Lakes states (Michigan and Wisconsin).

The states in the two middle quartiles represent sharply divergent situations, and in some cases, these rankings may reflect the limitations of using statewide statistical averages to measure the urgency indicators. In some states, rural poverty is regionally concentrated and some statewide averages may mask sharp variations in circumstances within the state. South Georgia, Coastal South Carolina, and Northern and Downeast Maine are examples of regions whose need for rural education policy attention is critical or urgent, although the state ranks only "serious" on the Urgency Gauge. At the same time, conditions in East Tennessee, coastal North Carolina, and northern New Mexico

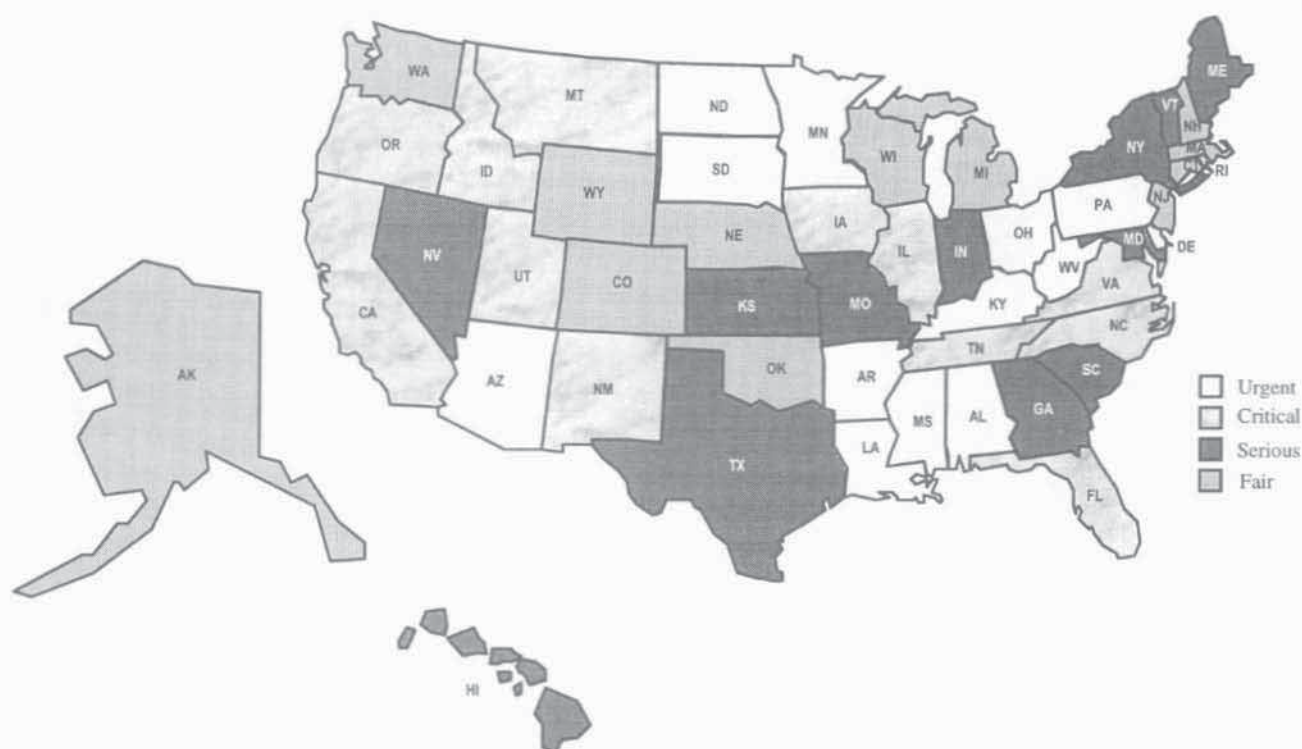


Figure 2. Urgency gauge rankings

are probably among the most urgent in the nation, although those states rank only "critical."

Still, these urgency indicators paint a broad picture of difficult conditions that are widespread in some states. North Dakota stands out as the only state that ranks in the top quartile on 7 of the 12 urgency indicators. Four states (Alabama, Arizona, Kentucky, and South Dakota) rank in the top quartile on 6 indicators. Minnesota and Ohio rank in the top quartile on only three urgency indicators, but they earn a place in the top quartile of the overall gauge by ranking quite high on nearly all the urgency indicators. In fact, Ohio ranks in the lowest quartile on only one indicator (declining enrollment) while Minnesota does not achieve the bottom quartile on any urgency indicator.

