## The State Education

# Standard 

The Journal of the National Association of State Boards of Education


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"Above all, we will apply a lens of equity and excellence to everything we do so that our focus and that of our member boards remains fixed on ensuring that all students get the resources they need to succeed."

- "Our Members, Our Mission: A Strategic Plan for the National Association of State Boards of Education" (Fall 2018)

NASBE develops, supports, and empowers citizen leaders on state boards of education to strengthen pubblic education systems so Students of all backgrounds and circumstances are prepared to succeed in school, work, and life.

## Core Values

## We believe in equity and excellence:

We believe that students of all races, genders, and circumstances deserve the supports they need to thrive in school.

We believe all students can learn at high levels and must have the opportunity to do so through state policies that address their diverse learning needs.
We prioritize state leadership of public education: We believe that state boards of education, in partnership with chief state school officers, governors, and legislatures, are best positioned to craft, promote, and oversee state education policies.

We empower citizen leaders: We build the capacity of state board members to question, convene, and act boldly with and for students, educators, and families.
We elevate evidence in policymaking: We ground our resources, tools, and services in the strongest evidence available and help our members make informed decisions in the best interest of students.

We build community: We facilitate productive dialogue and nonpartisan exchange among members with diverse perspectives, creating lasting channels for the sharing of evidence-based strategies and solutions.
We collaborate: We promote respectful collaboration, both among our members and between our members and the broader education community.

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## Editor's Note

Valerie Norville

Editorial Director

For some years now, state board
members have buttonholed staff at NASBE conferences to ask for more content on rural schools and districts. Although it varies by state, I think it's fair to say that most members are city dwellers, with the challenges and joys of working and learning in rural schools outside of their experience. Our last report, Educating Students in Rural America: Capitalizing on Strengths, Overcoming Barriers, emerged from the work of a NASBE study group in 2014.

This issue builds on some of the same themes. As Mara Tieken and MK Montgomery make clear in the opening article, rural schools typically are the heart of community life. Yet the challenges are great. Resources were always limited, and the pandemic has stretched rural districts even more. Distance can produce isolation, but education policy conversations in state capitals may seem even more remote to rural families and educators.

Three articles offer a glimpse into the innovative, collaborative ways states can get around these limitations and build on rural assets. New America's Melissa Tooley and Sabia Prescott write about an effort in Kentucky to provide professional development in Appalachian districts, a key component of which is microcredentials. The Colorado Rural Education Collaborative's Kirk Banghart offers two case studies of districts combining forces to tailor problem solving in rural districts: One brings together a peer community to add relevant local context to accountability systems. The other provides scholarships, mentoring, and a peer learning community to rural educators who teach concurrent enrollment classes in high schools across the state.

Ohio University's Sara L. Hartman urges state boards to not fall into the out-of-sight out-of-mind trap that young children in remote areas may be falling into. She cites the many ways in which the pandemic aggravates the threats to the well-being of some of these children: child care deserts and food insecurity, reliance on older family members who are at greater risk for contracting COVID-19 as caregivers, and inhibited reporting of child maltreatment and domestic violence.
An author who is well known to NASBE stalwarts is Reg Leichty of Foresight Law + Policy, who lays out the clear challenges to rural students' digital learning: inadequate access to internet at home, insufficient broadband speeds at school, and a relative lack of devices. Leichty lists steps state board members can take to ensure equitable access to digital instruction for students in rural communities.

Rounding out the issue is an interview with three state board members who grew up and worked in rural districts and who bring that perspective to their board tables. Fern Desjardins is a member of the Maine State Board of Education and NASBE's Board of Directors and spent her career in education in the preK-12 schools she had attended. Robin Stevens is a member of the Nebraska State Board of Education who grew up on a farm and likewise had a career in small schools. Sandra Kowalski is a member of the Alaska State Board of Education and Early Development, an educator and administrator, and was director of indigenous programs at the University of Alaska Fairbanks.

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## News \& Notes

Even as legislators looked ahead to 2021, a lame duck Congress in late 2020 wrestled with pandemic relief and the FY21 budget. Following the election, Senate Majority Leader McConnell (R-KY) and House Speaker Pelosi (D-CA) signaled interest in completing work on both areas, but negotiations did not begin in earnest until December. The parties finally reached a deal just before the holidays. The agreement included over $\$ 50$ billion in pandemic relief for K-12 schools to be distributed through the Elementary and Secondary Education Emergency Relief fund established by the CARES Act. Schools may use the emergency funding for any purpose authorized by the Elementary and Secondary Education Act, the Individuals with Disabilities Education Act, and a wide range of other activities. Congress also completed work on the FY21 budget, providing a modest increase for education.

In the Senate, the departure of Health, Education, Labor and Pensions (HELP) Committee Chairman Alexander (R-TN), past HELP Committee Chairman Enzi (R-WY), and committee member Roberts (R-KS), coupled with the defeat of Senator Jones (D-AL), will fundamentally reshape committee membership. If Republicans were to prevail in the Georgia runoff elections on January 5, the committee gavel would perhaps pass to Senator Burr (R-NC), who is next in line. If Senators Burr and Paul (R-KY) opt for other posts, Senator Collins (R-ME) could be the panel's top Republican. If Democrats were to prevail in Georgia, Ranking Member Murray (D-WA) would likely become chairwoman. Regardless of which party assumes control of the committee, we expect COVID-19 response and higher education to be major early issues.

The House Education and Labor Committee's leadership and membership is expected to be more stable. Because Democrats maintained control of the

House, Committee Chairman Scott
(D-VA) is expected to continue to lead the committee, along with Ranking Member Foxx (R-NC). As in the Senate, the House education committee's early 2021 work is likely to focus on COVID response and oversight, as well as reviving work on the Higher Education Act. Chairman Scott also plans to focus on workforce policy, including examining the Workforce Investment Act and continuing work, started in 2020, to update the National Apprenticeship Act.

President-elect Biden's transition team, including its education working group, started working after the election to identify the new administration's policy focus areas and to begin pinpointing individuals to fill key leadership posts, including at the Department of Education. The new administration will focus initially on COVID-19 response, but the president's education platform became clearer in the final weeks of 2020

Thanks to Jamie Brandon and Reg Leichty for this update.

Figure 1. Trend in NAEP Grade 12 Tests in Math and Reading (average scale scores)



Julie C. Tolleson
Vice-Chair of the National Council of State Education Attorneys

First Assistant Attorney General for K-12 Education in the Colorado Department of Law

## NCOSEA Voice

What State Education Agencies Need to Know about FERPA

Imagine that your state's flagship university wants thousands of student records to study the impact of participation in extracurricular activities on academic achievement. Or perhaps social services agencies seek assessment data to evaluate outcomes for students in foster care. What if your state auditor, citing its statutory authority to access confidential records, demands access to your student information system for an undefined purpose? Chances are your state's department of education is regularly navigating questions like this.

State board members are no doubt familiar with the basic premise of the Family Educational Rights and Privacy Act (FERPA): A school or district may not share a student's education record without parental consent unless one of a handful of limited exceptions applies. But what does FERPA mean for state education agencies (SEAs)? Why can states collect data without parental consent, and when can they share that data?

SEAs maintain massive troves of student data, and everyone-businesses, universities, researchers, auditors, and policymakers-wants it. It has been nearly a decade since the U.S. Department of Education revised the FERPA regulations to permit increased state-level data sharing, particularly for research and program evaluation. Yet many state leaders remain uncertain about the types of student data sharing they can approve.

The department has released hundreds of guidance documents since Congress enacted FERPA nearly 50 years ago, but almost none of them are geared toward SEAs. To fill that void, NASBE's affiliate, the National Council of State Education Attorneys (NCOSEA), released State

## Education Agency Data and the Family

 Educational Rights and Privacy Act. SEAs may collect, maintain, and disclose students' personally identifiable information (PII) in connection with an audit or evaluation of a publicly funded education program. The SEA may redisclose PII only under a FERPA exception.For example, SEAs may redisclose student PII to authorized parties for certain kinds of research, using either the law's "studies" exception or its "audit or evaluation" exception. But each contains precise definitions. For example, the only permitted "studies" are those focused on developing, validating, or administering predictive tests; administering student aid programs; or improving instruction. Meanwhile, the "audit or evaluation" exception only applies when the review concerns an "education program" and when the recipient is either a state or federal education authority or its designated agent. NCOSEA's report explains the scope of SEA discretion under each exception.

FERPA expressly subjects SEAs to hefty penalties for noncompliance, so an SEA must handle data privacy in a FERPA-compliant way or face a loss of federal funds. Yet this prospect should not restrain agency staff from sharing data effectively to improve a state's educational programs. State boards can set the vision for sharing data to serve the interests of students, families, and schools. But doing so effectively requires an understanding of FERPA's legal framework. For that reason, NCOSEA's new report, which is posted on NASBE's website, should be in every state board member's legal toolkit.

## State Board Voice

## School Meals: A Basic Ingredient for Equity

A
t Highland View Elementary in Bristol, Virginia, educational equity begins with a healthy breakfast. Since 2014, my staff and I have implemented an alternative breakfast program called Breakfast-to-Go, in which students kick off their school day with breakfast in their classrooms. The program helped us reach more students and created a more inclusive, affirming environment where all students can thrive and learn. Little did we know at the outset, the program also prepared us to serve kids during the pandemic, when congregating students as a group in the cafeteria is unsafe.

Ninety-nine percent of our school's families live at or below the federal poverty level. It is no secret that the pandemic amplified food insecurity. In the current economic crisis, many families struggle even more to pay bills and put food on the table.

