Why Rural Matters 2009:

State and Regional Challenges and Opportunities

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Why Rural Matters 2009: State and Regional Challenges and Opportunities

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Introduction

Why Rural Matters 2009 is the fifth 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.

While it is the fifth in a series, this report is not simply an updating of data from earlier editions. On the contrary, from one report to the next, we have deliberately altered the statistical indicators we use and the gauges we construct in order to call attention to the variability and complexity of rural education. Our intent in these reports is not—as it is in many state-by-state analyses—to compare states in terms of their differing rates of progress toward an arbitrary goal. Rather, our intent is (1) to provide information and analyses that highlight the priority policy needs of rural public schools and the communities they serve, and (2) to describe the complexity of rural contexts in ways that can help policymakers better understand the challenges faced by their constituencies and formulate policies that are responsive to those challenges.

In 2006-07 (the school year used in this report), 9,063,790 public school students were enrolled in rural school districts[i] —19% of the nation's total public school enrollment. Meeting the needs of more than 9 million children is a challenge that demands and deserves the attention of a nation. It is also a challenge that demands looking at issues from multiple perspectives in order to develop informed understandings that move beyond overly simplistic notions about rural schools and the communities they serve.

Gauging Rural Education in the 50 States

We frame the report around five gauges measuring for 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, (4) the Educational Outcomes of students in rural schools in each state, and (5) the characteristics of school districts experiencing Concentrated Poverty conditions. Each gauge is comprised of five equally weighted indicators—thus 25 indicators in all, the largest number of indicators we have used to date.

The higher the ranking on a gauge, the more important or the more urgent rural education matters are in a particular state.

The Data

The data we used for Why Rural Matters 2009 were compiled from information collected and maintained by the National Center for Education Statistics (NCES), the U.S. Census Bureau, and the New America Foundation (who combined NCLB proficiency data obtained from individual state departments of education to create a national data set). All data used here are available to the general public and may be downloaded in tabular formats.[ii]

To define "rural," we used the new 12-item NCES locale code system released in 2006.[iii] Rural schools and districts used in the report are those designated as locale codes 41 (rural fringe), 42 (rural distant), or 43 (rural remote). While previous versions of Why Rural Matters used a combination of school-level and district-level data, improvements in the new locale code system (specifically, assigning district-level locale based upon the locale where the plurality of students in the district attend school) have made it possible for us to be consistent and use districts as the unit of analysis for all indicators except for the percentage of rural schools. This consistency is particularly important because policy decisions impacting rural education (e.g., REAP funding) are made using district-level designations of rural status.

While the exclusive use of district-level data represents an improvement in terms of consistency within the report and relevance to educational policy contexts, it also introduces some potential for confusion. In 2007, we reported that 9,974,462 students were enrolled in rural *schools;* here, we report 9,039,731 students enrolled in rural *districts*. It is important for us to clarify here that rural enrollment did not decline by more than 900,000 students over that two-year period. On the contrary, enrollment in rural schools actually increased by nearly 600,000 over that time period—to a point where we can now report 10,572,790 students enrolled in rural schools.

We use data only for regular local education agencies (local school districts and local school district components of supervisory unions). Thus we exclude charter school-only districts and specialized state- and federally-directed education agencies focused primarily on vocational, special, or alternative education.

The indicators comprising the gauges 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
- **Percentage of rural minority students**
- **Percentage of rural ELL students**
- **Percentage of rural IEP students**
- **Percentage of rural student poverty**
- **Percentage of rural household mobility**

Educational Policy Context Gauge
- **Rural instructional expenditures per pupil**
- **Ratio of instructional to transportation expenditures**
- **Median organizational scale**
- **Inequality in state and local revenue per pupil**
- **Salary expenditures per instructional FTE**

Educational Outcomes Gauge
- **Rural high school graduation rate**
- **Rural grade 4 NAEP scores (math and reading)**
- **Rural grade 8 NAEP scores (math and reading)**
- **Rural proficiency in reading, per NCLB**
- **Rural proficiency in math, per NCLB**

Concentrated Poverty Gauge
- **Number of rural students**
- **Percentage of rural student poverty**
- **Percentage of rural minority students**
- **Rural instructional expenditures per pupil**
- **Rural high school graduation rate**

While some of the indicators used in this report are the same as in previous versions, many are not and so overall year-by-year comparisons of a state's ranking 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 and 50 individual state systems of public education, and we recognize that perspectives offered by the indicators we selected represent only one of many good ways of considering rural education in the U.S.

To illustrate the problematic nature of comparing a state's ranking on one report with the same state's ranking in another year's report that uses different indicators, consider Oregon, a state that ranked 16th in terms of overall rural education priority in 2007 (near the top of the second quartile, which we termed the "Major" priority category). By contrast, in the 2009 report, Oregon ranks below the national median as 27th in terms of rural education priority, a change that results from both changes in the gauge structure (the state ranks near the bottom on the "Concentrated Poverty" gauge) and in the indicators comprising individual gauges (the state ranks low on two new student achievement measures included in the "Educational Outcomes" gauge).

California, on the other hand, is a state that moved from a ranking just below the median at 26th in terms of overall rural education priority (at the top of the third quartile, or the Significant category) to a ranking of 14th, at the top of the Major priority group. The movement of California from below the median to just outside the highest priority category has much to do with the inclusion of the concentrated poverty gauge, where the state ranks 5th. The decision to include not just statewide measures of poverty, but measures that capture the characteristics of schools and communities experiencing the most intense poverty within each state, results in a higher demand for rethinking rural education as a priority in California.

For each of the five gauges, we added the state rankings on each indicator and then divide by the number of indicators to produce an average gauge ranking.[iv] Using that gauge ranking, we then divided 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, Educational Outcomes, and Concentrated Poverty gauges, the four quartiles are labeled "Fair," "Serious," "Critical," and "Urgent." It is important to note that these categories are intended to be descriptive in only the most general way. There is little substantive difference between a "Crucial" ranking of 13 and a "Very Important" ranking of 14.

Lastly, we combined the five average gauge rankings to determine an overall average ranking, 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 how you look at it.

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

New and Revised Gauges

In an effort to refine and better reflect our thinking about the contexts and characteristics of rural education, we made substantial changes from previous reports with regard to the selection and configuration of indicators and gauges used. Why Rural Matters 2007 included 23 indicators organized into 5 gauges: Importance (5 indicators), Socioeconomic Challenges (5), Student Diversity, (5), Policy Context (5), and Outcomes (3). The current report includes 5 gauges, each comprising 5 indicators (for a total of 25 indicators). Two of the gauges–Importance and Educational Policy Context–remain essentially unchanged in their configuration. The remaining three are either new or substantially revised.

The Student and Family Diversity Gauge comprises indicators that were included in the 2007 report's separate gauges on Student Diversity and Socioeconomic Challenges. We combined these indicators into one gauge because wanted to examine collectively the student and family characteristics that are associated with *achievement gaps* as they are typically described in the literature and construed in state and federal policy (e.g., NCLB).

The Educational Outcomes Gauge had two fewer indicators than the other four gauges in the 2007 report, primarily because we did not have reliable outcome measures available in a national data set. The work of the New America Foundation in collecting state-level accountability data, compiling it into a national data set, and making it available for download made it possible for us to include two additional variables measuring reading and math proficiency among rural school districts. State-level variations in how proficiency is determined made it necessary for us to transform the reported variable to create an indicator that measures the percentage of rural school districts with proficiency rates above the state median (see page 12 for details).

The Concentrated Poverty Gauge is a new construct, and represents an innovative approach that parallels our Rural 800 and Rural 900 analyses. Here, we identify the 10% of rural districts with the highest student poverty rates within each state, and show where that subset of districts ranks nationally with regard to the five indicators from the other gauges (total number of rural students, percent poverty among rural students, percent rural minority students, rural instructional expenditures per pupil, rural high school graduation rate). For states with 29 or fewer rural districts [Florida, Maryland, and Wyoming], we selected the 3 highest poverty districts in the state; for states with fewer than 10 rural districts [Delaware, Nevada, and Rhode Island], we used all rural districts).

New Indicators

Three of the 25 indicators used in this report were not included in *Why Rural Matters 2007:*

- **Percentage of rural mobility**
- **Rural proficiency in reading, per NCLB**
- **Rural proficiency in math, per NCLB**

Rural mobility is a measure of economic distress that has been used before in earlier reports in this series (i.e., in *Why Rural Matters 2005*). The indicator represents the percentage of rural households with school-age children that have changed residences within the previous 12-month period. While the Census data used for producing this indicator was collected two years prior to the recent housing bust and general economic decline, the list of states ranking high on this measure strongly suggests that rural families in states that were hit hardest by the later bust were already suffering by 2007 (e.g., California, Colorado, Arizona).

The other two new indicators measure academic outcomes in a way that allows us to consider the performance of rural schools in each state relative to performance in the state as a whole. These indicators report the percentage of rural districts in the state with proficiency scores above the state median proficiency rate. Computing the indicator in this way allows us to report on NCLB performance among rural school districts in spite of variations in how states define proficiency.

there may be rural regions within the state that differ considerably from the state average. This is especially true for indicators like poverty and ELL status, since demographic characteristics such as these tend not to be distributed evenly across a state but are concentrated in communities with similar demographic characteristics. 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. 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. In this report, we attempt to address this issue by including the new Concentrated Poverty gauge which looks more closely at the highest poverty rural districts within a state. For this gauge, the indicators are not statewide, but represent the subset of selected districts only.

Notes on Report Methodology

A few caveats from earlier editions of *Why Rural Matters* bear repeating here.

First, the quartile categories used to describe states' 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 New Hampshire based on its ranking of 13th on the Importance Gauge and the "Very Important" label assigned to Alaska based on its ranking of 14th on the same gauge.

Second, again in this report we use regional terms loosely. Now, as then, the intent is not to confuse or obscure meanings, but to recognize nuances in regional identities and to best represent the contexts within which we are discussing specific relationships between individual states and shared geographic and cultural characteristics. With this intent, a state like Oklahoma may be referred to variously as a Southern Plains state and as a Southwestern state. 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 has at least one indicator on which it is ranked worse than the national median, and 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 schooling outcomes, and so suggest the most urgent and most comprehensive need for attention from policymakers.

Results

The data for each state and state rankings for each indicator are presented in the charts and figures on pages 33-107. The results for each indicator are summarized and discussed below. To aid in making comparisons, the national level data for each indicator is presented in Table 1.