The indicators that most frequently contribute to a high ranking on the Urgency Gauge are rural per capita income (eight of the top quartile states score in the top quartile on this indicator) and the percentage of the population in rural areas (seven states). These are two indicators that are generally beyond the direct influence of education policymakers.

However, four indicators contribute to top quartile rankings for six states, and all of these are well within the purview of policymakers to achieve change. These are:

- average rural teacher salaries,
- computer use in the classroom,

- school administrative cost, and
- the share of expenditures spent on transportation.

Five of the six states that rank in the top quartile overall and on the school administrative cost indicator rank high on that indicator because their school-level administration expenditures are extremely low relative to other states (Arizona, Kentucky, Minnesota, Pennsylvania, and South Dakota). It might be that rural school districts in these states have been penny wise and pound foolish in paring administration costs at the principal level.

The indicators that contribute least often to a high overall urgency ranking are students per grade (two states of the most "Urgent" states score in the top quartile on this indicator), and declining enrollment, percent of expenditures on teacher and pupil support, and pupil teacher ratio (three top quartile states each).

The Rural Education Priority Gauge

We average the cumulative rankings on the Importance and Urgency gauges to discern the priority rural education states. This procedure gives somewhat greater weight to the indicators on the Importance Gauge, since there are only 7 of them and their average rank counts as much as the average rank of 13 indicators on the Urgency Gauge (and

Table 4
Rural Education Priority Gauge

Leading		Major		Significant		Notable	
MS	13.4	ID	21.9	HI	25.4	MI	28.9
AL	16.4	VA	22.5	NE	25.5	WA	29.1
KY	16.4	NM	22.7	OH	25.9	NH	29.2
ND	16.6	GA	22.8	OR	26.1	NY	29.8
SD	16.9	OK	23.2	WY	26.1	IL	29.9
NC	17.7	IA	23.3	IN	26.3	UT	30.3
AR	17.9	VT	23.7	AK	26.4	CO	31.9
WV	18.5	MO	23.7	WI	26.6	MD	32.3
SC	19.2	MN	24.1	FL	27.1	NV	33.3
LA	20.5	AZ	24.3	TX	27.3	NJ	36.5
TN	20.8	PA	24.6	CA	28.0	CT	37.1
MT	20.9	KS	24.9	DE	28.7	MA	37.9
ME	21.1					RI	40.2

Note. The combined average ranking of each state on the Importance and Urgency Gauges.

one of them, the percentage of people in rural areas, is included in both gauges). The rankings for the Rural Education Priority Gauge are presented in Table 4.

The top quartile on this gauge includes states in classic rural regions of the nation—the Mid-South Delta (Alabama, Louisiana and Mississippi), Appalachia (Kentucky, Tennessee and West Virginia), the Northern Plains (Montana, North Dakota and South Dakota), the Southeastern Black Belt (North Carolina and South Carolina), and northern New England (Maine).

There are seven states that rank in the top quartile of both the underlying gauges of Importance and Urgency: Alabama, Arkansas, Kentucky, Mississippi, North Dakota, South Dakota and West Virginia. These states are in the heart of the Mid-South Delta, Appalachia, and the Northern Plains.

Eleven of the states in the top quartile on the Rural Education Priority Gauge are also ranked in the top quartile of the Importance Gauge. Only two states (Louisiana and Tennessee) not in the top quartile of the Importance Gauge are pulled into the top quartile of the Rural Education Priority Gauge by their high ranking on the Urgency Gauge. Oklahoma and Vermont are the two states ranked in the top quartile of the Importance Gauge that do not make the top quartile of the Rural Education Priority Gauge because of their relatively low ranking on the Urgency Gauge.

Eight states in the top quartile of the Urgency Gauge are also in the top quartile of the Rural Education Priority Gauge. The five states pulled into the top quartile on the Rural Education Priority Gauge because of a high ranking on the Importance Gauge and despite a relatively low ranking on the Urgency Gauge are Maine, Montana, North Caro-

lina, South Carolina, and Tennessee. The five states that rank in the top quartile of the Urgency Gauge, but do not make the top quartile of the Rural Education Priority Gauge because they score relatively low on the Importance Gauge are Arizona, Delaware, Minnesota, Ohio and Pennsylvania.