Leveraging federal nutrition programs has been a smart, efficient solution to address childhood hunger at Highland View. Now more than ever, many of our students depend on the meals they receive at school for their daily nutrition. And without proper nutrition and access to food, my students will not enjoy equitable opportunities in education and healthier lifestyles that all children deserve.

When Virginia schools closed for in-person instruction, our district's nutrition teams never slowed down. Over the spring and summer, the district provided nearly 160,000 meals to youth. There was an astounding 375 percent increase in this year's summer service compared with last year's.

A new report by No Kid Hungry illustrates what I and other educators are witnessing across the nation: Almost
half of American families are living with hunger during the pandemic. The numbers are even worse among black (53 percent) and Latino families ( 56 percent).

Many parents and guardians are essential, frontline workers or do not have the luxury of working from home, meaning they are more likely to be exposed to the virus and to lose jobs and wages because of the pandemic. And people of color account for 43 percent of all U.S. essential workers, according to the Economic Policy Institute.

School meals will continue to play a vital role in communities of all kinds, but especially for low-income families and people of color, as they navigate pandemic-induced financial hardships. While different classrooms have different needs, meals programs can always make an impact.

The Virginia Department of Education recently updated its roadmap for achieving educational equity. State leaders describe educational equity as our commitment to eliminating the predictability of student outcomes based on race, gender, zip code, ability, socioeconomic status, and/or languages spoken at home. Implementing available federal nutrition programs-and seeking innovative ways to maximize participation-is an important step in filling equity gaps. I urge all school districts to consider the options.

Investing in school meal programs is an investment in your community. A critical lifeline now, school meals will continue to help level the playing field for future generations of students.


Pamela L. Davis-Vaught
Principal, Highland View Elementary, Bristol, Virginia

Member of the Virginia Board of Education


> In schools accustomed to making a little go a long way, the pandemic increased the burden. Mara Casey Tieken and
MK Montgomery Mara Casey Tieken and
MK Montgomery

## Challenges Facing Schools in Rural America

Last May, Mara attended graduation at a high school in a small, mostly AfricanAmerican town in the rural Arkansas Delta. Cotton and soybean fields surround the school, and large granaries stand across the street. The town has a couple of barbeque places, a Family Dollar, and lots of abandoned store fronts, some without roofs and filled with waisthigh wildflowers.

The school's campus includes elementary, middle, and high school buildings, but with district enrollment down to about 350 , the old high school sits empty. The district's property tax rate is one of the highest in the state, but, with the area's low property values, tax revenue is minimal, and so the district's budget is tight. Staff salaries are among Arkansas's lowest: Teachers tend to start in districts
like this, get a few years experience, and then move on to wealthier places.

But on a Thursday night in May, no one is worrying about the budget-instead, teachers and students rush around tying ties and straightening robes. As the band begins a slightly off-key rendition of "Pomp and Circumstance," 22 seniors file into a gymnasium stuffed with 500 family, school staff, and community members clutching balloons and fanning themselves with programs. The soon-to-be graduates take their seats at the center of the gym floor, their caps glittery and bright under the lights. The valedictorian encourages her classmates to believe in themselves, and a teacher reads a list of the academic and athletic scholarships the students have won-this school's senior class routinely pulls in millions of dollars toward their further education. As the graduates receive diplomas and parade out, the bleachers erupt in a storm of cheering and stomping, marking the end of one journey and the beginning of the next.

This school is not much to look at. But for this rural town, it is everything: close relationships, strong academics, the community's hope and future. Across the United States are thousands of rural schools just like this one, which against all odds are trying to make it work-a challenge that has only grown with the current pandemic.

## What Is "Rural"?

There is no single, agreed-upon definition of "rural." The federal government uses more than 15 definitions, and states have their own. These classifications are typically tied to land use, population size or density, or proximity to an urban area. Most rely on a core distinction between "urban" and "rural" or "metropolitan" and "nonmetropolitan," with "rural" or "nonmetropolitan" being the leftover category. The U.S. census, for example, classifies places outside of those with 2,500 or more residents as "rural." While most definitions put the rural or nonmetropolitan population at around 20 percent of the country's residents, depending on the definition used, the U.S. population swings from 17 to 49 percent rural.

Rural America also means something in the popular imagination. Two fictions dominate the media: One is the nostalgic, romantic image
of rural America (think The Andy Griffith Show); the other, very different fiction is the backwoods-and-backwards myth depicted in the movie Deliverance and in the more recent reality TV or news stories of opioid crises and rural decline. Through both of these false portrayals runs another myth: that rural America is a white America. ${ }^{2}$ These myths obscure a true understanding of the strengths and challenges of rural communities, and they erase a significant part of the rural population.

Portrayals of rural communities as white, located in a cornfield or a coal field, economically declining, and losing population do not accurately depict most rural places. Rural America is much more diverse than it is usually made out to be.

Rural America stretches from the coast of Maine to the edges of Alaska, from the Mexican border to the boundary with Canada. It is flat and mountainous, arid and humid, just outside a city and a day's drive from a Walmart. Its communities are also diverse. Currently, people of color make up about 20 percent of the nation's rural population. Of these 10.3 million residents, about 40 percent are African American, 35 percent are Hispanic, and the remaining 25 percent are Native American, Asian, or Asian Pacific Islander or multiracial. ${ }^{3}$ And rural places are growing even more diverse. From 2000 to 2010, the rural nonwhite population grew from 8.6 million to 10.3 million people, or by 19.8 percent, while the rural white population remained nearly flat. Much of this growth was due to a rapidly expanding rural Hispanic population, which grew during this period by 44 percent.

Rural economies are also diverse. Many rural industries are growing: Rural tourism has been booming; rural locales have become a destination for retirees and, when the pandemic first hit U.S. cities, even for some city dwellers; and organic farming and clean energy are thriving. However, other rural industries are struggling. Many of the industries that have traditionally defined rural places-agriculture, mining, timber, fishing-are declining. ${ }^{4}$ Currently, only about 1 in 10 rural workers is employed in one of these sectors, ${ }^{5}$ and those jobs continue to disappear. Globalization and economic restructuring have had disproportionate impacts in rural places, squeezing many rural industries

> Rural America is much more diverse than it is usually made out to be.
and forcing out many small rural businesses. And on the eve of a new recession, rural America had not recovered from the last one: Rural jobs were still lagging behind pre-2007 recession levels. ${ }^{6}$

This economic decline takes an enormous toll on rural communities, especially those without much economic diversification-a feature of many rural economies. In 2017, 16.4 percent of nonmetropolitan residents were living in poverty, compared with 12.9 percent of metropolitan residents. ${ }^{7}$ Persistent poverty-poverty that extends across generations-is particularly extreme in rural places: More than 85 percent of counties with poverty rates over 20 percent for at least 30 years are nonmetropolitan. ${ }^{8}$ Rural poverty is also linked to substandard housing or homelessness, environmental destruction and toxicity, poor nutrition and food scarcity, and inadequate health care.

Perhaps the largest challenge facing rural America right now is economic inequality. Inequality divides most rural places: Some rural families and children face greater barriers, more challenges, and fewer resources than others. Historically, many rural economies were rigidly stratified: Factory owners and mill workers, coal executives and coal miners, planters and sharecroppers. ${ }^{9}$ Increasing automation, dwindling natural resources, and economic uncertainty have changed these industries, but they have not erased this underlying hierarchy. Today, it is CEOs of corporate farms and migrant farm workers or casino owners and hotel housekeepers. Low wages, high unemployment, and residential segregation further entrench inequality. ${ }^{10}$ Segregated poverty also lowers property wealth, which erodes educational funds and can compromise the quality of education a child receives. The effects of rural poverty, therefore, are devastating and enduring.

But poverty is not equally distributed across the rural population. In 2017, the rural black poverty rate was 32 percent, the poverty rate for rural Native residents was 31 percent, and the rural Latinx poverty rate was 24.5 percent-while only 13.5 percent of rural white residents lived below the poverty line. ${ }^{11}$ Rural communities of color are often concentrated in persistently poor places, ${ }^{12}$ and poor rural communities of color experience even greater segregation than poor rural white
communities. ${ }^{13}$ "Rural America," then, is actually "rural Americas," a loose aggregate of racially separate and unequal places.

The challenges facing rural communities are large. But many also enjoy important strengths and resources. There are areas of significant rural economic growth, and many rural communities have expanding populations as well. Immigrants are bringing new ideas, resources, and human capital to rural places. Rural places also often rank high in social capital, which are the resources that come from relationships. It is difficult to measure or quantify this kind of relational resource, but we see it in the community that raises scholarship money so a local student can go to college or the town that turns out to rebuild a house lost to fire. These resources will keep rural America growing and thriving.

## Characteristics of Rural Schools

According to the National Center for Education Statistics, nearly one-third of public schools are rural, and about one-fifth of public school students— 9.3 million children-are educated in these rural schools. By some indicators, these schools and their students are performing quite well: Rural high schools have higher graduation rates than urban high schools, and rural students' scores on the National Assessment of Educational Progress, or NAEP, have been higher, too. ${ }^{14}$ Low-income students have been shown to fare better academically in rural than urban schools. ${ }^{15}$
Schools matter not only to students but also to surrounding communities, and in rural communities they are particularly influential, as they are often one of just a few institutions. ${ }^{16}$ Rural schools may be a community's largest employer, and they support other businesses in town: Their buses are serviced at the local garage, and their bills are paid at the local bank. Rural schools can knit the social fabric of rural communities. As children sit for lunch in the cafeteria together or as parents staff the Friday night concession stand, they sustain old relationships and start new ones. Traditions and values are communicated in rural schools, through things like dress codes and annual celebrations, and sometimes they are challenged and changed, perhaps with protests to change a school mascot. Rural schools also offer
a community a measure of political power: Elected school boards determine the direction and future of their schools and therefore the direction and future of their communities. And rural schools can be an important force for racial integration and equity. They often pull together a number of small towns, which can offer the opportunity for a new, more diverse community in segregated contexts.