Table 1. National Rural Statistics

Importance Gauge

Percent rural schools:	32.3%
Percent small rural districts:	30.5%
Percent rural students:	19.4%
Number of rural students (US Median = 131,129):	9,039,731
Percentage of state education funds to rural districts:	20.5%

Student and Family Diversity Gauge

Percentage of rural minority students:	22.2%
Percentage of rural ELL students:	3.4%
Percentage of rural IEP students:	14.0%
Percentage of rural student poverty:	40.6%
Percentage of rural mobility:	12.8%

Educational Policy Context Gauge

Rural instructional expenditures per pupil:	$5,107
Ratio of instructional to transportation expenditures:	$11.30
Median organizational scale:	461,160
Inequality in state and local revenue per pupil:	70.2%
Salary expenditures per instructional FTE:	51,111

Educational Outcomes Gauge

Rural high school graduation rate:	69.2%
Rural Grade 4 NAEP scores (math and reading):	243
Rural Grade 4 NAEP scores (math and reading):	261
Rural proficiency in reading, per NCLB:	49.9%
Rural proficiency in math, per NCLB:	49.6%

Concentrated Poverty Gauge

Number of Rural Students (US Median = 11,689):	656,283
Percentage of rural student poverty:	63.7%
Percentage of rural minority students:	43.3%
Rural instructional expenditures per pupil:	$5,554
Rural high school graduation rate:	60.41%

Importance Gauge

Importance Gauge Indicators

Absolute and relative measures of the size and scope of rural education help to define the importance of rural education to the well-being of the state's public education system as a whole. In this section, we define each of the indicators in the Importance Gauge and summarize state and regional patterns observed in the data (note: Hawaii is excluded from this gauge because its organization as a statewide district makes analysis impossible).

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

States vary considerably on this indicator, from a low of 9.5% in New Jersey to a high of 76.9% in South Dakota. More than half of all schools are rural in 15 states (in order, South Dakota, Montana, North Dakota, Vermont, Maine, Alaska, Nebraska, Wyoming, Arkansas, Iowa, Oklahoma, New Hampshire, Alabama, West Virginia, Kansas) and at least one in three of all schools is rural in 14 other states. In general, states with a high percentage of rural schools are those where sparse populations and/or challenging terrain make it difficult to transport students to consolidated regional schools in non-rural areas. Predominantly urban states on the East coast have the smallest percentages of rural schools.

- **Percent small rural school districts** is the percentage of rural school districts that are below the median enrollment size for all public school districts in the U.S. (median = 535 students). The higher the percentage of districts with enrollments below 535, the higher the state ranks on the Importance Gauge.

At least half of all rural districts are smaller than the national median in 8 states (North Dakota, Montana, Vermont, South Dakota, Nebraska, Oklahoma, Maine, and Alaska). 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. Hawaii is organized as a single state-wide school district.

- **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 dis-

tricts, 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 NCES designates as rural. The higher the percentage of rural students, the higher the state ranks on the Importance Gauge.

The ten states with the highest percentages of rural students have a combined rural enrollment of more than 2 million—about 22% of the total rural enrollment in the U.S. States with the largest proportional rural enrollments are concentrated in four regions: Northern New England, the Mid-South Delta, the Great Plains, and Central Appalachia. States with the lowest proportional rural enrollments are primarily urban states on the East and West coast, along with arid Western states where the population resides mostly in cities and rural areas are very sparsely populated.

- **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.

More than half of all rural students in the U.S. attend school in just 11 states, including some of the nation's most populous and urban states (in order of rural enrollment size, North Carolina, Texas, Georgia, Ohio, Virginia, Pennsylvania, New York, Tennessee, Michigan, California, and Alabama). The four states with the largest rural enrollments—North Carolina, Texas, Georgia, and Ohio—serve 1 in 4 of all rural students in the U.S., more than 27 other states combined, including several that are typically thought of as rural (e.g., Vermont, Nebraska, Kansas, Louisiana).

- **Percentage of state education funds going to rural schools** represents the proportion of state P-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 percentage of state funds going to rural education, the higher the state ranks on the Importance Gauge.

It's no surprise that states ranking high on percent rural schools and percent rural students also rank high on this indicator. There are some inconsistencies, however. In Kansas, for instance, more than half of public schools are rural, but only 33% of the state's education dollars go to rural schools.

Importance Gauge Rankings

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

Table 2. Importance Gauge Cumulative Rankings

How important is it to the overall public education system of the state to address the particular 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	8.8	AK	17.6	OH	24.6	OR	32.2
SD	9.4	KS	18.0	TX	24.6	WA	32.4
VT	10.6	TN	18.4	WI	24.6	CA	34.2
MT	12.8	NE	18.6	IN	25.0	NJ	37.2
ND	12.8	MO	19.0	MI	26.6	CT	37.4
NC	14.0	GA	20.2	NY	27.8	FL	37.8
OK	14.6	WV	20.8	PA	28.2	MD	39.4
IA	15.2	VA	21.2	AZ	28.6	NV	41.2
KY	15.2	ID	21.8	NM	28.8	UT	41.4
AL	16.2	WY	23.4	CO	29.0	MA	42.8
MS	16.2	SC	24.2	IL	30.2	RI	43.8
AR	16.6	MN	24.6	LA	32.2	DE	45.0
NH	16.6					HI	N/A

Note: numbers are rounded

The top quartile in the Importance Gauge is shared by states in the Prairie/Plains (South Dakota, Montana, North Dakota, Oklahoma, and Iowa), the South (North Carolina, Alabama, Mississippi, and Arkansas), Northern New England (Maine, Vermont, and New Hampshire), and Appalachia (Kentucky).

The eight Northern New England and Prairie/Plains states hold seven of the top eight positions because they score generally very high on all the indicators except the "number of rural students," on which none of them ranks higher than 20th and six rank below the median.

The five southern states (including Appalachia here) are clustered toward the bottom of the quartile because all rank relatively low in the percentage of small rural districts. Bigger rural schools and districts are the general rule in these states.

One of the most striking realities about the Importance Gauge is that rural education is important not where rural people are, but where urban people are not.

Over half of all rural students (5.2 mil. or 57%) are in states ranked in the top quartile for the "number of rural students"

indicator. But only three of those states (North Carolina, Kentucky, and Alabama) are among the top quartile in the overall Importance Gauge, and only three more (Tennessee, Georgia, and Virginia) are in the second quartile. Seven of the 13 states with the largest rural student populations rank below the median on the overall Importance Gauge.

These seven states—California, Texas, and five contiguous East-Midwest states, Indiana, Michigan, New York, Ohio, and Pennsylvania—are large states where the heavy urban population dwarfs even a relatively large 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 31st on the "percentage of rural students" indicator, and none of them ranks higher than 23rd on that indicator.

These seven states provide schooling to 2.7 million (or 30% of all) rural students. By contrast, the 13 states in the top quartile of the Importance gauge serve 2.4 million (26%).

Crossing gauge lines, however, it is worth noting that the 13 top quartile states on the Importance Gauge also place five in the top quartile for percentage of rural students who live in poverty. Five of the big seven rank below the median on that indicator, and only California ranks in the top quartile at 13.

Student and Family Diversity Gauge

Student and Family Diversity Gauge Indicators

Public education in the U.S. has generally been ineffective in meeting the needs of diverse student populations. A veritable mountain of research describes achievement gaps—between rich and poor, white and minority, native English speakers and English language learners. Here, we include a gauge that captures characteristics of rural students and their families that distinguish them from the populations that schools have generally been effective in serving. Illustrating variations in the extent to which these characteristics are present in each state can help us to comprehend the relative importance for policymakers to attend to achievement gap issues in their state. 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 (note: Hawaii is excluded from this gauge because its organization as a statewide district makes analysis impossible).

- **Percentage of rural minority students** represents the number of rural minority students (per NCES categories: American Indian/Alaskan Native, Asian/Pacific Islander, Black, Hispanic) divided by the total number of rural students. The higher the percentage 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. Educational research and state and federal accountability system have disaggregated data to disclose sizable differences in the academic performance of minority students as compared to white students, but policies to address gaps are often inadequate or non-existent. Identifying the states with the largest (relative) rural minority student populations calls attention to the states with the greatest need for policy action to support the closing of achievement gaps based on race/ethnicity.

In four states (New Mexico, Alaska, Arizona, and California) there is no racial or ethnic majority group in rural schools—white students make up less than 50% of the rural student population and minority students collectively make up more than 50% (note: Hawaii is not included here because its one-district structure makes it impossible to compute this indicator; earlier reports would however suggest that more than 50% of all rural students in the state are minorities). More than one in three rural students is a minority in 8 other states (in descending order, Louisiana, South Carolina, Texas, Mississippi, Oklahoma, North Carolina, Florida, and Delaware). Nearly 58% of all rural minority students in the U.S. attend school in these 12 states.

States vary considerably with regard to their respective minority student population. One of the states with the largest percentages of rural minority students (Alaska) has a rural population predominantly comprised of indigenous peoples. 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, Florida). Perhaps the nation's most ethnically diverse state, California's rural minority student population is predominantly Hispanic.

- **Percentage of rural ELL students** represents the percentage of the rural population aged 5-17 who speak English "less than very well," per U.S. Census figures. The higher the percentage of rural ELL students, the higher the state ranks on the student and family diversity gauge. (Note: we use Census data reflecting the general population rather than NCES data reflecting student populations because states fail to report ELL counts).

States ranking high on this indicator have large Hispanic and/or American Indian/Alaskan Native populations living in

rural areas (in order, New Mexico, California, Arizona, Texas, Nevada, Alaska). More than one in three rural students in New Mexico is an English Language Learner; in Arizona and California, the rate is about one in four. The highest ranking Eastern state is North Carolina—a state experiencing tremendous demographic shifts in recent decades—at 7.6%.

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

State and federal accountability systems like No Child left Behind (NCLB) mandate that schools make progress toward closing achievement gaps between IEP students and non-IEP students; thus, it is useful to measure the relative size of the rural special education student population in each state. Additionally, it is important to note teaching children with exceptional needs requires additional and specialized resources—financial, human, and material—that are not available in every school. In New Jersey, more than one in four rural students qualifies for special education services. In four other states (New Mexico, Kentucky, Arizona, and Maine) the IEP eligibility rate is 18% or higher.

- **Percentage of rural student poverty** is the percentage of students who qualify for federally-funded free or reduced priced meal programs. The higher the rate of rural students eligible for subsidized meals, the higher the ranking on the Student and Family Diversity Gauge.

Subsidized meal rates are the most commonly used measure of student poverty in educational research. It is a measure with recognized limitations however—participation rates are affected by factors that are unrelated to poverty, including families' willingness to apply and schools' efforts to secure applications. It is nevertheless the most widely accepted approach to describing economic stress among student populations. Using this measure, more than half of all rural students face poverty in nine states: in descending order, New Mexico (81%), Louisiana (68%), Mississippi (64%), Arkansas (59%), Oklahoma (59%), South Carolina (57%), Kentucky (55%), West Virginia (53%), Alabama (51%). Rates are lowest among rural students in predominantly urban Northeast states.