Five of the 12 states in the second quartile of the Rural Education Priority Gauge rank in the top quartile of either the Importance or Urgency Gauge. They are Arizona, Minnesota, Oklahoma, Pennsylvania, and Vermont. The seven states in the second quartile that do not rank in the top of either of the two underlying gauges are Georgia, Idaho, Iowa, Kansas, Missouri, New Mexico, and Virginia.

The lowest ranking states on the Rural Education Priority Gauge are mostly large urban states on the East Coast or in the far West. Nearly all of them rank higher in urgency than importance (New Hampshire and Washington are exceptions) but only Illinois and Utah rank above the median on urgency.

Discussion

The four quartile categories merely describe a state's relative position along a continuum. When evaluating the urgency of policy attention to rural matters, there is no bright line distinguishing Delaware as "urgent" from Virginia as merely "critical." Likewise, the difference in importance between Vermont as "crucial" and Tennessee as merely "very important" is negligible. However, these categories do allow us to group states into certain clusters in order to discuss patterns in the findings.

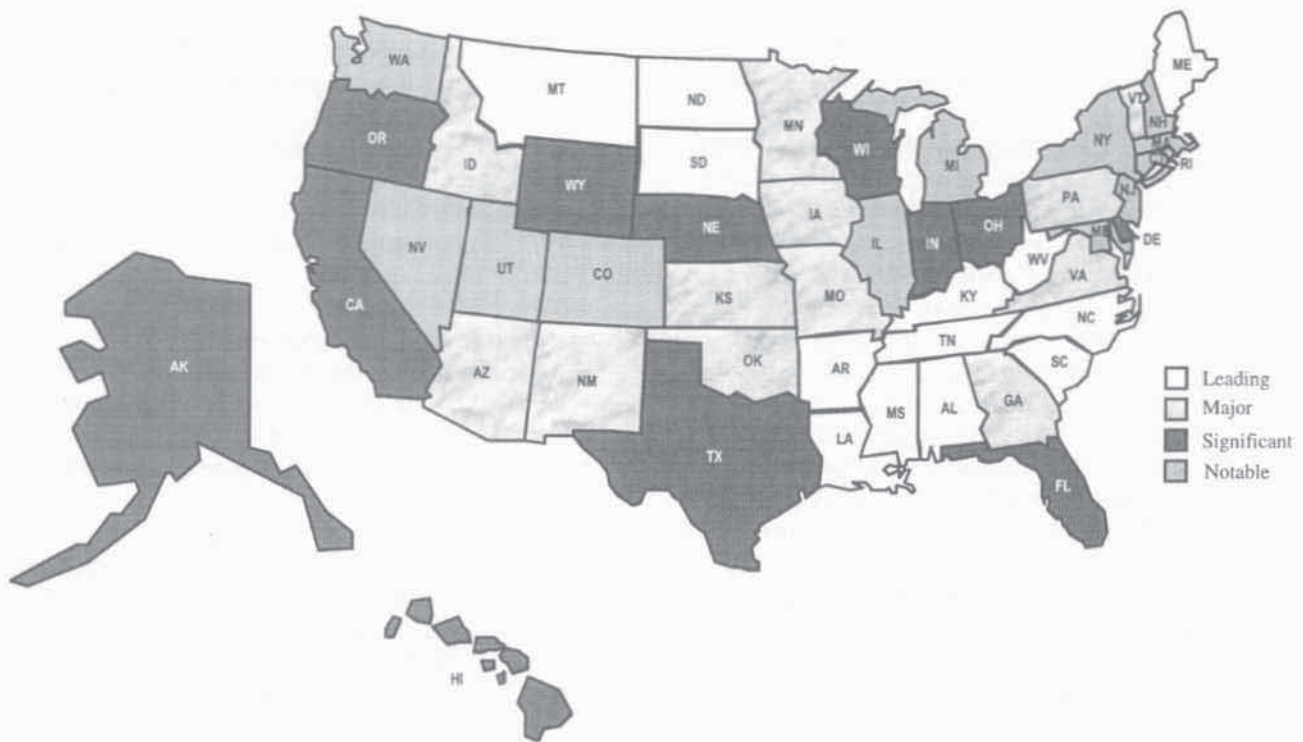


Figure 3. Rural education priority gauge rankings

In interpreting the results, we have been very liberal in the use of regional terms. We have used regional terms without defining them, and in many cases we have used them inconsistently—that is, we have referred to one regional configuration of states in describing results of one indicator, and used a different, overlapping configuration of states under a different regional name when discussing another indicator. Thus Oklahoma might be part of the Great Plains, the Southern Plains, or the Southwest, depending on the context in which we are discussing its relationship with other states on a given indicator. In fact, Oklahoma is part of all those regions. In looking for pattern, we might find it aligned with the experiences of Kansas and Nebraska on one indicator and with the experience of Texas and New Mexico on another. Some readers may find this untidy, but the nuanced cultural patterns of rural America caution against rigid division of states into regions. Sometimes Mississippi is part of the Southeast, sometimes it is more particularly part of the Mid-South Delta.

Nonetheless, we have noted certain regional patterns in the rankings on various indicators and on the separate and combined gauges. It seems very clear that no matter how you look at it, the Mid-South Delta (Alabama, Arkansas, Louisiana, and Mississippi), central Appalachia (Kentucky, Tennessee, and West Virginia), the coastal Southeast (Georgia, North Carolina, and South Carolina), the north-

ern Plains (Montana, Nebraska, North Dakota, and South Dakota), and northern New England (Maine and Vermont), and pretty much in that order, stand out as the priority rural education regions. Not all the states in these regions score high on many indicators and on one or both gauges, but the states noted do.