## Disparities

Despite these successes, by many other indicators rural schools are struggling. There is a persistent test score gap between rural white students and rural Latinx and African American students, and there are also racial gaps in graduation rates. ${ }^{17}$ Rural students do not go to college at the same rates as their urban and suburban counterparts, and they are particularly underrepresented in four-year degree programs and at selective schools. ${ }^{18}$ Though more and more nonmetropolitan adults have college degrees, the rural/urban bachelor's degree gap is actually growing; 19 percent of nonmetro adults have bachelor's degrees compared with 33 percent of adults in metropolitan areas. ${ }^{19}$ In many contexts, rural schools mirror the surrounding area's racial and class segregation. In these places, schools can divide communities and limit opportunities.

These kinds of disparities in outcomes tend to reflect disparities in resources, and, for many rural schools-especially those serving rural communities with high rates of poverty and rural communities of color-resources are scarce.

Funding is perhaps the biggest inequity of public education. Many rural districts are underfunded, some severely so. ${ }^{20}$ While property-wealthy places can generate plenty of resources locally, places without high property values-like many rural areas-cannot, and they must rely on state and federal sources. But these sources are often tight, too. Only 17 percent of state education funding goes to rural districts, federal Title I formulas can disadvantage lowpopulation rural places, and narrowly directed competitive grants are often not much help. For example, new computers mean little to a school with a leaky roof, a failing electrical system, and limited access to high-speed internet. ${ }^{21}$

These funding inequities mean fewer educational opportunities for rural students. Many
rural students, for example, have limited access to advanced coursework. The average rural school offers half as many advanced math classes as the average urban school, and while more than 90 percent of suburban and urban schools offer at least one Advanced Placement course, only 73 percent of rural schools do. ${ }^{22}$ Rural teachers' salaries are lower, too, which can raise teacher turnover-and also might explain rural teacher shortages in key areas, like STEM subjects and English learner instruction. ${ }^{23}$

And just as funding is running low, the demands on rural schools are increasing. Nearly one in four rural children lives in poverty, ${ }^{24}$ and 13 percent of rural children under the age of six experience deep poverty, which means a family income below half the poverty line. ${ }^{25}$ About 14 percent of rural students attend a school where more than three-quarters of students are eligible for free or reduced-price lunch. This kind of deep, concentrated poverty is often associated with a greater need for additional resources, like social services or medical services-opportunities that cash-strapped rural districts can find hard to support.
The racial and ethnic demographics of schools are changing, too. Currently about 1 in 4 rural students is nonwhite, and, like in rural communities, this population is growing. More rural schools need to offer instruction to students learning English, and many are scrambling to recruit and retain a more diverse teaching force and provide additional professional development-all of which bring their own financial pressures. These pressures, coupled with declining enrollments in some rural districts, can lead to school closure. The country has dropped from over 270,000 schools in 1919 to less than 100,000 in 2010, and the vast majority of those closed have been rural schools. ${ }^{26}$ These closures can mean long bus rides, less extracurricular participation, and decreased parent engagement-and they can devastate the surrounding community.

## Policy Disconnects

Perhaps it is unsurprising then that many rural administrators and teachers argue that state and federal policies do not fit the rural context. Take the recent charter school and choice movement. Choice reforms only work if you have choices, but the long distances and small populations

Many yural adminisistrators and teachers argue that state and feiteral policies sto not fit the rural context.
of rural places often cannot support multiple schooling options. So only 11 percent of charters are located in rural areas compared with 56 percent in urban, and these rural charter schools do not fare as well as their urban counterparts. ${ }^{27}$ Virtual charter schools also are not much of an alternative: They have weak outcomes, ${ }^{28}$ and as the pandemic has highlighted, many rural areas do not have the internet access needed. Similarly, No Child Left Behind Act and other accountability era policies included many provisions that proved unworkable for rural places, like turnaround models that require replacing an entire staff; in many rural places, there just are not enough people to replace them with. ${ }^{29}$ While its successor, the Every Student Succeeds Act, offers states more flexibility, many rural schools are still subject to policies written for a state's urban and suburban contexts.

Other kinds of state mandates can also prove problematic for rural districts. ${ }^{30}$ For example, many find it difficult to meet staffing requirements, due to small hiring pools or the need for teachers to cover multiple subject areas or grade levels. New construction mandates, like minimum building sizes, can bankrupt districts or force school closures. And curricular requirements can be difficult to staff and sometimes make little sense for schools with small student bodies. These mandates are especially challenging when they are unfunded or when state support expires after a few years.

Funding policy is an area of particular frustration for rural administrators, teachers, and families. While some states try to offset weak tax bases with additional state funds, 34 have flat or regressive formulas. ${ }^{31}$ Competitive grant programs often offer little help for rural districts, as their limited staff may not have the time or expertise to write strong applications or the conditions of the grants might be so burdensome that they effectively exclude small schools. Therefore, many policy "solutions" are more problem than solution for rural schools.

## Rural Schools and the Pandemic

The COVID-19 pandemic has only intensified many of the challenges facing rural schools. Rural schools are feeling the effects of the nation's digital divide acutely, which is limiting remote learning options for many rural students
and compromising administrators' ability to communicate with parents. In many places, rural families are not able to access the medical, social, and mental health services that are often located at rural schools (see also article, p. 33). School counselors and organizations supporting rural college access are limited in the work they can do remotely-in-person college visits, for example, are suspended-and rural students may now be particularly reluctant to travel far from home for college.

As districts reopen, they are facing logistical challenges and costs-including, in many places, long bus routes and large numbers of retiring teachers-that further complicate recovery efforts. ${ }^{32}$ The economic effects of the pandemic will be long-lasting and devastating, as districts-some of which have not yet recovered from the 2008 recession-are already cutting budgets to accommodate struggling communities. And these effects will likely be most profound for low-income rural communities of color, many of which are also facing the country's highest infection rates.

## Conclusion

Rural America is experiencing an era of unprecedented demographic change, as rural communities of color are growing-an expansion that is necessary for keeping rural America thriving. But racial and class inequality divides many rural places, threatening rural students' education and rural communities' well-being, and the current pandemic is already exacerbating these divides. If these inequalities go unchecked, they will jeopardize rural communities across the country.
Education leaders play an important role in addressing these inequalities. First, policymakers must spend time in rural communities and schools, getting to know their unique obstacles and opportunities and, importantly, their most pressing equity issues. They should partner with rural leaders-school administrators but also community leaders like pastors and organiz-ers-to design policies. These policies must account for the local context, such as a town's brutal racial history or the effects of a recently closed mill or long and mountainous bus routes. These details will dramatically shape a policy's effectiveness. A rural district, for example, may
need more money for transportation, additional supports to combat histories of racial and economic injustice, or some flexibility around a program's particular requirements. Rural equity, not just equality, should be the goal. Finally, policymakers must change education funding formulas: Relying on property taxes to fund schools only perpetuates educational injustice.

As Mara sat in that Arkansas gymnasium and watched graduation last year, she was struck by all there was to celebrate at this little rural school: strong academic achievement, robust community engagement, and the hope, joy, and promise of graduation. That this school can accomplish these things with only the scarcest of resources and little state support is remarkable. But this should not be the case. Imagine what this rural school could do if it had the kind of support and recognition offered to other schools. State leaders must act: Rural schools need policies that promise all students, no matter where they live, a well-resourced, community-responsive education.
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Policymakers must clange edulcation funding formulas: Relying on property taxes to fund schols only perpetuates ediucational iniustice.

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## Online Learning for Rural Students

Despite 25 years of significant progress in connecting schools to the internet, the absence of universal high-capacity broadband access at school and at home-especially among lower income and minority families-is limiting rural students' instructional opportunities relative to their urban and suburban peers. The pandemic brought the rural broadband gap into stark relief, as schools shuttered and many families lacked the internet access and devices necessary to connect their students to high-quality online learning.

Even before the pandemic, school leaders across the country were sounding the alarm about desperate students parking next to schools, libraries, and even businesses to gain Wi-Fi access for homework. America's students deserve better.

State boards of education can help solve the rural broadband connectivity challenge and expand learning opportunities. To do so, they should support efforts to better map broadband access, champion additional connectivity funding for rural community anchor institutions like schools and libraries, invest in digital literacy initiatives to highlight broadband's benefits, and work with other state leaders to dedicate resources for expanding telecommunications infrastructure to locations where markets fail to provide consumers home connectivity options.

Rural economies and communities have changed significantly over the past 30 years. Changes to agriculture and mining have concentrated many employment opportunities in large cities, and rural populations and economies experience acute pressures from aging populations and evolving societal preferences. ${ }^{1}$ These demographic and economic shifts make expanding online learning opportunities for rural students-including adult learners-more important than ever. Technology, especially the ability of
new tools to deliver access to rich online instruction and educational resources, offers rural communities an economic development and educational lifeline.