- **Percentage of rural student mobility** represents the percentage of households with school-age children who changed residences within the previous 12 months, per U.S. Census figures. Mobility is a measure of economic stress that 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.

Western states rank highest on this indicator—Nevada and Arizona both have rural mobility rates above 20%, and Arizona, Alaska, Colorado, Utah, California, Texas, and Wyoming all have rates above 15%. The lone Eastern state among states with the highest rural mobility rates is Florida at 18%. States with the lowest mobility/most stable rural households are located in the Northeast and the Great Lakes region.

Table 3. Student and Family Diversity Gauge Rankings

How important is it to the overall public education system of the state to address the needs of diverse populations within 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	
AZ	6.2	WA	19.8	NJ	25.0	WI	32.0
NM	6.2	LA	20.2	NE	25.4	MD	32.2
FL	8.8	AL	20.6	SD	26.6	NY	32.4
AK	13.4	CO	20.8	VA	26.8	MN	32.8
CA	14.8	AR	21.0	IN	27.4	MI	34.0
TX	15.2	DE	21.0	IL	28.2	IA	34.6
OK	15.4	MS	21.2	MO	28.5	OH	34.8
NV	16.6	ID	21.6	WV	29.0	RI	37.2
OR	17.0	WY	23.0	TN	29.2	CT	38.4
NC	17.2	KS	24.2	PA	30.2	MA	38.4
SC	17.8	MT	24.4	ME	30.8	NH	39.8
GA	18.4	KY	24.8	ND	31.6	VT	40.0
						HI	N/A

Note: numbers are rounded

All but three of the top quartile on the Student and Family Diversity Gauge (Diversity Gauge)are on the U.S. southern or western border, and those three are one state removed from those borders. Among the indicators, the "percent rural minority students" carries the most weight, with ten of the 13 top quartile states for the Gauge also scoring in the top quartile on that indicator. By contrast, only five of the Gauge top quartile also place in the top quartile in the percentage of rural students who receive special education services. In fact, another five of the Gauge top quartile are in the bottom quartile for the special education indicator. Most of the states that rank in the top quartile (7 of the 13) on the "percent of rural students in special education" indicator rank below the median on the Diversity Gauge.

Educational Policy Context Gauge

Educational Policy Context Gauge Indicators

For this gauge, we use indicators that describe the characteristics of the public schooling system that are the result of policy decisions. And we focus on policy decisions that are highlighted in educational research as being closely related to student achievement and other measures of student well-being. Illustrating the variations in state policy contexts suggests—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 (note: 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 policy 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 the amount of money, per pupil, that goes toward teaching and learning in rural schools.

The range here is substantial, from just under $4,000 in Idaho to more than $9,000 in New York. Joining Idaho are 11 other states that spend less than half of what New York spends per pupil for in instruction in rural schools (Arizona, Oklahoma, Utah, Tennessee, Mississippi, Florida, Alabama, Illinois, Missouri, Colorado, and Kentucky).

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

Variations in pupil transportation costs are related to unavoidable issues related to geography and terrain, but also result from policies and practices related to the size of schools and school districts, personnel decisions, and the permissible length of bus rides for students. 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.

Nationally, rural school districts spend about $11.30 on instruction for every dollar spent on transportation, but there is considerable variation among states. At the low end, West Virginia spends only $7.15 on instruction for every transportation dollar spent; at the other end of the spectrum, nine state spend more than double that—Alaska ($23.59), North Carolina ($17.90), Texas ($16.94), Nebraska ($16.29), Vermont ($16.20), Oklahoma ($15.62), California ($14.90), Tennessee ($14.63), Georgia ($14.51), Arkansas ($14.45), and South Carolina ($14.39).

Regional patterns are not immediately apparent for this indicator. Indeed, comparisons of states with similar geographies and terrains reveal substantial differences: New Mexico spends nearly $8 less on instruction per transportation dollar than its neighbor Texas; North Carolina spends nearly $8 more on instruction per transportation dollar than its neighbor Virginia.

- **Median organization scale** is a measure that captures the combined effects of school and district size. We compute the organizational scale for each rural school by multiplying school enrollment by district enrollment. For simplification in reporting, we then divide the result by 100. The figure reported for each state represents the median of organizational scale figures 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 Policy Context Gauge.

School and district size exert influence over the schooling process both individually and in combination with one another. Specifically larger size has been linked with undesirable schooling outcomes, particularly among impoverished and minority students. By including this indicator, we intend to provide a relative measure of the scale of operations for rural education in each state. The range is dramatically wide: Florida, the highest ranking state, has a median organizational scale that is nearly 1,000 times larger than the lowest ranking state, Montana. Thirteen of the next 14 highest ranking states are located in or contiguous to the Southeast region (in order, Maryland, North Carolina, Georgia, South Carolina, Louisiana, Virginia, Tennessee, Delaware, Alabama, Mississippi, West Virginia, Kentucky), states where county-wide districts and regional high schools are the norm. Only one state west of the Mississippi River is among those with the largest organizational scale, Nevada. The lowest ranking states are mostly in the Great Plains and the West, where local independent districts prevail.

- **Inequality in state and local revenue per pupil** is measured here using a statistic called the coefficient of variation (COV), a standard measure of inequality. A higher COV means that the per pupil revenue levels are unequal

among rural school districts in the state, and so the greater concern about equity and the higher the state ranking on the Policy Context Gauge.

A higher COV statistic is an indicator of higher variation among districts in terms of the variable under consideration (in the case of this indicator, the level of combined state and local revenue per pupil), meaning that rural districts across the state are not receiving comparable allocations of operating funds. Of note, to account for varying levels of need among districts (i.e., it is generally accepted that providing equal educational opportunities for impoverished children necessitates additional resources, and so school districts serving higher percentages of impoverished children require additional funds), we weighted the size of the impoverished student enrollment using a weighting system similar to that used by the federal government in calculating aid to schools under Title 1 of the Elementary and Secondary Education Act.

States with the highest COV statistics (and so the most inequitable revenue distributions) are scattered across the U.S. with no real regional pattern: the top quartile includes Oregon, Idaho, California, Texas, Massachusetts, Montana, Colorado, New York, Arizona, Nevada, Louisiana, and North Dakota.

Several states have low COV statistics (indicating relatively equitable distributions of revenue) and very low rural instructional expenditures per pupil. Such states—e.g., Mississippi, Tennessee, Alabama—appear to have funding systems that treat most all rural districts equally inadequately.

Conversely, several states with high COV statistics (and inequitable revenue distributions) have high rural instructional; spending per pupil. The interpretation here is that these states—e.g., Massachusetts, New York—have funding systems that treat some rural districts extraordinarily well and others extraordinarily poorly.

- **Salary expenditures per instructional FTE** in rural districts is the total dollar amount spent on instructional salaries divided by the total number of instructional staff members, and is used here to represent the relative level of the financial commitment to 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 Policy Context Gauge.

One of the greatest challenges facing rural schools is recruiting and retaining high quality teachers, a challenge that is inextricably tied to teacher salaries (i.e., it is more difficult to recruit and retain high quality teachers when a school district cannot offer a competitive salary). States with the lowest rural salary expenditures according to this indicator are primarily in the Southeast, Prairie/Plains, and the Mid-South Delta (in order, Alabama, North Dakota, South Dakota, Oklahoma, Missouri, Arkansas, Nebraska, Montana, Florida, Mississippi, Iowa, Tennessee, and Kansas). States with the highest rural salary expenditures are located primarily in the Northeast, the West, and the Mid-Atlantic (in order, New York, Alaska, Connecticut, New Jersey, California, Maryland, Washington, Massachusetts, Delaware, Michigan, Pennsylvania, Nevada).

Table 4. Educational Policy Context Gauge Rankings

Given the educational policy context 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.

Crucial		Very Important		Important		Notable	
LA	9.8	WV	21.8	RI	24.6	MA	28.6
FL	12.4	KY	22.0	SD	26.2	DE	30.6
AZ	13.4	VA	22.0	IA	26.6	MN	30.8
ID	14.8	IN	22.2	MI	26.8	NH	31.0
AL	17.0	MO	22.2	WA	26.8	KS	31.8
MS	17.6	TN	22.8	PA	27.0	ME	32.0
NV	19.4	OK	23.0	CA	27.8	NE	32.2
ND	19.8	NM	23.4	NY	28.0	WY	32.6
IL	20.0	NC	23.6	AR	28.2	WI	33.8
UT	20.0	TX	23.6	MD	28.2	CT	34.8
CO	20.6	MT	24.2	NJ	28.2	VT	39.2
OR	20.6	SC	24.2	GA	28.4	AK	39.6
OH	20.8						
						HI	N/A

Note: numbers are rounded

There is a distinct regional shift in this year's Why Rural Matters top quartile on the Policy Context Gauge. Three Western states join the top quartile – Colorado, Nevada, and Oregon – while Kentucky, Missouri, and Virginia move into the second quartile. Six of the 13 top quartile states are now entirely west of the Rockies and a seventh, Colorado, is a divide state. The indicators that contribute most of the "urgency" ranking of these western states are "inequality in state and local revenue per pupil" in rural schools (6 of the 7 rank in that indicator's top quartile); "rural instructional expenditures per pupil" (4 of 7 in top quartile); and "ratio of

instructional to transportation expenditure per pupil" (4 of 7). Only one of these seven western states – Nevada – ranks in the top quartile on "median organizational scale" and four rank in the bottom two quartiles.

Four states in the top quartile are in the South (Alabama, Florida, Louisiana, and Mississippi) and two in the Midwest (Illinois and Ohio). All four of the Southern states rank in the top quartile on "median organizational scale," reflecting the region's penchant for large schools. None ranks in the top quartile in "inequality in state and local revenue per pupil," but all four rank in or very near the top quartile in "rural instructional expenditure per pupil" and "salary expenditure per instructional FTE." These indicators taken together reflect the region's equitable, but often inadequate, funding systems.

The Midwestern states in the Policy Context Gauge top quartile are largely a function of low instructional expenditures per pupil and high transportation costs relative to those instructional expenditures.

The top quartile on the Policy Context Gauge includes nine states that rank below the median on the Importance Gauge but only three that rank below the median on the Student and Family Diversity Gauge. Among these 13 states, only Illinois, Ohio and Florida would be considered large and predominantly urban states. Most of the states with the most rural-unfriendly policies are states with a relatively small total population, but where the rural population is also small, as well as sparse, remote, declining, poor, diverse, and politically marginal.