It would be a mistake to conclude that other regions and other states do not deserve the attention of policymakers. Indeed, we note 10 states that rank in the lower half on the Importance Gauge that rank in the upper half on the Urgency Gauge (Arizona, California, Delaware, Florida, Illinois, Minnesota, Ohio, Oregon, Pennsylvania, and Utah). Many of these are large, urban states, and all but Minnesota have less than one quarter of their population in rural areas. Nonetheless, they combine to share nearly one quarter of the nation's rural population. In the midst of their struggles to address the pressing problems of urban education, some of these states may not notice their rural schools and communities, but they ought to, as the Urgency Gauge indicates.

Likewise, there are 11 states that score in the upper half on the Importance Gauge, but in the lower half on the Urgency Gauge (Alaska, Georgia, Hawaii, Kansas, Maine, Missouri, Montana, Nebraska, Oklahoma, South Carolina and Vermont). Rural areas in many of these states are sparsely populated and many schools and communities are

remotely located. Apparently these states have some good things going for these schools and communities, and policymakers should take care not to take them for granted.

And that brings us once again to the final point we made in the first edition of *Why Rural Matters*. The Importance Gauge is a relative measure of the importance *to that particular state* that it explicitly address rural education. We take this approach because this report is directed to state education leaders and policymakers, and to the rural people they serve. It may be more important for North Dakota's educational performance that its policymakers consider the rural dimensions of its educational system than it is for California's policymakers to do so. But from a national perspective, it is at least as important for California to consider the educational needs of its 1.9 million people living in rural places as it is for North Dakota to consider the educational needs of the 283,000 North Dakotans who live in rural places. And from the perspective of rural Californians, it is certainly every bit as important that California have a rural education policy as it is to North Dakotans that North Dakota does. Thus while the rankings in this report are useful in identifying states where rural education is paramount to good schooling in the state, it is also useful in identifying states where rural communities' educational needs may be unjustly lost in the political shuffle of state politics. No child deserves to be lost in the shuffle.

We hope that state policymakers in each state will consider the findings of this report and turn their attention to the particular needs of rural education in their state. Those who do will doubtless find their state's situation unique. There is no single agenda for rural education that is universal to all the states. Nonetheless, as we look at the national landscape, it seems appropriate to note once again the four indicators contributing to top rankings for many states on the Urgency Gauge. They are:

- average rural teacher salaries,
- computer use in the classroom,
- school administrative cost (many states spend *extremely low* on *school-level* leadership), and
- the share of expenditures spent on transportation.

In this set of issues, we see too many states spending money on moving kids around to larger schools further from home, paying rural teachers too little to compete for the highly qualified faculties needed in hard-to-staff schools, and failing to support them with strong principal leadership at the building level or with adequate technology in the classroom. These, we suspect, are rural education problems too common to ignore in any state.