Nationally, most schools have at least the minimum broadband capacity required for classroom-based online learning; the few that do not are disproportionately rural. According to Education Superhighway, 99 percent of schools, serving 46.3 million students, have access to the 100 kilobit per second bandwidth that the Federal Communications Commission (FCC) says is the minimum required for classroom-based digital learning. Education Superhighway estimates that only 743 schools nationally-mostly located in "hard to reach" rural areas and small towns-lack this minimum connectivity level. ${ }^{2}$

Connecting these schools must be a high priority, but it is not near enough. The bandwidth required for learning evolves, so policymakers must commit to expanding broadband speeds for all schools. Only 38 percent of all school districts, including 57 percent of America's smallest rural school districts, have reached the FCC's more aspirational online learning broadband speed of 1 megabit per second-10 times faster than the minimum. ${ }^{3}$

## Home Broadband Gaps

Although most rural schools have at least the minimum broadband connections for digital learning, home broadband access rates for rural students are too low. Every rural student needs home access. Policymakers often refer to this home connectivity problem as the "homework gap." But with the pandemic requiring millions of students to attend school wholly or partially from home during the 2019-20 school year, this "homework gap" has become a massive "learning gap," especially for rural families. Rural adults

> Rural a aults and students are less likely than their urban and suburban peers to have home hroadband or own a smart phone.
and students are less likely than their urban and suburban peers to have home broadband or own a smart phone. They are also less likely to have access to the devices required to take full advantage of broadband's potential. Responding to a 2019 survey conducted by the Pew Research Center, approximately two-thirds of rural adults (63 percent) reported that they have a home broadband connection, which compares poorly to urban ( 75 percent) and suburban (79 percent) broadband connection levels. ${ }^{4}$

Other studies confirm Pew's assessment of rural connectivity. A recent report by Common Sense and the Boston Consulting Group shows that " 37 percent of students are without a home broadband connection compared to 25 percent in suburban households and 21 percent in urban areas." ${ }^{5}$ The Alliance for Excellence in Education's Future Ready Schools initiative reports that " 36 percent of Americans living in rural areas of the United States lack highspeed home internet, and 14 percent don't have a computer" (see also figures 1 and 2). ${ }^{6}$ The National Center for Education Statistics reported in 2017 that for " 5 - to 17-year-old students living in households in remote rural areas, the percentage without internet access at home was particularly high. For instance, in remote rural areas 41 percent of Black students and 35 percent of students living in poverty had either no internet access or only had dial-up access at home." ${ }^{7}$

Home broadband gaps in rural areas emerge for a variety of reasons, including households' inability to pay for internet access and some consumers' failure to recognize the internet's value, but the absence of sufficient telecommunications infrastructure represents one of the biggest obstacles to universal broadband connectivity. Citing the FCC's annual broadband status report, Brookings Institution telecommunications policy experts Blair Levin and Carol Mattey recently noted that " 39 percent of the rural population ( 23.4 million Americans), compared to just 4 percent of the urban population, lacked access to what the FCC regards as basic fixed broadband service." Levin and Mattey, as well as other experts, point out that market failures are responsible for the lack of infrastructure in many rural areas. ${ }^{8}$ Small populations living at great remove from denser populations simply do
not provide sufficient returns on investment to telecommunications companies. ${ }^{9}$

One reason policymakers struggle to solve this problem is that broadband availability maps are not detailed enough to explain with precision where the gaps exist. Fortunately, Congress earlier this year passed the Broadband Deployment Accuracy and Technological Availability Act, which directed the FCC to fundamentally transform broadband mapping. The agency has already published new regulations to help push this work forward for rural communities. ${ }^{10}$ With better broadband maps in hand, policymakers should be able to better target subsidies to encourage companies to expand broadband to rural students and their families.

The Pew survey also showed that "rural adults remain less likely than suburban adults" to own "traditional and tablet computers" and that rural residents go online less frequently than other Americans. Thus to be fully effective, broadband access policies must be paired with initiatives to help families acquire devices and to tout broadband's advantages for their learning and work. Congress recognized this need when it made devices and software, not just broadband, an eligible use of education funding under the Coronavirus Aid, Relief, and Economic Security Act (CARES). This funding was a helpful start. But given schools' many pandemic-related needs, additional investments in devices will be required to close access gaps and keep them closed.

## E.Rate and More

Several federal programs aim to expand broadband availability, but the FCC's schools and libraries universal service support program, known as E-Rate, is the most important initiative focused on access to digital learning. Established by the Telecommunications Act of 1996, E-Rate subsidizes telecommunications services and products for public and private elementary and secondary schools. Program discounts range from 20 to 90 percent based on the family poverty levels of the students that applicants are serving. For-profit schools and schools with endowments greater than $\$ 50$ million may not participate. ${ }^{11}$

Figure 1. Nonmetropolitan Households without High-Speed Home Internet (percent), 2018
U.S. average $=36.2 \%$


Figure 2. Nonmetropolitan Households without a Computer (percent), 2018
U.S. average $=14.2 \%$


E-Rate annually provides up to $\$ 4.2$ billion to eligible schools and libraries, the third largest federal investment for schools.

Contingent on demand, E-Rate annually provides up to $\$ 4.2$ billion to eligible schools and libraries, which makes the program the third largest federal investment for schools after Title I of the Elementary and Secondary Education Act and Part B of the Individuals with Disabilities Education Act. E-Rate helps schools pay for internet access costs and the internal connections required to deliver broadband within schools (for example, installing Wi-Fi networks on campus). When Congress authorized the program in 1996, only 14 percent of schools had internet access. Today, the program is widely credited with helping the country achieve 99 percent school broadband connectivity. ${ }^{12}$

However, E-Rate applicants are prohibited from using program funds for off-campus broadband initiatives, such as equipping rural students with the home connectivity required for digital learning. Historically, this limitation served to focus limited E-Rate resources on greatly needed school connections, but the rule has also frustrated state and district leaders' efforts to ensure that all students can participate in learning at home. When nearly all schools suddenly closed to in-person learning in March due to the COVID-19 pandemic, this limitation moved to the forefront of the digital learning debate. At that time, local leaders quickly began looking for ways to ensure that their unconnected students could participate in online learning, even though using E-Rate funding was not an option.

Responding to calls from education leaders to expand E-Rate to encompass students' connection to home broadband, FCC Chairman Ajit Pai said the agency lacked the statutory authority to use the program for that purpose. However, FCC Commissioner Jessica Rosenworcel has repeatedly argued, including during September 17 testimony before the House Subcommittee on Communications and Technology, that the agency in fact has the authority to expand the program's reach: "The agency has even done this in the past on a trial basis! That means the FCC could use E-Rate right now to provide every school library with Wi-Fi hotspots and other connectivity devices to loan out to students who lack reliable internet access at home," she said. ${ }^{13}$

Yet even if all commissioners agreed on this point, the FCC would still need significant
additional funding to deliver on it, especially for students in sparsely populated rural areas that lack access to costly broadband infrastructure. To help connect students to broadband during the pandemic, some federal legislators introduced the Emergency Educational Connections Act (S. 3690 and H.R.6563) in spring 2020. If approved, the act would require the FCC to use E-Rate for home broadband connectivity for students and would dedicate emergency funding for that purpose. ${ }^{14}$ It remains unclear if Congress will adopt it, but states and school districts in the meantime are permitted to use education funding from the CARES Act for connectivity initiatives. However, these flexible funds are needed for many emergency purposes.

E-Rate is not the only federal broadband program important to rural students. The Universal Service Fund-of which E-Rate is one component-also supports rural households through the High Cost (also referred to as the Connect America Fund) and Lifeline programs. The High Cost program is "designed to ensure that consumers in rural, insular, and high-cost areas have access to modern communications networks capable of providing voice and broadband service, both fixed and mobile, at rates that are reasonably comparable to those in urban areas." ${ }^{15}$ The Lifeline program subsidizes phone and broadband service for qualifying low-income consumers. ${ }^{16}$
Beyond the FCC, the U.S. Department of Agriculture's Rural Utilities Service (RUS) manages several telecommunications programs for rural areas. These programs include the Rural Broadband Access Loan and Loan Guarantee Program, the Community Connect Grant Program, and the ReConnect Program. RUS also administers the Distance Learning and Telemedicine grants program, which does not support broadband connectivity but funds related equipment and software.

## Recommendations for State Boards

State board members can play an important role in ensuring that rural students have access to the evolving high-capacity broadband levels required to support online learning during the remainder of the COVID-19 pandemic and beyond. Board leaders interested in this work for
rural communities should consider taking the following steps:

- Support broadband mapping. The collection of better data about broadband access gaps in rural areas is a vital precursor to ensuring that all households, regardless of location, have access to broadband. Congress's approval of the Broadband Deployment Accuracy and Technological Availability Act will help, but state and local leaders must hold the FCC accountability for successfully implementing the law, and then they must call public attention to the resulting data.
$\square$ Support expansion of E-Rate. E-Rate dramatically boosted school connectivity levels. Championing ongoing, expanded funding for the program is essential, and state board members should also urge federal leaders to allow E-Rate funds to be used for connecting rural and low-income students to broadband at home.

■ Support public education about broadband's benefits. Digital literacy initiatives can highlight broadband's benefits, including educating rural households about home broadband's educational advantages. State board members should work with other state agencies to launch public awareness campaigns about how broadband can expand education, health, and economic opportunities.

## - Support funding for broadband infra-

 structure. State leaders must invest in public networks to close rural infrastructure gaps or create public-private partnerships that incentivize telecommunications providers to provide services that otherwise will not be offered as a result of market failures.The educational challenges facing many rural communities are significant, but universal school and home broadband access could provide students with access to expanded instructional opportunities and an array of resources to help them prepare for success after graduation. Expanding broadband access for learning will require strong leadership by state boards and other state leaders who are committed to defining and funding solutions to this longstanding problem.
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## Microcredentials show promise in overcoming

 the challenges of offering rural educators highquality opportunities.Melissa Tooley and Sabia Prescott

## Professional Learning in Appalachia

All teachers need high-quality, relevant, ongoing professional development, but it is particularly hard to come by in rural areas. ${ }^{1}$ The Kentucky Valley Educational Cooperative (KVEC), an educational service agency serving some of the most economically distressed rural
counties in America, has been leading one promising model for delivering professional learning to educators in the region. Microcredentials are an important component.
Established by eight small school districts in rural eastern Kentucky in

1969, KVEC now serves 23 districts, 140 schools, and over 50,000 students in a part of Appalachia roughly the size of Connecticut. ${ }^{2}$ Compared with the nation as a whole, Appalachia's population is largely rural: 42 percent, compared with 20 percent nationally. ${ }^{3}$ And rural Appalachian residents face greater challenges than rural residents in other parts of the United States. Overall, they have lower levels of education, employment, income, and access to the internet, and higher levels of poverty and disability.