Educational Outcomes Gauge

Educational Outcomes Gauge Indicators

This gauge includes indicators describing student academic achievement as measured by state and national assessments and by schools' success in graduating high school students. Illustrating variations among states in terms of educational outcomes suggests in relative terms the urgency with which policymakers should attend to improving the academic performance of rural schools in their state. In this section, we define each of the indicators in the Educational Outcomes Gauge and summarize state and regional patterns observed in the data (note: Hawaii is excluded from this gauge because its organization as a statewide district makes analysis impossible).

- **Rural high school graduation rate** is measured using the Cumulative Promotion Index model developed by Christopher Swanson of the Urban Institute.[v] The lower the rural graduation rate, the higher the state ranks on the Educational Outcomes Gauge and the more serious the concern for the policy environment (note: in addition to Hawaii, we were unable to compute rates for New York or Wisconsin due to missing data).

There is considerable debate among researchers about the best approach to computing graduation rates, and none of the many approaches are considered definitive. One thing researchers do have in common is their rejection of (what they perceive as) inflated graduation rates reported by many states. The Swanson approach is widely accepted, and has been used and/or cited by, among others, entities such as the Education Commission of the States, the Education Trust, and Education Week. The model is fairly unique in that it accounts for year-to-year retention en route to graduation, as opposed to simply dividing the number of graduates in a given year by a denominator serving as the presumed number of potential graduates.

The range here is dramatic—from just over 52% in South Carolina to 102% in Nevada (the 100%-plus rate is a statistical anomaly characteristic of this type of calculation; it is, however, safe to assume that Nevada is graduating a very high proportion of their rural students). Other states with rural graduation rates above 90% include Nebraska, Connecticut, and New Jersey. At the other end of the spectrum, four states (Alaska, Georgia, New Mexico, and Arizona) join South Carolina in graduating fewer than 6 in 10 of their rural students.

- **Rural grade 4 NAEP score** represents the average of reading and math scores at the 4th grade level on the National Assessment of Educational Progress (NAEP) for students in rural school districts. The lower the rural grade 4 NAEP score, the higher the ranking on the Educational Outcomes Gauge (note: we were unable to compute rates for Alaska or Vermont due to missing data).

The 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 schools as a sub-group within states. The ever-increasing pressure on schools and districts to demonstrate improvements in academic outcomes makes understanding the status of rural educational performance a crucial concern for policymakers and practitioners.

States with the lowest rural grade 4 NAEP scores are scattered among several regions: seven of the lowest performing 13 are in the Southeast and Mid-South Delta (Arkansas, Louisiana, Mississippi, Alabama, South Carolina, Georgia, and Tennessee); others are located in the Pacific West (California, Oregon, and Hawaii), the Southwest (New Mexico and Oklahoma), and Central Appalachia (West Virginia). States with the highest rural grade 4 NAEP scores are located in the

Northeast and New England (New Jersey, Massachusetts, Connecticut, Rhode Island, New York, and New Hampshire), the Midwest/Great Lakes (Illinois, Pennsylvania, Ohio, and Minnesota), and the Great Plains (Kansas and Colorado). NAEP performance is closely related to the student and family diversity (schools serving higher rates of economically disadvantaged students tend to produce lower NAEP scores, as do schools with higher rates of minority students and English Language Learners). These relationships parallel achievement gaps disclosed in analyses of NAEP data that include all schools—rural and non-rural.

- **Rural grade 8 NAEP score** represents the average of reading and math scores at the 8th grade level on the National Assessment of Educational Progress (NAEP) for students in rural school districts. The lower the rural grade 8 NAEP score, the higher the ranking on the Educational Outcomes Gauge (note: we were unable to compute rates for Alaska or Vermont due to missing data).

States with the lowest rural performance on NAEP at the 8th grade level are generally the same as those with low performance at the 4th grade level. Only two new states move into the lowest scoring quartile at the grade 8 level (Arizona and Nevada, replacing Oregon and South Carolina). On the other end, Iowa, Nebraska, and North Dakota join the highest scoring quartile, replacing Rhode Island, Illinois, and Pennsylvania).

- **Rural proficiency in reading per NCLB** represents the percentage of rural districts with reading proficiency rates (per the assessment used for NCLB reporting purposes) above the median proficiency rate for the state as a whole.

This indicator is a measure of rural students' performance in reading according to the assessment that the state uses for reporting purposes under the No Child Left Behind Act (NCLB). While we were working here with a national data set that included proficiency rates for all public school districts, we could not make direct comparisons of rural proficiency rates among states. Here's why: there are considerable differences in the way states define proficiency, leading to dramatic differences in the reported proficiency rates (consider this example: in Vermont, a historically high performing state on nationally-normed tests , 67% of students score at or above the threshold for proficiency set within the state; in Mississippi, a historically low-performing state, 84% of students score at or above their state threshold). To make these data meaningful then, we chose to compare performance in rural school districts within each state with the performance level of the state as a whole.

So the measure used for the indicator (the number of rural districts with proficiency levels above the median for all districts in the state divided by the total number of rural districts in the state) gives us an illustration of how well rural schools are doing relative to the overall performance of that particular state. If performance among rural school districts is comparable with that of all districts, we would expect to see a measure of around 50%; the extent to which a state indicator exceeds 50% thus represents the extent to which rural districts are outperforming all districts, and the extent to which a state indicator falls below 50% represents the extent to which rural districts are performing at levels below all districts. The lower the percentage score, the higher the state ranks on the Educational Outcomes Gauge as a matter of concern for outcomes.

There are no clear regional patterns here. The highest priority states, where the rural performance is weakest relative to the performance of the state as a whole, range from New York to Arizona and Washington to South Carolina (others in the highest priority quartile include Alabama, Alaska, West Virginia, Tennessee, Kentucky, Pennsylvania, Ohio, Idaho, and Minnesota). The opposite end of the spectrum is similarly varied (in order from highest performing/lowest priority, Nevada, Utah, Florida, Indiana, Connecticut, Illinois, Georgia, Oregon, Maine, Vermont, Texas, New Mexico, and Colorado).

- **Rural proficiency in math per NCLB** represents the percentage of rural districts with math proficiency rates (per the assessment used for NCLB reporting purposes) above the median proficiency rate for the state as a whole.

Not surprisingly, performance in reading and math is closely correlated.[vi] States in which rural schools perform poorly in reading tend also to be states performing poorly in math. There are some inconsistencies, though: Maine and New Mexico both have rural math proficiency rates in the lowest performing/highest priority quartile (respectively, 45.6% and 47.6%), and reading performance in the highest performing/lowest priority quartile (respectively, 54.0% and 53.5%).

Nine of the 13 states ranking in the top quartile on the Outcomes Gauge also rank in the top quartile on either the Concentrated Poverty Gauge (4) or the Diversity Gauge (1) or both (4). The four that do not are Kentucky, New York, Washington, and West Virginia.

New York ranks in the third or fourth quartile on every other gauge, and its high ranking on the Outcomes Gauge is a reflection of the high ranking (poor performance) on two indicators—the percent of rural districts with proficiency rates above the state median in reading and math on state tests mandated under NCLB. Kentucky, Washington, and West Virginia also score in the top quartile on these indicators (that is, they score poorly on the test, ranking them high in concern on the indicator). Those states also score in the

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	
AK	2.0	CA	17.5	MD	25.8	NJ	31.5
AL	4.5	MI	18.8	OH	25.8	IN	35.3
SC	6.0	ID	21.5	WI	26.0	VT	35.7
WV	8.3	DE	22.0	ND	26.5	KS	37.3
LA	8.5	MO	23.0	WY	26.5	SD	37.8
KY	10.5	VA	23.5	AR	26.8	IL	38.3
AZ	11.5	GA	24.3	TX	26.8	NV	38.3
WA	12.3	MN	24.5	ME	28.0	UT	38.3
NM	13.8	MT	24.5	OR	28.3	NE	38.8
NY	14.3	PA	24.5	MA	30.3	IA	39.8
TN	15.5	FL	25.0	RI	31.0	CO	40.8
MS	16.8	NC	25.0			CT	45.8
						HI	N/A

Note: numbers are rounded

first or second quartile on the two indicators for NAEP testing, suggesting that their rural students also score below the median on the federal test. But New York rural students rank in the lowest quartile on the NAEP test indicators (that is, they score well on NAEP).

In fact, the gap between New York's rank on the combined reading and math state tests and the reading and math NAEP test is a whopping 77 points. Ohio, New Jersey, Massachusetts, and New Hampshire all sport a gap of 50 points or more favoring high achievement on NAEP relative to state tests. At the other extreme, Arkansas, Nevada, Georgia, Mississippi, and Utah all have gaps of 50 points or more favoring the state test score over the NAEP score rankings. The rankings on the state tests need to be taken with a heaping dose of salt as the percent proficient may be as much a measure of the relative test difficulty as it is of relative student achievement.

That said, there is nonetheless substantial consistency among the rankings for all five indicators for the states in the top quartile on the Outcomes Gauge. The top quartile for each of the five indicators in the gauge included between 8 and 10 of the states that ended up in the top quartile for the gauge as a whole. Only New York and Washington seem to be placed too high in the gauge due to high rankings (i.e., low test scores) on their state tests.

Concentrated Poverty Gauge

Concentrated Poverty Gauge Indicators

The Concentrated Poverty Gauge is new and represents an approach not taken in any of the previous reports. Attentive to the research literature suggesting that poverty is the strongest and most prevalent threat to academic achievement, here we describe the characteristics of the most impoverished rural school districts in each state. The methodology for identifying these districts is borrowed from other work we have done around the Rural 800 and, more recently, the Rural 900. Both are projects where we used poverty rates (as estimated for each school district by the Census Bureau for the purpose of distributing federal Title I funds) to identify clusters of school districts whose challenging circumstances demand attention and whose like circumstances suggest opportunities for collaboration and targeted assistance that would cross state boundaries.

Parallel to the methodology used to identify Rural 800 and Rural/Small Town 900 districts, here we started by identifying the 10% of rural districts within each state with the highest poverty levels as measured by Title I eligibility (which we termed "concentrated poverty" districts). We then selected five of the most salient indicators from the other four gauges and created indicators using data from each state's "concentrated poverty" subset of districts. In this section, we summarize state and regional patterns observed in the data (note: for states with 29 or fewer rural districts [Florida, Maryland, and Wyoming], we selected the 3 highest poverty districts in the state; for states with fewer than 10 rural districts [Delaware, Nevada, and Rhode Island], we used all rural districts).

- **Number of rural students in concentrated poverty districts** is an absolute measure of the size of the concentrated poverty rural student population. The figure given for each state represents the total number of students enrolled in the highest poverty rural public school districts. The higher the enrollment number, the higher the state ranks on the Concentrated Poverty Gauge.

The list of states with the largest numbers of rural students in concentrated poverty districts closely parallels the list of states with the largest numbers of rural students in the state as a whole (e.g., Texas, North Carolina, Ohio, California). The only changes among the highest priority quartile are Missouri moving in and Indiana moving out (in both cases the movement is only by a few positions however). At the other end, states with low numbers of rural students in concentrated poverty districts include Western states with sparsely populated rural regions (Oregon, Utah, Wyoming, Idaho, Colorado, Alaska, North Dakota, Nebraska), New England states with small independent school districts and/or lower

poverty levels (Vermont, New Hampshire, Massachusetts, Connecticut).

- **Percentage of rural poverty in concentrated poverty districts** is an indicator that highlights just how widespread the poverty is within these districts. The figure given for each state represents the percentage of students enrolled in concentrated poverty districts who are eligible for free or reduced price meals. The higher the percentage, the higher the state ranks on the Concentrated Poverty Gauge.

Nationwide, more than 6 in 10 of the students in concentrated poverty districts are eligible for federally subsidized meals. In New Mexico, 99% of the student population in these districts is economically disadvantaged based on this measure; in Mississippi, the rate is 98%. The rate is above 80% in seven other states (Wyoming [87%], Arkansas [87%], California [86%], South Carolina [84%], Alaska [83%], Alabama [82%], and Montana [81%]). States where concentrated poverty districts have the lowest rates of poverty are primarily in New England and the Northeast (the five lowest—Rhode Island, Connecticut, Massachusetts, New Hampshire, and New Jersey—all with free and reduced meal rates below 35% for their most impoverished rural districts).

- **Percentage of rural minority students in concentrated poverty districts** is a measure of the proportional size of the minority student population among the poorest rural districts in each state. The higher the percentage, the higher the state ranks on the Concentrated Poverty Gauge.

This variable illustrates the extent to which rural minority student populations are concentrated within the poorest rural communities in each state. Nine of 13 states ranking near the top on this indicator (i.e., with the highest percentages of rural minority students) are West of the Mississippi River and serve large populations of Hispanic and American Indian/Alaskan Native students (in order by percent minority students: Arizona [99%], Wyoming [99%], New Mexico [94%], Alaska [93%], California [91%], Texas [87%], Montana [84%], South Dakota [75%], North Dakota [73%]). Other high ranking states are in the Southeast and characterized by large populations of African-American students (in order by percent minority students: Mississippi [96%], South Carolina [92%], Alabama [84%], North Carolina [78%]).

- **Rural instructional expenditures per pupil in concentrated poverty districts** represents the total current expenditures for instruction in rural concentrated poverty 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 Concentrated Policy Gauge.

States ranking high on this indicator are ones that spend less (in comparison with other states) on teaching and learning for their most challenged rural school districts. Six of these states (Mississippi, Tennessee, Alabama, Florida, Oklahoma, and Louisiana) spend less than $4,500 per pupil for instruction. Another seven (New Mexico, Illinois, Missouri, South Carolina, Kentucky, Ohio, North Carolina) spend less than $5,000. Low spending among these districts represents an especially serious threat, as schools serving large populations of impoverished students require additional resources to level the playing field.

- **Rural high school graduation rate in concentrated poverty districts** is measured using the Cumulative Promotion Index methodology developed by Christopher Swanson of the Urban Institute. The lower the rural graduation rate, the higher the state ranks on the Concentrated Poverty Gauge.

Graduation rates among concentrated poverty districts are disturbingly low. In Wyoming, fewer than 1 in 3 students in concentrated poverty districts can be expected to graduate. In South Carolina and Georgia, about 4 in 10 will make it through high school and receive a diploma. Two other states have graduation rates below 50% in concentrated poverty districts (North Dakota and Alaska), and ten other states have rates below 60% (North Carolina, Alabama, New Mexico, Arizona, Florida, Michigan, South Dakota, Louisiana, Mississippi, and California).

Table 6. Concentrated Poverty Gauge Rankings

Given the characteristics of the highest poverty rural districts in each state, how urgent is it that policymakers take steps to address the specific needs of schools serving those 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	7.0	FL	19.0	SD	26.2	NE	32.2
AL	8.0	MI	19.4	MT	26.4	KS	32.6
SC	8.6	KY	20.4	MD	27.2	NJ	33.6
MS	8.8	WY	20.4	IN	27.4	OR	34.6
CA	9.2	AK	21.2	WV	28.0	IA	34.8
NC	9.8	VA	21.2	WI	29.0	ME	35.0
AZ	10.6	IL	21.8	CO	29.2	UT	37.0
GA	12.0	MO	22.2	ID	29.2	RI	37.8
TX	14.8	ND	23.6	DE	29.4	MA	38.4
LA	16.4	WA	25.4	PA	31.6	CT	40.8
OK	16.4	MN	26.0	NV	32.0	NH	41.0
AR	18.0	OH	26.0	NY	32.0	VT	44.4
TN	18.4					HI	N/A

Note: numbers are rounded

The top quartile in this gauge is a solid block of states running across the Southern U.S. border from California to North Carolina. In these states, the ten percent of rural districts with the highest poverty rates score consistently high on the five indicators used in the gauge.

Not surprisingly, nine of the 13 in the top quartile are also in the top quartile among states for the poverty rates in their most concentrated rural poverty districts. Students in the concentrated poverty districts in these thirteen states participate in federally subsidized meal programs at an average rate ranging from 58 percent in Texas to 99 percent in New Mexico.

Eight of the 13 in the top quartile for the gauge are also in the top quartile for the "percent rural minority students" indicator. In all but one state, the average minority rate in these high poverty rural districts is over 50%, ranging from 53 percent in Arkansas to 99 percent in Arizona. Tennessee is the outlier, with a minority rate of only 4 percent in high poverty rural districts.

In most of these states, the concentrated poverty rural districts are on average smaller than other rural districts. Only in New Mexico and Oklahoma does the highest poverty 10 percent of districts have 10% of the rural student population (in California and Arizona they have just 10%). In the other nine states, the concentrated poverty districts have proportionally fewer students than other rural districts.

In the bottom quartile, each state's highest poverty districts rank relatively low on these five indicators (compared with the highest poverty districts in other states, not compared to the other districts in their own states). The states that rank in the lowest quartile include all six New England states, three Prairie Plains states (Nebraska, Kansas, and Iowa), Utah and Oregon in the West and New Jersey in the East.

There are some anomalies in this gauge. Kentucky, a high poverty state overall, ranks only 16th. But it would rank 9th if not for the fact that it scores so low on the indicator for "percent minority students." Another anomaly is West Virginia, a high poverty state in general whose concentrated poverty districts do not rank in the top quartile on any of the indicators. Its highest ranking (14th) is for "percent poverty students."

Alaska ranks in the top quartile on three of five indicators in this gauge, but ranks 47th on "rural instructional expenditures per pupil" and 42nd on "number of students" in these highly concentrated rural poverty districts. That reflects the very small size and very high cost of these extremely remote, almost entirely Alaska Native districts.

Wyoming ranks first, second, or third on three indicators, but 49th on "instructional expenditures per pupil" and 47th on "number of rural students," a reflection of the small size of remote districts serving largely Native American populations. The lowest graduation rate among concentrated poverty districts in the 50 states belongs to Wyoming. Only 28% of students in Wyoming's concentrated poverty districts graduate, compared to the state's overall graduation rate among rural districts of 82% (ranked 34th).

The Wyoming case expresses a pattern that is apparent among the concentrated poverty districts in the Great Plains and the North West: Concentrated poverty districts in seven states have disproportionally high percentages of minority students, many Native Americans. The graduation rates for these students varies sharply from state to state, and in some states vary sharply from that of students in all rural districts. Table 7 ranks these states on the gap between the graduation rate for concentrated rural poverty districts and all rural districts and shows the gap in each state between the percent minority students in concentrated poverty districts and all rural districts.

Table 7. Graduation Rates and Minority Students in Concentrated Poverty Districts

	Graduation Rate			Percent Minority Students		
State	All Rural	Concentrated Rural Poverty	Gap	All Rural	Concentrated Rural Poverty	Gap
Wyoming	82%	28%	54%	16%	99%	-83%
North Dakota	81%	44%	37%	16%	73%	-57%
South Dakota	85%	57%	28%	16%	75%	-59%
Montana	79%	78%	1%	22%	84%	-62%
Colorado	83%	91%	-7%	30%	60%	-30%
Idaho	78%	86%	-7%	19%	50%	-30%
Washington	76%	104%	-28%	23%	70%	-46%

In three states, Wyoming, North Dakota, and South Dakota, the gap in graduation rates between concentrated poverty districts and all rural districts is very high. In those same states, concentrated poverty districts have high percentages of minority students compared to all rural districts (note: the concentrated poverty districts are among the "all rural" category, inflating its percentage of minority students). These states clearly do not do well with graduation rates in their high-minority, high-poverty rural districts.

In Montana, the graduation rate gap between concentrated poverty districts and all rural districts is negligible, even though the percentage of minority students in the concentrated poverty districts is nearly quadruple that of all rural districts But in Colorado, Idaho, and Washington, the graduation rate in concentrated poverty districts is actually higher than it is for all rural districts. In Washington, theoretically every rural student in concentrated poverty districts graduated during the study period.[vii] Yet the pattern of high minority rates in the concentrated poverty districts in these states is the same as in the other states. The minority student rate in concentrated poverty districts, though generally lower than in the other states, is still at least twice the minority student rate for all rural districts in these states.

Do Colorado, Idaho, and Washington know something the other states do not about educating high-poverty, high-minority rural populations? Or is this evidence of social promotion or some other practice that inflates the graduation rate?

Rural Education Priority Gauge

Finally, we average the cumulative rankings on the five gauges (Importance, Student and Family Diversity, Educational Policy Context, Educational Outcomes, and Concentrated Poverty) 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 8.

The top quartile on the Priority Gauge includes states in several quintessentially rural regions across the country: the Southeast (South Carolina, North Carolina, Florida, and Tennessee), the Mid-South Delta (Alabama, Mississippi, and Louisiana), the Southwest (Arizona and New Mexico), and Central Appalachia (Kentucky). Oklahoma borders the Mid-South Delta and the Southwest. Other states in the top quartile are located in the Far West (Alaska) and the Mountain West (Idaho). These regional patterns are consistent with those of our previous reports, despite considerable changes in the indicators we use.