## Access and Quality

This rural context affects K-12 teachers' jobs in myriad ways. Students' families may face more daily stressors than other families, and they may also fear that academic success will draw their children out of the area to attend postsecondary education or training or to find good jobs. ${ }^{4}$

Because school budgets are largely tied to the local tax base, rural schools may have limited funds to provide the resources teachers need to do their jobs well. A study of professional development offered in Oklahoma in the 2015-16 school year, for example, found that a lower percentage of rural schools offered professional learning opportunities of every type than nonrural schools (figure 1). Most concerning, the greatest inequities were in sustained formal and informal collaborative learning, including coaching, in areas relevant to district, school, teacher, or student data and/or goals-that is, the very types of experiences shown to be most effective in improving teacher practice. ${ }^{5}$

The study found scheduling conflicts with other school or professional activities to be the biggest barrier to teachers attending professional development generally, and for teachers in rural schools in particular. This barrier is magnified because schools must pay substitutes to cover any instructional hours teachers must miss, assuming that schools can find substitute teachers at all. ${ }^{6}$ And because of small staff sizes in rural schools, teachers often have to take on additional roles-as athletic coaches, counselors, even bus drivers-making finding time even more difficult.

Rural principals also take on more roles than their peers, including ones that would usually be delegated to a vice principal or support staff in
bigger schools. ${ }^{7}$ A principal may even manage multiple schools in a district. So while the principal may technically be the instructional leader in a school, she may lack the capacity to provide direct coaching and support to teachers. ${ }^{8}$
It is also possible that a teacher may be the only one in their school-or even their district-teaching a subject or grade level. This absence of peers affects teachers' ability to engage in meaningful professional collaboration and learning, and it also has implications for social-emotional well-being. Coupled with the geographic distance to attend learning opportunities, professional isolation can push teachers to move to larger, less-isolated, more well-resourced districts. ${ }^{9}$

## Role for Microcretentitials

Even before the pandemic hit, some rural districts and the organizations that support them, including in Appalachia, were changing their approaches to teacher professional learning. When Kentucky eliminated educator professional learning from its budget in 2014 and districts struggled to support teacher development, KVEC sought to build professional connections between educators and to ground its professional learning in research on how adults learn best-by doing, not by watching or listening. It developed a suite of digital tools in conjunction with in-person professional learning to serve rural educators.

One such tool is microcredentials. A microcredential is not professional development in and of itself, neither is it a course. Like credentials such as degrees or diplomas, it recognizes knowledge and skills acquired, and it typically takes the form of a digital badge that teachers can display in social media accounts like LinkedIn, email signatures, or even in "digital backpacks" designed specifically for collecting and displaying digital badges (figure 2). ${ }^{10}$

Unlike many other credentials, a teaching microcredential verifies that a teacher possesses a discrete skill or competency, which the teacher demonstrates by submitting evidence. Currently, the granularity of the teaching skills that microcredentials cover varies widely-from small and specific ("using wait time effectively") to big and broad (e.g., "culturally responsive pedagogy"). ${ }^{11}$ Demonstration of skills may be via videos,

> Professional isolation can push teachers to move to larger, lessisolated, more wellresourced districts.

Figure 1. A lower percentage of rural schools than of nonrural schools in Oklahoma offer each professional development structure for teachers, 2015-16


ڤ The difference between rural and nonrural schools is significant at $p<.05$.
a. Indicates that a school or district offered any of the following: professional conference, live workshop or seminar, collab, learning activity, formal coaching or mentoring, video-based workshop or seminar, or college or university course. REL 2017-273 (Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest).
student work, lesson plans, written reflection, or any other evidence of professional practice or student outcomes.

And while the microcredential itself is not professional development, earning a high-quality microcredential requires engaging in the kind of professional learning that research supports. Typically, earning a microcredential requires teachers to engage in "action research" by identifying a professional learning need, engaging in study to address that need, trying to implement
the designated skill as part of their practice, and reflecting on the outcomes. KVEC supports this process by helping teachers identify professional learning needs and finding microcredentials and other professional development resources to support those needs. And if a microcredential is not available, KVEC develops it.
"Rather than asking educators to spend their limited time and money traveling great distances for professional learning, we chose to use technology as a tool for overcoming distance,"
wrote Jennifer Carroll and Robert Brown, who lead this work. "We began developing our own personalized, competency-based microcredentials to connect our educators with new opportunities to improve their teaching and advance in their careers."

KVEC's microcredential efforts address other challenges rural teachers face as well. The microcredentials on Digital Promise's microcredential platform, including many that KVEC developed, are either free or low cost—\$25 to \$50—versus the hundreds or thousands of dollars it costs to attend a conference or enroll in a graduate-level course. Many of the supporting resources are provided online as well, so teachers can choose convenient times to engage with them.

Teachers must apply their learning to their work and reflect on outcomes, and this is where microcredentials hold the biggest promise. But to do this efficiently and effectively, teachers need guidance and support. KVEC hosts an online community, "The Holler," for educators to share ideas and questions as they learn and experiment. ${ }^{13}$

KVEC also helps principals develop their capacity to provide instructional leadership through its Activating Catalytic Transformation (ACT) initiative. Teachers, principals, and central office staff collaborate to identify problems of practice that student data points toward and create theories of action and logic models to address those problems. The ACT work sessions often uncover professional learning needs. While some can be met through mentoring, coaching, or networking, some are best suited to what Carroll refers to as "clinical professional learning," including microcredentials. ${ }^{14}$ Because finding time for more work is a challenge in selling things to teachers, it is important that selected microcredentials have "meaning for their context and are focused on things that they would need to be doing anyway," one principal said. ${ }^{15}$ In several districts, principals have encouraged teachers in their school to earn the same microcredential to address a particular problem of practice; in others the approach is more individualized.

## Outcomes

KVEC has influenced teacher professional learning beyond its member districts. In 2019,

Kentucky's Education Professional Standards Board added an option for achieving the second tier of teacher licensure: a district-developed professional learning plan that is informed by data on professional and student needs and incorporates some form of assessment of teachers' success in achieving the plan. The regulations explicitly allow microcredentials to be part of these plans. ${ }^{16}$

While KVEC's approach does not address every professional learning challenge, some evidence suggests it may promote rural education equity. For her doctoral research, Carroll examined two groups of rural Kentucky teachers: 50 who pursued microcredentials and 50 who did not. ${ }^{17}$ Students of teachers who engaged in microcredentialing scored significantly higher on a nationally normed academic progress exam in spring 2019 than did students of teachers who engaged in other forms of professional learning. ${ }^{18}$ The study also showed a statistically significant relationship between educators' positive perceptions of professional learning, as measured by the Learning Forward Standards Assessment Inventory, and their engagement in microcredentialing as compared with teachers who engaged in other forms of professional learning. ${ }^{19}$

As with similar studies of National Board certified teachers, ${ }^{20}$ it is difficult to tell whether these outcomes are only or primarily measuring selection bias (i.e., teachers who are already more effective or motivated are more likely to pursue microcredentials), whether other factors are at play (more instructional-leader or peer support) or whether there is something about KVEC's microcredentialing process itself that is contributing to student outcomes. Nonetheless, it is the case that teachers saw value in the process that they did not see in more traditional development opportunities.

## Ongoing Challenores

As Jennifer Carroll said, "Microcredentials should be one tool in the teacher professional learning toolkit, not the entire toolkit." Microcredentials can provide an impactful learning experience because they encourage educators to curate and reflect on evidence of practice. However, most microcredentials are not now designed primarily to provide intensive

> Teachers must apply their learning to their work and reflect on outcomes, and this is where microcredentials hold the biggest promise.

Figure 2. The Process To Earn a Micro-Credential

- First, understand the micro-credential (MC) ecosystem:


What MCs are Available?
Developers create MCs and make them available online (often via a separate Digital Platform provider)


What Value Does a MC Provide?
Recognizers (e.g., states and employers) determine the market value that a given MC or stack of MCs hold for Earners

- Next, engage in the process:


## SELECTION

Candidate selects a MC to earn from the Digital Platform and reviews the evidence required for demonstrating competency and the rubric describing how submitted evidence will be assessed


## IMPLEMENTATION

Candidate collects evidence of demonstrating competency in practice. Candidate may review the associated MC resources and/or engage in other types of professional development to aid their ability to demonstrate

## FEEDBACK



If the Provider does NOT approve the submission, the Candidate receives feedback on how to improve their submission, and is provided the opportunity to re-submit (often as many times as necessary to earn the MC)



## SUBMISSION

Candidate curates required evidence (e.g., artifacts of learning, practice, and/or impact) and submits through and/or impact) and
the Digital Platform


## ASSESSMENT

Provider-assigned Assessor(s) reviews evidence using the provided rubric and recommends whether the Candidate meets requirements for earning


## EARNING!

If the Provider approves the submission, the Candidate earns the MC, and receives some representation of the credential as proof via the Digital Platform (often in the form of a digital badge) from the Issuer
training in a particular competency. As such, districts and even individual teachers often still need other supports. ${ }^{21}$