Table 8. 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 Concentrated Poverty). 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	
AL	7.0	CA	19.2	OH	26.8	KS	32.0
AZ	10.2	GA	19.2	OR	27.0	IA	33.4
MS	10.6	TX	19.4	WY	27.2	NE	34.4
OK	11.4	MT	20.0	IL	27.8	WI	34.4
NM	13.2	WV	20.2	NV	27.8	MD	34.6
SC	31.2	ND	20.4	CO	28.6	NH	34.8
LA	13.6	VA	20.6	IN	28.8	NJ	36.2
NC	13.6	MO	21.4	NY	30.0	VT	37.8
KY	14.2	AR	21.6	MN	30.2	RI	40.2
AK	17.2	WA	22.8	PA	30.8	MA	42.6
FL	17.2	SD	24.8	UT	31.2	CT	46.2
TN	18.6	MI	26.2	DE	31.4		
ID	19.0			ME	31.4	HI	N/A

Note: numbers are rounded

No state ranks in the top quartile on all five gauges, but the four highest priority states (Alabama, Arizona, Mississippi, and Oklahoma) all rank in the highest quartile on four of five gauges.

Five of the states in the top quartile (Leading) on the Rural Education Priority Gauge are also ranked in the top quartile on the Importance Gauge (Alabama, Mississippi, Oklahoma, North Carolina, and Kentucky). Of the remaining eight highest priority states, four are in the second highest Importance Gauge quartile (South Carolina, Alaska, Tennessee, and Idaho). Three others are in the third quartile (Arizona, New Mexico, and Louisiana), and one is in the fourth quartile (Florida).

Seven of the states in the top quartile (Leading) on the Rural Education Priority Gauge are also ranked in the top quartile on the Student and Family Diversity Gauge (Arizona, New Mexico, Oklahoma, South Carolina, North Carolina, Alaska, and Florida). Five others are in the second highest Student and Family Diversity Gauge category (Alabama, Mississippi, Kentucky, Louisiana, and Idaho). The final state (Tennessee) is in the third student and family diversity quartile.

Six of the 13 highest priority states also ranked in the top quartile on the Educational Policy Context Gauge (Alabama, Arizona, Mississippi, Louisiana, Florida, Idaho). Five others

are in the second highest Educational Policy Context Gauge category (Oklahoma, New Mexico, South Carolina, North Carolina, Kentucky, and Tennessee). The remaining state in the highest priority quartile (Alaska) ranks 49th in terms of its educational policy context.

Ten leading states on the Rural Education Priority Gauge also ranked in the top quartile on the Educational Outcomes Gauge (Alabama, Arizona, Mississippi, Oklahoma, New Mexico, South Carolina, Louisiana, Kentucky, Alaska, Tennessee). The three other states (North Carolina, Florida, and Idaho) are in the second highest category on the Educational Outcomes Gauge.

All but three of the 13 highest priority states rank in the top quartile on the Concentrated Poverty Gauge (Alabama, Arizona, Mississippi, Oklahoma, New Mexico, South Carolina, Louisiana, North Carolina, Florida, and Tennessee). Two of the remaining three (Kentucky and Alaska) are in the second concentrated poverty quartile, and one (Idaho) is in the third.

Four states in the Major Category (second quartile) on the Rural Education Priority Gauge ranked in the highest quartile on two of the five underlying gauges. Of the other Major states, all but one (Michigan) ranked in the highest quartile on one of the underlying gauges.

The lowest ranking states on the Rural Education Priority Gauge are mostly East Coast states with predominantly urban populations. There are some more rural states as well, though (e.g., Kansas, Iowa, Nebraska, and Vermont). These states are distinguished to varying degrees by low rankings on student and family diversity, educational policy, educational outcomes, and concentrated poverty—that is, all gauges except importance.

Discussion

Top-Ranking States

The majority of the top-ranking states on our Rural Education Priority Gauge are located in prototypically rural regions: the Southeast, the Mid-South Delta, the Southwest, and Central Appalachia. Oklahoma borders the Mid-South Delta and the Southwest. While these regions differ considerably in terms of topography, cultural traditions, and socioeconomic characteristics, they are similar to one another in terms of the indicators that lead to their high priority rankings.

Of the 25 indicators used in the report, the 10 most closely related to the overall priority state ranking are (in order of strength of correlation):

1. Percentage of rural poverty in concentrated poverty districts
2. Percentage of rural poverty
3. Rural grade 8 NAEP scores
4. Rural grade 4 NAEP scores
5. Rural high school graduation rate
6. Percentage of rural minority students
7. Percentage of rural minority students in concentrated poverty districts
8. Rural instructional expenditures per pupil
9. Rural high school graduation rate in concentrated poverty districts
10. Rural instructional expenditures per pupil in concentrated poverty districts

Collectively, the 10 indicators illustrate that the highest priority rural states are those facing poverty that is both widespread and intense, working with lower levels of school funding than rural districts in wealthier states[viii], and producing achievement outcomes that are lower than other states. We compared key characteristics of the 13 highest ranking states with (1) all other states, and (2) the 13 lowest ranking states (see Table 9, below). The five indicators selected represent the indicator within each of the 5 gauges that was most closely associated with the overall priority ranking.

New High-Ranking States

Two of the highest priority states did not rank in the highest quartile in any of the previous reports: Idaho and Alaska. The two states have been ranked as high as the second highest quartile however, and Idaho ranked at the very top of the second quartile in 2003.

The highest ranking for these two states on individual gauges are for Student and Family Diversity (Alaska ranks 4th), Educational Policy Context (Idaho ranks 4th), and Educational Outcomes (Alaska ranks 1st). Neither state ranks in the top quartile on either the Importance Gauge (though both do fall in the second quartile, with Alaska at the top on the strength of a 14th gauge ranking) on the Concentrated Poverty Gauge.

Regional Patterns

Results from the analyses reported here suggest that the Southeast (South Carolina, North Carolina, and Florida), the Mid-South Delta (Alabama, Mississippi, and Louisiana), the Southwest (Arizona and New Mexico), and Appalachia (Kentucky and Tennessee) are the nation's highest priority rural regions.

Each of these was a priority region in both the 2005 and 2007 report; all but the Southwest were priority regions in

Table 9. Highest Priority States' Characteristics Compared with Characteristics of All Other States and with Lowest Priority States

Indicator (Gauge)	13 Highest Priority States	All Other States	13 Lowest Priority States
Number of rural students (Importance)	210,041 (median)	111,908 (median)	76,506 (median)
Percentage of rural poverty (Student and Family Diversity)	53.7%	39.6%	27.9%
Rural instructional expenditures per pupil (Educational Policy Context)	$7430	$9,548	$11,651
Rural grade 8 NAEP scores (Educational Outcomes)	268 (median)	276 (median)	282 (median)
Percentage of rural poverty in concentrated poverty districts (Concentrated Poverty)	77.5%	60.5%	42.3%

Note: numbers are rounded

the 2003 report. As with the 2005 and 2007 reports, results here continue our movement over the course of four editions of the report toward attempting to uncover the ways in which contexts, barriers and challenges intersect and compound to influence schooling outcomes. Thus, predominantly rural states that may have ranked high in the first reports rank lower in the current analysis. Consider Maine, for example. In 2003, Maine was among the highest priority states, ranking 13th overall. In the current report, Maine ranks as the nation's most rural state (based on the Importance Gauge), but ranks 36th in terms of diversity, 43rd in terms of educational policy context, 34th in terms of educational outcomes, and 43rd in terms of concentrated poverty. The result is an overall priority ranking of 37, reflecting a state that is predominantly rural but characterized by fewer demographic challenges, a relatively supportive policy context, and better than average outcomes (note: recent legislation in Maine compelling school district consolidation may alter considerably the policy context ranking of this state in future reports).

The results do not suggest that rural education in Maine is not in need of attention from policymakers, merely that other states (and regions other than Northern New England) feature combinations of influences that collectively suggest greater demands for policy action.

Table 10. Measuring States' Performance Relative to the Diversity in Their Rural Populations

The difference obtained from subtracting each state's ranking on the Educational Outcomes Gauge from its ranking on the Student and family Diversity Gauge. The higher the number, the worse a state is doing (in terms of academic outcomes) relative to the diversity of the students and families it serves; the lower the number, the better a state is doing (in terms of academic outcomes) relative to the diversity of the students and families it serves.

Notably Underperforming		Somewhat Underperforming		Somewhat Overperforming		Notably Overperforming	
NY	30	LA	10	ME	2	SD	-13
WV	29	MA	10	DE	1	AR	-14
MI	27	VA	10	CT	-3	NC	-14
NH	24	VT	9	IA	-3	KS	-18
TN	23	WI	9	AZ	-6	NE	-19
MN	20	MS	8	OK	-6	FL	-21
KY	19	RI	8	GA	-8	OR	-26
OH	17	SC	8	NM	-8	TX	-26
AL	14	ND	7	WY	-8	UT	-30
MO	14	WA	6	CA	-9	CO	-31
PA	14	ID	5	IN	-9	NV	-35
MD	12	AK	3	IL	-12		
		MT	3	NJ	-12	HI	N/A

Note: numbers are rounded

Measuring States' Performance Relative to the Diversity in Their Rural Populations: An Achievement Gap Analysis

Closing achievement gaps (inequitable distributions of achievement relative to student and family characteristics) has in recent years become a primary stated concern of educational reform. Still, the gaps generally persist and little policy action has been taken other than mandating more and more testing in what some critics consider a misguided attempt to fatten the sheep by weighing them.

Here, we explore the extent to which states are performing relative to measures of diversity that have traditionally been used by policymakers and researchers to define achievement gaps in the current educational context: poverty, minority status, English Language Learner (ELL) status, and special education status, and mobility (less often used as a distinct category for achievement gaps but reported as a contextual feature in most reporting of outcomes—e.g., school district report cards).

For this analysis, we subtract each state's ranking on the Outcomes Gauge from its ranking on the Student and Family Diversity Gauge. A state that is achieving outcomes comparable to the level of diversity among its student population—relative to other states—would produce a score of zero. A state with a positive score is producing academic results that are lower (relative to other states) than what could be expected given the diversity of the student population. A state with a negative score here is considered to be producing academic results that are higher (relative to other states) than what could be expected given the diversity of the student population and so, in the context of the analysis, is considered to be making progress in terms of meeting diverse needs and closing achievement gaps. Table 10 presents the results of this analysis.