With COVID-19 squeezing school finances everywhere, funding for high-quality professional learning will likely remain an issue for some time. While access to microcredentials is generally free or affordable now, it is unclear whether the philanthropic and competitive grant funding that make that affordability possible will continue. Anecdotal evidence from microcredentials' implementation, combined with prior research on the characteristics of impactful professional development, underscore teachers' need for feedback and coaching throughout the microcredential process. Such coaching can be scarce, particularly in rural schools. A few microcredential providers include virtual coaching either as a standard or add-on feature, but that raises its cost. ${ }^{22}$

While online professional learning may address barriers to physical access that many teachers across Appalachia and other rural areas face, it presents a new set of challenges around digital equity. Appalachia as a whole is less connected to the internet than the general U.S. population. In 2018, the Appalachian Regional Commission reported 75.1 percent of residents in the region had broadband at home, compared with 80.4 percent nationally and 67 percent in the least connected areas of the region, primarily in central Appalachia. ${ }^{23}$

A national Pew Research Center survey conducted the same year found that roughly six in ten rural residents see internet speeds in their community as a problem. ${ }^{24}$ Speed and reliability may be particularly salient challenges for teachers who rely on the internet at community centers or public libraries, which often have slower speeds to accommodate multiple users, or for those at home needing to stream video or access large files as professional learning resources while accommodating family members who are online simultaneously-an increasing challenge in the age of COVID-19. Internet connection is not the only challenge. Device access and digital literacy are key factors in rural residents' ability to take full advantage of online professional learning. In fact, having devices available and the ability to use them matter just as much as the speed and quality of connection. ${ }^{25}$ The gap between those
with and without the skills to maneuver online programs, platforms, and software-commonly called the "new digital divide"-includes disproportionately high percentages of rural and low-income residents.

Additionally, having reliable access to a personal computer-not just a smart phone or a tablet and not a device shared with othersmakes it much easier to meet the demands of online professional learning. Yet rural users are more likely to have access to the internet only via a mobile device. ${ }^{26}$

KVEC and other providers are cleareyed that microcredentials will not produce results different from "sit-and-get" professional development just by virtue of being asynchronous and virtual. Carroll emphasizes the importance of microcredentials not becoming "the tail wagging the dog." ${ }^{27}$ For this reason, KVEC describes its work as helping to "create systems of personalized, competency-based professional learning, which include microcredentials," rather than as a set of microcredentials that sum to personalized, competency-based professional learning. Thus the biggest challenge may be in communicating the value of tools like microcredentials without overselling them as a silver bullet.

## Considerations for State Boards

KVEC recognizes that rural districts and schools need professional learning to serve their students well, and they need educators to feel connected and supported in order to attract and retain them. KVEC is not alone in this work. Improving Curriculum serves a primarily Iowan constituency, and Center for Teaching Quality helps districts across the country think differently about professional learning-not as a box to check but an opportunity to transform school culture. Ultimately, high-functioning systems ensure that teachers can practice new skills and receive feedback, using technology and tools that have become more cost-effective and efficient.

To promote high-quality, technologysupported professional learning for educators in rural districts, state boards of education can take on these tasks:

- Work with regional educational service agencies (RESAs) and other local education organizations to promote and support the

> Ensure that state board guidance and policies cite microcredentials as an acceptable use of professional learning funds.
development of virtual professional learning communities that include affinity groups for specific specializations, such as special education, to minimize professional isolation.
$\square$ Share information with RESAs, districts, and schools on what high-quality professional learning entails and how they can affect teacher satisfaction and retention, as well as student engagement and other outcomes.
$\square$ Encourage RESAs, districts, and schools to revisit the use of in-service professional development days to reflect best practices in professional learning, and provide resources to help them experiment with creating more consistent opportunities for teachers, independently and collaboratively. ${ }^{28}$
$\square$ Ensure that state board guidance and policies explicitly cite the submission and earning of high-quality microcredentials as an acceptable use of district and state professional learning funds when they are part of a comprehensive professional learning plan, and ensure that state funds are made available for these purposes.

■ Revisit state license renewal policies to allow completion of high-quality microcredentials aligned with individual needs for professional growth, to count them toward professional learning requirements, and to give them greater weight than professional development with less potential for effectiveness.
$\square$ Turn to state broadband commissions, regional networks, community-based groups, and school leaders to identify the unique infrastructure, connectivity, and device needs in schools, and help districts identify available resources to meet those needs.

While federal programs such as E-Rate have not yet been extended to better serve students and teachers off campus, states might consider reallocating funds that were previously used for in-person activities to provide broadband and devices to educators in need, such as through the distribution of wireless hotspots or personal device rentals.

[^0]https://www.tandfonline.com/doi/full/10.1080/00131911.2 019.1705247; Pia Peltola et al., "Opportunities for Teacher Professional Development in Oklahoma Rural and Nonrural Schools," REL 2017-273 (Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest, 2017).
${ }^{2}$ The Appalachian Region as a whole includes all of West Virginia and parts of 12 other states.
${ }^{3}$ Kevin Pollard and Linda A. Jacobsen, "The Appalachian Region: A Data Overview from the 2014-2018 American Community Survey: Chartbook" (Appalachian Regional Commission, June 2020), https://www.arc.gov/wp-content/ uploads/2020/08/DataOverviewfrom2014to2018ACS.pdf.
${ }^{4}$ Phone conversation with James Beeler, senior director, College Access Partnerships, Appalachian State University, August 20, 2020.
${ }^{5}$ Peltola et al., "Teacher Professional Development in Oklahoma"; Melissa Tooley, "What Does High-Quality Research Say about Developing Teacher Practice?" blog (Washington, DC: New America, March 16, 2017).
${ }^{6}$ Madeline Will, "Low Pay and High Risk: Being a Substitute Teacher during COVID-19," Education Week, August 10, 2020.
${ }^{7}$ Melissa Tooley, "From Frenzied to Focused: How School Staffing Models Can Support Principals as Instructional Leaders" (Washington, DC: New America, June 2017).
${ }^{8}$ Megan Lavalley, "Out of the Loop" (Alexandria, VA: Center for Public Education, National School Boards Association, January 2018).
${ }^{9}$ Aimee Howley and Craig B. Howley, "High-Quality Teaching: Providing for Rural Teachers' Professional Development," Rural Educator 26, no. 2 (Winter 2005).
${ }^{10}$ Michael B. Horn, "Taming the Wild West of Digital Badges and Credentials," Forbes, October 12, 2017.
${ }^{11}$ Melissa Tooley, "Teacher Microcredentials: State Considerations for Professional Development and License Renewal," blog (Washington, DC: New America, June 11, 2019).
${ }^{12}$ Jennifer Carroll and Robert Brown, "This District Uses Microcredentials to Boost PL," eSchool News, January 23, 2020.
${ }^{13}$ For example, see https://www.theholler.org/hollers/ act-activating-catalytic-transformation/.
${ }^{14}$ Phone interview with Jennifer Carroll and Robert Brown, Kentucky Valley Education Cooperative, April 17, 2019.
${ }^{15}$ Conversation with Anna Prince, principal, Louisa East Elementary, Lawrence County Schools, Kentucky, June 18, 2019.
${ }^{16}$ Education Professional Standards Board, Continuing Education Option, Plan II Guidelines, approved August 20, 2019, http://www.epsb.ky.gov/pluginfile.php/618/mod_page/ content/6/CEO\%20Plan\%20II\%20Guidelines.pdf.
${ }^{17}$ Because teachers generally elected to participate in microcredentials, this study was not a randomized control trial.
${ }^{18}$ The Northwest Evaluation Association's Measures of Academic Progress interim assessment was used.
${ }^{19}$ There was not a statistically significant relationship between microcredentialing for professional learning and educator professional practice ratings on the Kentucky Framework for Teaching (2017).
${ }^{20}$ Dan Goldhaber and Emily Anthony, "Can Teacher Quality Be Effectively Assessed? National Board Certification as a Signal of Effective Teaching" (Washington, DC: The Urban Institute, 2005); James Cowan and Dan Goldhaber, "National Board Certification and Teacher Effectiveness: Evidence from Washington State," Journal of Research on Educational


## Colorado's Network for Local Accountability

In Colorado, a grassroots accountability and continuous improvement network is uniting far-flung rural school districts—with members as many as 400 miles apart-in a collaborative effort to address the unique needs of Colorado's rural students.

As in other states, Colorado rural districts must deal with funding disparities, isolation, education policies driven by urban voices, and small enrollments, which, when coupled with lower perpupil revenues, result in tight district budgets and make it hard to offer equitable opportunity for all students. For example, counselors, social workers, psychologists, and special education services are most often shared across multiple rural school districts through a Board of Cooperative Educational Services (BOCES). In one Colorado BOCES, staff are shared across 10,000 square miles and 13 districts. It is also challenging for districts to offer a wide range of advanced courses, electives, and work-based learning opportunities to rural students.

When it comes to accountability, small rural school districts face issues related to small sample size, or $n$-size, where each individual student's score gets significantly more weight due to a lower overall number of test takers when compared with large school districts. In numerous categories, small districts and schools receive an effective "no score" due to an n-size of less than 16. Over time, this n-size problem has resulted in rural districts with similar scores receiving different ratings for reasons difficult to uncover.

Another issue for rural Colorado schools-and one that can serve as an early warning system for larger districtsis difficulty in hiring teachers, which is exacerbated by state teacher preparation programs currently graduating half the needed supply each year. ${ }^{1}$ The situation in rural Colorado is particularly acute (see also article, page 29). And if that were not enough, funding for education in Colorado is among the worst in the nation, behind Mississippi, Louisiana, and New Mexico, which post the nation's highest poverty rates. ${ }^{2}$ Colorado schools

A network of rural peers help districts design meaningful, timely, community-connected accountability.