The results suggest multiple patterns. Eleven of 12 states that are Notably Underperforming rank in the bottom half of the nation on the Student and Family Diversity Gauge, 5 of the 12 in the bottom quartile. Alabama is the lone exception. These notably underperforming states thus have—relative to other states—less diversity in terms of student and family characteristics used in measuring and describing achievement gaps. As such, they would be expected to perform at higher levels relative to other states. That they don't

Table 11. Comparison of Demographic and Policy Variables by Educational Outcomes Ranking

Outcomes Gauge Indicator	Ranking on Educational Outcomes			
	Urgent	Critical	Serious	Fair
Percent rural students eligible for free or reduced meals	50.8%	40.2%	37.7%	26.6%
Percent rural minority students	46.3%	34.7%	30.7%	20.2%
Rural state and local revenue per pupil	$8,595	$8,785	$9,524	$10,378
Organizational Scale among rural schools (median)	12,972	4,189	2,741	1,802

suggests that the needs of the rural student population as a whole are not being adequately met. The average ranking on the Outcomes Gauge for the 12 Notably Underperforming States is 15.5. The average ranking on the Student and Family Diversity Gauge for those same states is 35.8.

At the other end, six of 11 states in the Notably Overperforming category rank in the top quartile on the Student Family Diversity Gauge. Three others are above the national median (the exceptions are South Dakota and Nebraska). For nine of the 11 over-performing states, then, their ranking appears to result primarily from a combination of reasonably high performance (on average, the Outcomes Gauge ranking for these states is 36.3) and a student population that is considerably more diverse than other states (on average, their Student and Family Diversity Gauge ranking is 13.5).

Helping or Hurting: Investigating the Relationships between Achievement Gaps and Educational Policy Contexts

More than 40 years ago the Coleman Report[ix] first called widespread attention to differences in academic performance associated with students' race and socioeconomic status--differences that have come to be understood and described as achievement gaps by researchers, policymakers, practitioners, and the public. Since then, researchers have compiled an abundant literature investigating achievement gaps and educational policy. Collectively, that literature suggests three policy variables with the demonstrated potential to help close achievement gaps (i.e., the narrow the differences between the achievement levels of white and minority students and higher versus and lower-socioeconomic status students): increased fiscal resources, higher teacher quality, and smaller school and district size.

In this analysis, we take the four quartile categories we constructed from rankings on the Educational Outcomes Gauge, and we compute an aggregate measure for states in each category on key demographic and policy variables.* Our research question has two parts: First, to what extent are achievement gaps present—i.e., to what extent are achievement levels related to race and socioeconomic status? Second, is the policy context one that could be expected (based on the research literature) to make things better and work toward narrowing gaps, or one that could be expected to make things worse and work toward widening gaps? (See Table 11.)

Research suggests that schools and districts serving higher percentages of economically disadvantaged students will need additional resources to enable their students to reach the same achievement levels as other schools and districts serving more affluent student populations. Research also suggests that poor and minority students benefit from attending smaller schools and in smaller districts. The patterns illustrated in Table 9 suggest that the reality for rural America is quite the opposite. As we might expect, given the

Table 12. Bivariate Correlation Analysis Results for Gauge Rankings

	Importance	Student and Family Diversity	Educational Policy	Educational Outcomes	Concentrated Poverty
Importance	1	-.113	-.096	.181	.085
Student and Family Diversity Gauge Rank	0.113	1	.376**	.330*	-.133
Educational Policy	-.096	.376**	1	.223	.099
Educational Outcomes	.181	.330*	.223	1	.210
Concentrated Poverty	.085	-.133	.099	.210	1

**Correlation is significant at the 0.01 level (2-tailed).
*Correlation is significant at the 0.05 level (2-tailed).

research, the states where rural achievement levels are lowest are states serving larger populations of economically disadvantaged and minority students. Unfortunately, they are also the states where rural districts receive the fewest resources and where rural students attend the largest schools in the largest districts, indicating that the more challenging the rural education context, the less responsive the education policy context.

The same patterns are also apparent in results of a correlation analysis we performed using the individual gauge rankings (see Table 12).

The results presented in Table 12 reinforce findings from the analysis above:

1. The significant positive correlation between educational policy and student and family diversity indicates that the more diverse a state's rural areas are, the worse the rural educational policy context.

2. The significant positive correlation between educational outcomes and student and family diversity indicates that the more diverse a state's rural areas are, the worse the rural educational outcomes.

In the following section we propose a broad new policy approach for addressing the needs of students in high-poverty rural regions of the country.

A Regional Approach to Rural School Improvement In High Poverty Districts

There are three realities confronting policymakers and all others concerned about shaping educational policies to respond to the needs of rural students and the schools they attend, in particular those rural students and schools whose socio-economic circumstances present special educational challenges. We have mentioned these three realities in one way or another in previous reports in this series.

First, some of the largest rural student populations are in populous urban states where rural people constitute a small demographic – and political – minority. For example, California, Illinois, Michigan, New York, Pennsylvania and Texas together have over 2.2 million rural students, about one-fourth of all rural students in the nation. But those rural students constitute no more than about one-fifth and as little as only five percent of the student population in each of those states. In some of these states, the rural education problem may be getting rural education noticed at all.

Second, in some of these large urban states with large numbers but small percentages of rural students, the rural population is not as socio-economically challenged as it is in many smaller, more rural states. Except for California and Texas, the rural student poverty rate in those six states noted above is below the national average, and the rural minority rate is below 10 percent. But despite relatively low levels of demographic challenge, rural student achievement outcomes in many of these states is surprisingly low, with three (New York, California, and Michigan) ranked 15th or lower on our student outcomes gauge, another (Texas) below the median at 24th, and a fifth (Pennsylvania) only barely above the median at 28th. We have dubbed this phenomenon "out of sight and out of mind" to reflect the fact that the seemingly intractable problems in urban education in these large states simply obscure real problems in rural areas.

Third, the highest concentrations of rural poverty and minority students are in small rural states where rural people are a demographic majority or a large minority. These states are largely in the Southeast and Southwest, have rural student poverty rates (based on eligibility for federally subsidized meals) of 44 percent or higher and often have rural minority student rates of over 40 percent.

As our "Concentrated Poverty" Gauge indicates, the rural poverty rate and rural percent minority population in some of the districts in these rural states are extraordinarily high. This gauge offers a new insight into the most distressed rural districts in each state and serves well to compare high-poverty rural districts from state-to-state. For example, the ten percent of rural districts with the highest poverty rates in New York do not fare nearly as badly on most indicators as do the ten percent of rural districts with the highest poverty rates in Texas.

The Concentrated Poverty Gauge allows us to compare conditions in the highest poverty districts in each state, but for that very reason it does not give a good view of the nationwide distribution of rural student poverty. When high poverty rural districts are examined on a national basis, without concern for how many are included in any state, the level and intensity of rural school poverty becomes both more pronounced and more concentrated in certain states.

For example, we used school year 2007-08 data from the Title 1 program of the Elementary and Secondary Education Act to identify the 800 rural school districts (using the same definition used in this report) with the highest rate of disadvantaged students eligible for Title 1 funding. We called this group of rural districts the "Rural 800." The number 800 was chosen because it is the number representing ten percent of all rural districts, rounded to the nearest 100. The Rural 800 are the 800 rural districts nationwide with the highest student poverty rate.

There are a Census Bureau-estimated 369,000 school age children living in the communities served by these districts. About 32 percent of these students are poor or disadvantaged as defined by Title 1. This is the same as or higher than the rate that year for Chicago, Philadelphia, Detroit, Los Angeles, and nearly all other large city districts. Some Rural 800 districts had a 100 percent Title 1 eligibility rate; none had lower than a 26 percent rate. Most of the students in these districts are children of color (26% African American, 19% Hispanic, and 10% Native). They are predominantly located in the South, with nearly nine in ten of the Title 1 students in these 800 districts living in 15 contiguous states from North Carolina to California.

The concentration of high-poverty rural school districts in these 15 states is highlighted by our New York-Texas comparison. There are 130 Rural 800 districts in Texas serving nearly 41,000 Title 1 students. In New York there are five Rural 800 districts serving fewer than 1,000 Title 1 students.

But the real story of the distribution of rural school poverty is that, in terms that may matter most, it is not state boundaries that define the character of what is truly a regional pattern. Instead, there are numerous geo-cultural regions that transcend state boundaries and define clusters of high-

poverty rural schools that share similar characteristics, including natural resources and landscape, economic base, history, and demographic patterns. A geo-cultural region may lie within one state, but usually it includes portions of several states. At the same time, a state may have high poverty rural districts in more than one geo-cultural region.

To identify these geo-cultural regions, we produced a map showing high-poverty rural school districts. We used a slightly different definition of "rural" for this analysis than we have used throughout this report or that we used to identify the Rural 800 districts discussed above. For this mapping analysis, in addition to the districts classified as "rural" as we usually define it, we also included districts in which a plurality of students attend a school located in a community that the Census defines as a "town," but that is either "distant" or "remote" from an urbanized area.

These "distant" and "remote" small town districts are classified by the National Center for Education Statistics as locale code 32 or 33. So for this analysis, we include districts in locale codes 32 and 33 as well as those we usually include from locale codes 41, 42, and 43. From among these, we selected the 900 highest poverty districts because that represents about ten percent of them, rounded to the nearest 100. We call this group the Rural 900.

We chose this enlarged definition of "rural" for this regional analysis because by including schools in small towns, we "fill in the gaps" in areas where an entire region consists of similarly situated schools, only a few of which might not be considered "rural" under our usual strict definition. By including these small town schools, we brighten the picture of where rural poverty is concentrated both within states and in clustered regions that cross state lines.

The Rural 900 districts serve about 1.4 million school aged children, 37 percent of whom are disadvantaged under Title I guidelines. Fifty-nine percent are people of color (28% African American, 23% Hispanic, and 8% Native).

Figure 1 on page 24 shows these districts as we have tentatively separated them into mostly interstate regions. These regions generally, but not necessarily, consist of contiguous counties, but not all school districts within a region are either rural or high poverty, so the school districts, while clustered, are not necessarily contiguous. At least one third of the students in the Rural 900 districts in each of these regions is a Title I student.

Four of these regions have a widely recognized rural identity, long understood to represent a culturally, historically, demographically, geographically and economically coherent place –Central Appalachia, the Black Belt, The Mississippi River Delta, and the Ozarks. A fifth, the Borderlands region adjacent to Mexico, is rapidly achieving that status as well. We refer to these five as "Classic" rural regions.

In addition, we identify seven other less commonly recognized regions, using criteria ranging from common racial/ethnic populations to a shared economic base. Of these seven regions, three are defined by their shared economic and natural histories, and four by their indigenous populations.

- **Farm Labor –** The irrigated valleys of California, especially the San Joaquin and Imperial valleys, are rich with agricultural productivity and poor with farm labor incomes. Eighty-five percent of Rural 900 students here are Hispanic.