## Kirk Banghart

currently have over $\$ 14$ billion in infrastructure needs. And in response to budget reductions and to attract and retain teachers, more than 100 districts across the state, predominantly rural ones, had already moved to a four-day school week before the pandemic began. ${ }^{3}$

Consequently, rural students are not receiving sufficient support, including in their social and emotional learning, which has been shown to boost academic scores and high school graduation rates. ${ }^{4}$ Colorado has one of the highest youth suicide rates in the country, and it is the leading cause of death in the 10 - to 24 -year old age group. ${ }^{5}$ Yet the current state accountability system, as in most other states, does not encompass the need for monitoring and reporting on the needs of the whole child.

## Collaborative Problem Solving

Spurred by their desire to make state accountability more relevant to local stakeholders and actionable for them as district leaders, a group of rural superintendents came together in 2015 to create a peer-driven accountability system. "To collect and communicate this comprehensive look at students, we needed to look at the district system overall, through a variety of tools, by being onsite, and then supporting the district to adjust priorities to continually improve," said Lisa Yates, superintendent in the Buena Vista School District.

What started with a commitment by 15 rural superintendents and advocacy organizations at an annual gathering of school executives developed into a robust network improvement community called S-CAP. It is supported by a research-practice partnership that includes a national nonprofit, Battelle for Kids; a state organization, Colorado Rural Education Collaborative supported by Generation Schools Network; and the University of Colorado's Center for Practice Engaged Education Research, along with technology partners and local, state, and national funders.

The S-CAP partners coalesced around a shared commitment to expand the state accountability system to reflect multiple measures in evaluating student learning. S-CAP districts and partners work together to measure, reflect on, and communicate growth of the whole child in a meaningful, localized way. The program has three main components:
$\square$ evidence-based accountability and improvement rubrics and tools centered on the mastery of rigorous academic content as well as deeper learning dispositions that consider the whole child;
$\square$ a peer-based annual Systems Support Review (SSR) process guided by survey and academic data and rubrics to assess quality indicators in learning climate, curriculum and instruction, professional learning, and leadership and vision; and
$\square$ a superintendent-led networked improvement community to use SSR findings for continuous improvement.
Four values drive the work: 1) emphasize every student and the whole student, 2) accountability means continuous improvement, 3 ) what gets measured and reported gets done, and 4) accountability impact increases with local stakeholder investment.

## Rural Districts and Their Relationship to Accountability

Over the past two decades, state and federal governments have moved toward tighter district and school accountability for student outcomes. Under the Every Student Succeeds Act (ESSA), state boards of education, along with state education agencies, shoulder much of the weight for successful implementation. Yet in Colorado, some educators-particularly rural ones-have found that the statewide system does not always address the local context well.
In Colorado, 17 out of 20 school districts are classified as rural, 70 percent of which are classified as small rural (with district enrollments of less than 1,000 students). ${ }^{6}$ Yet they serve only 15 percent of Colorado's preK-12 population. These districts, as well as the state's charters and alternative schools, have struggled to leverage the state accountability system as designed to guide their efforts to continuously improve. The state's summative assessment, Colorado Measures of Academic Success, largely determines state K-12 accountability ratings.

The state legislature passed a bill to create Local Accountability System Grants in 2019, and the Colorado State Board of Education awarded $\$ 450,000$ in grants in spring 2020. Grantees applied to support innovative efforts that do
not subvert the state's ESSA plan but rather add meaning for the local school context. The applicants could select from among three options for improving accountability: 1) using multiple measures to evaluate student success, including nonacademic measures, 2) assessing a school system's ability to support student success, and 3) applying measures of student success to continuous improvement efforts.

The Student-Centered Accountability Program (S-CAP), a grassroots accountability and continuous improvement network driven by a geographically diverse group of rural district leaders, received one of the grants. Created in 2015, S-CAP was also a source of inspiration for the legislation that created the grant program. Its lessons learned may also help state boards nationwide as they grapple with how to make accountability relevant amidst COVID realities and how to better serve small, remote districts and school settings that serve nontraditional student populations with small n-sizes.

## System Support Reviews

Staff and administrators from participating districts meet to conduct the onsite reviews in each district. Participants use data collection tools developed by S-CAP partners and member districts to collect data, then work together at the end of the SSR to develop a "summary of findings" that the host district can use to inform their improvement planning, professional development, and stakeholder communication. Data sources for the review include classroom observations, staff and student focus groups, online staff and student surveys, and data and document review. S-CAP peer reviewers use these multiple measures of student success to structure their feedback and explore results beyond a single state test score, including additional academic measures and learning disposition measures.

Not only do the results of the SSR provide the host district with actionable feedback, but the SSR process benefits participating reviewers, who are able to network and form relationships with educators from other rural districts and bring back successful strategies identified through observation and analysis to their own districts. SSRs uncover system weaknesses and highlight strengths to provide district leaders the information they need to build strategic plans for
continuous improvement. With both comprehensive student success data and feedback from on-site reviews, district leadership, local school boards, and stakeholders are better equipped to support local efforts and invest in student success.
"This is the most impactful work I have done in all of my years in education," said Rob Sanders, superintendent of the Buffalo-Merino School District.

Opening your district and schools to visits from other districts can be intimidating. Yet a strong sense of trust has been built among the superintendents and staff to the point that they now welcome the SSRs and the opportunity to learn from one another throughout the year in ways that go well beyond their review. Participating superintendents have said that the changes they have made in response to SSRs would not have surfaced as priorities with the statewide School and District Performance Frameworks alone.

A Colorado Education Initiative review of the program suggests that the SSR process offers a viable supplement to state accountability. Participating district staff largely embrace participating in SSRs and are not afraid of what the process will reveal. District leaders look forward to hosting SSRs and consider the review process a valuable professional development experience for staff. The program review revealed other benefits as well:
$\square$ Superintendents said SSRs help them better understand the root causes of their challenges, develop strategies to address them, and align resources.

- Superintendents and staff said peer feedback often validates their own assessments of strengths and challenges, pushes their thinking, and elevates issues sooner than they might have been without the reviews.
$\square$ Peer reviewers report they gain instructional ideas, particularly around deeper learning, from observing and talking with other educators on their review teams.
$\square$ SSR findings help board members, parents, and community members engage in the accountability process in authentic, meaningful, and positive ways. ${ }^{7}$
"Our district had been complacent at 'pretty good' for many years," said Darcy Garretson, superintendent of the Haxton School District.

> Superintendents and staff said peer feedback often validates their own assessments, pushes their thinking, and elevates issues sooner.
"I wanted to help parents see what we do, why, and get their feedback."

## COVID-19 Response

When schools across the nation abruptly closed to in-person learning in an attempt to slow the spread of the novel coronavirus in spring 2020, educators responded in unprecedented ways. Not only were they challenged to provide alternative instruction, they were also asked to help ensure food security and internet access for their students and to train staff to deliver instruction remotely. Among the many repercussions of this crisis, traditional accountability systems were suspended. Because student learning dramatically shifted and testing accuracy could not be ensured, most states elected to forgo the state testing that feeds their accountability systems. In Colorado, this meant no CMAS testing in 2020, causing a delay in school and district ratings. ${ }^{8}$

For S-CAP member districts, the crisis also provided an opportunity to put their accountability system to the test. Through the S-CAP network improvement community, leaders were able to swiftly reallocate funds earmarked for transportation to provide wireless hotspots for families and transition commencement ceremonies to socially distant formats. Rather than problem solving alone, they did so together in a divide and conquer fashion. Through their SSRs and S-CAP reporting websites, they were able to pivot, holding onto their improvement priorities and supporting staff in staying the course, even in an online environment.

At a time when traditional accountability systems have ground to a halt, S-CAP is providing communication to stakeholders, a network for leaders, and-most important-high-quality support for students. Using supplemental information provided by SSRs (which can be conducted virtually), it continues to provide authentic accountability to local stakeholders.

## A Viable Means to Augment Statewide Accountability?

For state board members nationwide, the work of S-CAP can inform and benefit your state accountability systems in these ways: 1) modeling how peer review provides an efficient, effective supplement to accountability
and continuous improvement; 2) identifying additional accountability performance reporting measures that inform small districts and their community stakeholders despite a small n -size; and 3) demonstrating strategies for increasing local stakeholder investment in school accountability.

A superintendent in a S-CAP district summed up the benefits. "The process of the System Support Review at Kit Carson is making the big picture clearer to me and my team," said Superintendent Robert Framel of Kit Carson School District. "The SSR has made my life a lot more focused. From the review, the Board of Education and I have been able to focus and realign our district priorities.... This process does involve hard work, but everything we have learned is guiding our next steps. It is making our steps more natural and less fragmented. And it is making some of my responsibilities as a leader much easier and definitely more efficient. This has allowed the teachers and staff to provide critical input and self-reflection. I encourage everyone to take a serious look at S-CAP and the value that it has."
${ }^{1}$ Cynthia Cole, "Teacher Shortages across the Nation and Colorado: Similar Issues, Varying Magnitudes" (Denver: Colorado Department of Higher Education, December 2017).
${ }^{2}$ "Education Spending Per Student Per State," Governing, https://www.governing.com/gov-data/education-data/state-education-spending-per-pupil-data.html.
${ }^{3}$ Jennifer Oldham, "In a Booming State, Public Schools Grapple with Asbestos, Leaks, and Four-Day Weeks," The Washington Post, March 7, 2019.
${ }^{4}$ John Payton et al., "The Positive Impact of Social and Emotional Learning for Kindergarten to Eighth-Grade Students: Findings from Three Scientific Reviews" (Chicago: Collaborative for Academic, Social, and Emotional Learning, 2008).
${ }^{5}$ Colorado State Office of Suicide Prevention, Colorado Department of Public Health \& Environment, "Office of Suicide Prevention Annual Report 2016-2017," 2017. In June 2015, the Colorado State Board of Education unanimously endorsed the work of the S-CAP districts. In spring 2019, legislation was passed (SB 19-204) that created the Public School Local Accountability Systems Grant, influenced by the work of S-CAP districts. Additionally, elements of the S-CAP model are being considered as a way to fulfill a provision of ESSA funding that requires struggling schools to visit high-performing schools.
${ }^{6}$ Colorado Department of Education, "Colorado Education Facts and Figures," web page 2020, https://www.cde.state. co.us/communications/coeducationfactsandfigures.
${ }^{7}$ Elliott Asp and Rebecca Holmes, "A Grass Roots Approach to Rethinking Accountability" (Colorado Education Initiative, February 28, 2018).
${ }^{8}$ Adjustments are being made to ensure that S-CAP can continue to function as an accountability system during COVID and without the state test by using local formative and summative assessments.