- **The Piney Woods –** This region includes parts of East Texas, Northwestern Louisiana, Southwestern Arkansas, and Southeastern Oklahoma. It is an ecological region defined by its oak, hickory, and especially pine forests, and the small businesses and low wages they support. Less than 50 percent of students in these Rural 900 school districts are white, with 28 percent African American and 14 percent Native American. This region could easily be extended by jumping across the Mississippi Delta region into the Pine Belt that lies below the Black Belt in Southern Mississippi and Alabama, but we have included those districts in the Black Belt.

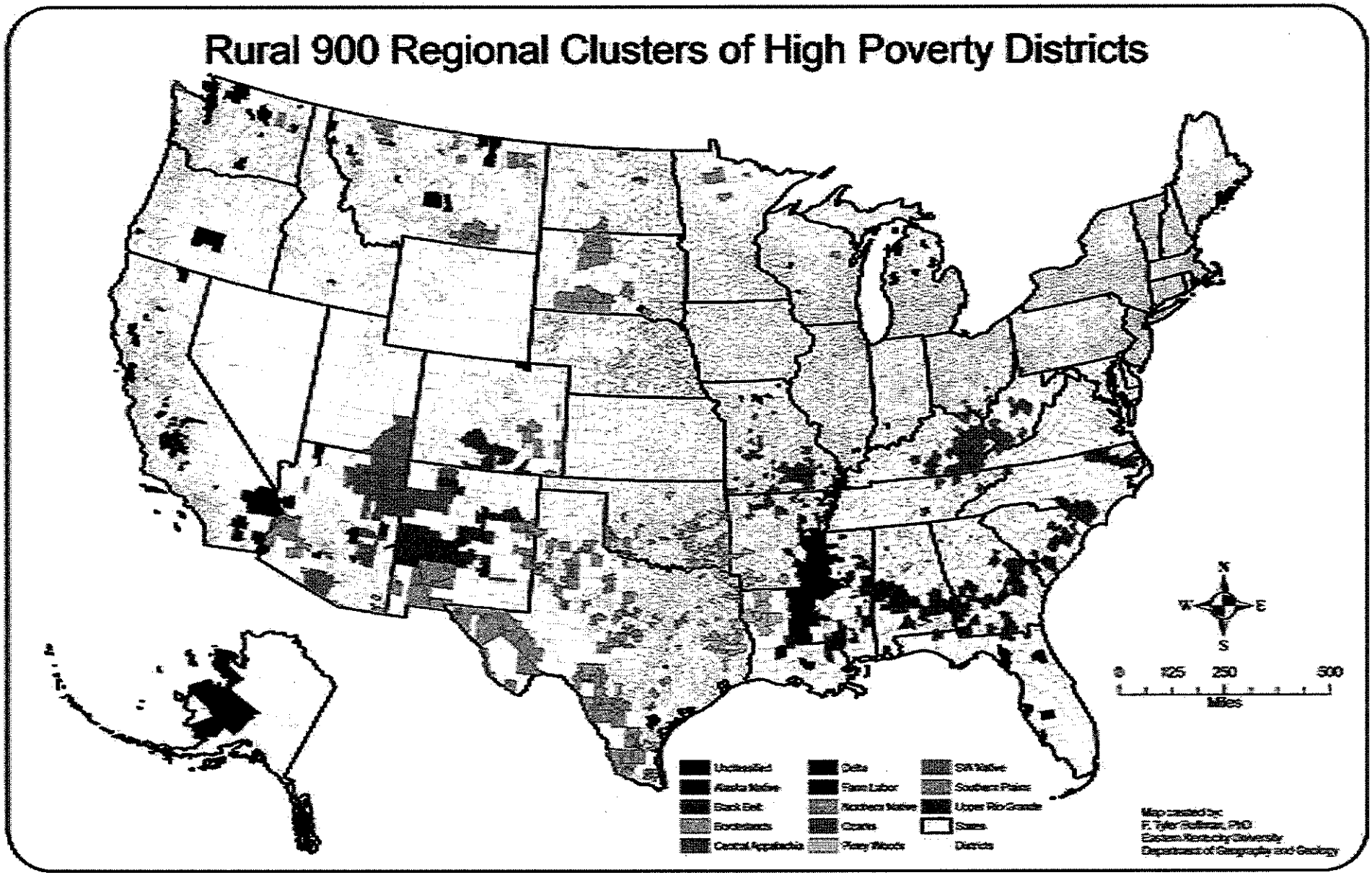
- **The Southern Plains –** Beginning in Central Texas Hill Country and running in a northwesterly direction through the Texas Panhandle, Southwestern Oklahoma, Eastern New Mexico, and to the Arkansas River Valley in Southwestern Colorado, this is a drought-susceptible farming and ranching region. Most Rural 900 students here are either Hispanic or White, in equal proportion.

- **Northern Native –** This is a non-contiguous region consisting of Indian reservations and adjacent communities in the Northern Plains, the Rocky Mountains, and the Pacific Northwest. Five of six students in these Rural 900 districts are Native American; two in five live in poverty.

- **Southwestern Native –** A non-contiguous region consisting of Indian Reservations and adjacent communities in New Mexico, Arizona, and Utah. Six in seven students in Rural 900 districts here are Native, and 43 percent live in poverty, the highest rate in all the regions.

- **Alaska Native –** This region consists of schools mainly in the unorganized territory of Southwestern and Western Alaska. All but a handful of the students in the Rural 900 schools in Alaska are Eskimo. A few are Indian people, and

Figure 1.


Rural 900 Regional Clusters of High Poverty Districts
N
W
E
S
0
125
250
500
Miles
Unclassified
Alaska Native
Black Belt
Borderlands
Central Appalachia
Delta
Farm Labor
Northern Native
Ozarks
Piney Woods
SW Native
Southern Plains
Upper Rio Grande
States
Districts
Map created by:
F. Tyler Rollman, PhD
Eastern Kentucky University
Department of Geography and Geology

a very few (about 2 percent) are white. The economies in many of these communities is subsistence, making poverty statistics an unsatisfying basis for comparing these districts with most other high poverty districts.

- **Upper Rio Grande Valley –** From the headwaters of the Rio Grande in Southern Colorado to the part of Southern New Mexico we include in the "Borderlands" region, the Upper Rio Grande Valley's rural areas consist of highland and valley communities built on shrubland, grassland, and evergreen forest. Except for the irrigated areas of Colorado's San Luis Valley, this region's agriculture is primarily extensive livestock grazing. Heavily Hispanic, these communities are ancient, long preceding formation of the United States, and much less influenced by recent decades of Mexican immigration than are the Borderlands. Three-fifths of the students in Rural 900 schools here are Hispanic.

This division of school districts into geo-cultural regions is not without challenges. Some districts simply did not fit any regional pattern. Of the 900, we could not classify 93 as part of any high-poverty rural region. On the other hand, some districts could easily be placed in any one of two or even three regions. Many of the districts in East Central Oklahoma, for example, could be placed in either the Ozarks or the Piney Woods regions, or could be grouped in their own region. This new Oklahoma region could be called by the historical term that defines the tragedy by which its Native American ancestors were forcibly removed to there from Alabama, Georgia, South Carolina and North Carolina—the Trail of Tears. Or it could be known by a more locally recognized term that defines its roots in the Southeast—Little Dixie.

But these classification challenges aside, the reality is that the complexity and diversity of rural education, and especially that of high poverty schools, is amply demonstrated by this kind of regional analysis. For state policy makers and education officials, the challenges are particularly keen when a state's rural education landscape includes schools in two or three of these regional configurations. Consider Arkansas, with high poverty rural schools in the Ozarks, the Mississippi River Delta, and the Piney Woods regions. Can the state develop a uniform, one-size-fits-all strategy for addressing the problems of high poverty rural districts in all three regions? Should it even try? Can it afford not to try a more regionally sensitive approach that takes into account the historic and cultural differences in these high-poverty regions within its borders?

The federal government should adopt a regional strategy to help the states address the needs of students in high-poverty districts on an interstate cooperative basis. The objective should be to define strategies appropriate to the special circumstances of schools in each region, and to encourage states to work together to address the problems in a cohesive manner. Rural America is too often seen simply as nothing more than what it is not—"non-metropolitan." It is further wrongly assumed to be uniform in character and circumstance. It is not. But there are regional patterns of similarity not neatly divided along state lines, where school improvement efforts might build on common denominators and shared assumptions. A federal initiative to help the states define and implement such strategies to improve schools in high-poverty regions is certainly needed.

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[i] While this figure represents a decrease of 911,672 over the 9,974,462 rural students reported in *Why Rural Matters 2007*, the difference is the result of changes in methodology (specifically, the use of district-level data as opposed to school-level data). See "The Data" on page 1 for a detailed discussion.

[ii] Sources:
National Center for Education Statistics, Common Core of Data, Public Elementary and Secondary School Universe, 2006-07 (final). Accessed using NCES BAT application: **http://www.nces.ed.gov/ccd/bat/**
National Center for Education Statistics, Common Core of Data, Public Elementary and Secondary School Universe, 2004-05 (final). Accessed using NCES BAT application: **http://www.nces.ed.gov/ccd/bat/**
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New America Foundation, Federal Education Budget Project. Accessed from: **http://febp.newamerica.net/k12**
U.S. Census Bureau, 2005-2007 American Community Survey 3-Year Estimates. Accessed using Census American Fact Finder application: **http://factfinder.census.gov/home/saff/main.html?_lang=en**
Note: Lack of data in these primary sources is denoted with N/A throughout the report.

[iii] **See http://nces.ed.gov/whatsnew/commissioner/remarks2006/6_12_2006.asp** for a description and rationale for the creation of the new system. See also **http://ies.ed.gov/ncee/edlabs/regions/southwest/pdf/REL_2007010.pdf** for a discussion of the new system and its implications for educational policies and practices.

[iv] Gauge rankings are not calculated for states with two or more N/A indicators.

[v] See **http://www.urban.org/publications/410934.html** for a detailed description of the methodology.

[vi] For this analysis, the correlation coefficient (Pearson's r) is a robust .66 (statistically significant at $p<.001$).

[vii] The 104% graduation rate is a statistical artifact of the methodology used to calculate graduation rates, and results from a combination of modest enrollment growth and very high graduation rates (indeed, we can safely assume that states with rates approaching 100% are among the highest in the nation regardless of enrollment growth).

[viii] Of the 13 highest priority states, seven rank in the top quartile of states in total taxable resources per capita in the three most recent years for which data is available from the U.S. Treasury. Two other top priority states rank just below the top TTR quartile at 14th and 15th place.

[ix] Coleman, J., Campbell, E., Hobson, C., McPartland, J., Mood, A., Weinfeld, A., & York, R. (1966). *Equality of educational opportunity.* Washington, DC: U.S. Government Printing Office.

[x] The data available for use in this report did not include variables that would allow us to investigate teacher quality.