## Teacher Recruitment and Retention in Rural Colorado

In Colorado, where higher education institutions are not graduating enough candidates to fill open teaching jobs, particularly in specializations such as math, several initiatives are working to
improve rural teacher recruitment and retention. ${ }^{1}$ Through scholarships, state university partnerships, a multidistrict professional learning community, and strategies for cultivating mentorship,

Rural districts band together, with help from partners and grants, to attract and keep teaching staff.

Kirk Banghart
some rural Colorado districts are increasing teachers' enthusiasm for the profession, which keeps them from leaving.

The need for support in retaining teachers is a pressing one in rural Colorado. While public school districts in Colorado overall had a teacher turnover rate of 15.78 percent from 2018-19 to 2019-20, rural school districts reported 17.85 percent turnover. ${ }^{2}$ For the 107 Colorado districts designated as "small rural" (with enrollments of less than 1,000 ), that figure was 18.1 percent. $^{3}$

Shortages in hard-to-fill subjects like math and science have become chronic nationally. In 2018, nearly 90 percent of states reported math teacher shortages, and over 80 percent of states reported science teacher shortages. ${ }^{4}$ Nationally, new teachers have high rates of attrition, with 17 percent of beginning teachers leaving the field within their first five years. ${ }^{5}$ Shortages vary greatly depending on school and district contexts, with Title I schools reporting rates of math and science teacher turnover nearly 70 percent greater than non-Title I schools. ${ }^{6}$ Additionally, schools with high proportions of low-income students and students of color report higher rates of novice teachers and teachers with less preparation.

Teacher turnover impairs student performance, as does having less-experienced teachers without subject-matter expertise. ${ }^{7}$ High schoolwide turnover rates can also harm students, even if they are in classrooms without teacher attrition, because of the effect on the sense of community and the accumulation of institutional knowledge. ${ }^{8}$

Furthermore, turnover is expensive. One study found that, depending on the district, turnover costs per teacher ranged from \$4,366 to $\$ 17,872 .{ }^{9}$ Thus state boards of education will want to consider how they can increase the number of long-term teachers with subjectmatter expertise who are well prepared to deliver high-quality instruction.

The issues of retaining teachers and recruiting high-quality teacher candidates are deeply intertwined. While teacher recruitment can be a challenge in any context, filling open positions can be even more difficult in rural districts due to limitations in the ability to offer a supportive network of colleagues in job-alike roles, limited access to professional development, and
less competitive salaries. Due to their reduced visibility, rural districts located farther from colleges with educator preparation programs may have difficulty competing with urban and suburban districts for newly graduated teacher candidates. Individuals in rural areas who are interested in teaching may choose not to enter prep programs due to their physical distance.

Given the drop in prep program enrollment and the fact that half of their teachers are licensed out of state, Colorado districts in recent years have brought retired teachers back to teach part time, made use of J1 visa provisions, and employed "grow your own" strategies. ${ }^{10}$ And a handful of districts have banded together, with support from the Colorado Rural Education Collaborative and other partners, to experiment with innovative ways to recruit and retain teachers. These programs have seen promising results.

## Concurrent Enrollment

For many students in rural schools far from a college or community college, concurrent enrollment represents the best opportunity to attain college credit while in high school. ${ }^{11}$ In 2015, the Colorado Department of Education began requiring that high school teachers of concurrent enrollment courses complete either a master's degree in the specialty in which they were teaching or 18 graduate-level credit hours within that specialty along with a master's degree from any discipline. As a result, six rural districts in southeastern Colorado were in danger of losing up to half of their concurrent enrollment offerings-and likely teachers as well. Of the districts' combined student populations, 72 percent qualified for free or reducedprice lunch, and 56 percent were minority students. The schools had been collectively offering 82 courses per year with a 98 percent pass rate, and thus they were contributing to closing the state's equity gap around degree attainment for students of color. ${ }^{12}$
In response, the Generation Schools Network, through the Colorado Rural Education Collaborative, secured a $\$ 210,000$ Title II grant to recruit and retain teachers in these districts' high schools. Colorado State University-Global Campus provided scholarships to help teachers obtain master's degrees or certificates signifying they had earned the required 18 graduate credit
hours, allowing them to become adjunct faculty members at a local college and teach concurrent enrollment classes.

By 2017, the effort had increased the number of students participating in concurrent enrollment from 243 to 485 , as expected. It also enabled six teachers to earn master's degrees and five to receive certificates. All but one, who transferred to another nearby rural district, remained in their districts for the next three years. ${ }^{13}$

## Rural Immersion

In a parallel effort that also benefited from a Title II grant, 13 adjacent rural south-central districts in Colorado leveraged scholarships and a teacher immersion program to combat a 20 percent teacher turnover rate. With Colorado State University-Pueblo as their higher education partner, the districts rolled out a model, previously tested in Alaska, ${ }^{14}$ in which bonds that are developed between teacher candidates and the rural communities that want to hire and retain them serve as a critical factor in a teacher's decision to live and work there.

Under the program, 12 to 15 teacher candidates visited classrooms in a rural community over three or four days, connecting with school leadership, teachers, students, and families. A community service project allowed them to deepen connections with the local community. They received individual coaching from university staff on how to finish or add to their teaching credentials and scholarships. The grant enabled the districts to create a professional hiring guide, complete with marketing pieces and a shared brand identity, and a shared job board that reached more than 100 colleges and universities. The program saw promising results. By the end of the year and a half grant period, the rural districts had hired a third of the candidates who had participated in the program.

## Hard-to-Fill Subjects

A subsequent effort in the same south-central districts sought to reduce math teacher shortages and improve math instructional quality. In addition to scholarships, teacher candidates and novice teachers were invited to join a multidistrict professional learning community supported by a stipend, immersion experiences, and a Math Summer Institute.

A 2016 survey of the districts had reported existing or upcoming vacancies in half of all math and science teaching positions. Interim and state assessment results also suggested that half of the staff needed to improve instructional quality. The two data points are related. Turnover and low teaching quality are often interconnected: Teachers who feel less prepared to lead a classroom are three times more likely to leave the profession than colleagues who feel better prepared, while novice teachers who participate in teacher induction programs are two times less likely to leave teaching. ${ }^{15}$

Addressing quality would be critical for retaining teachers in the south-central districts, yet most of them lacked resources to provide strong teacher induction. A meta-analysis by Richard Ingersoll and Michael Strong found that induction activities are correlated with higher student academic achievement scores. ${ }^{16}$ Thus an important component of the grant-supported effort cultivated math teachers to serve as mentors for the 25 participating novice and preservice teachers.

The program appears to have increased teachers' subject knowledge. Pre- and post-testing on the Learning Mathematics for Teaching assessment indicated a statistically significant increase in the mathematical knowledge of secondary teachers on the geometry assessment. Survey data also yielded positive results. Attendees at the summer math institute indicated that their content knowledge was higher at the end of the institute than at the beginning, and 90 percent indicated that their confidence and capacity to take on leadership roles increased after participating in the grant activities. Overall, 84 percent of professional learning community participants found these activities "useful" or "very useful" for reducing teacher isolation. And 91 percent planned to continue teaching in the upcoming school year. The only participants leaving the profession were planning to retire.
"My confidence in teaching math to my own students has increased," reported one earlycareer elementary teacher. "I had difficulty with that my first year. I could not explain things very well, I didn't ask enough questions to guide my students thinking, and I wasn't sure how to provide that extra level of thinking to my students. Now I have lots of ideas and have put them to use, even during the distance learning

> Teachers who feel less prepared to lead a classroom are three times more likely to leave the profession.

> Rural districts must establish and continue to nurture relationships with educator preparation programs.

Kirk Banghart is chief facilitator at the Colorado Rural Education Collaborative.
we are doing currently. And my students are successful...I really believe it is because I have acquired these new skills." ${ }^{17}$

An additional round of collaboration, partnership, and funding has expanded this work to serve 65 math and special education teachers in rural districts across Colorado. While the grant program is ongoing and thus has not produced final results for analysis, the program's framework may help state boards looking for innovative strategies to solve teacher recruitment and retention issues in their state.

## Lessons Learned

Programs used to recruit and retain teachers in Colorado's rural districts may provide a promising roadmap for other states as well. The programs taken together yield several key takeaways:

■ Rural districts must establish and continue to nurture relationships with educator preparation programs.

■ Offering scholarships to teachers to complete coursework toward licensure or endorsement can increase teacher qualifications and longevity. Providing scholarships in a cohort model improves completion rates on certificates or degree programs.
■ Activities that increased candidates' exposure to rural teaching opportunities correlated with successful recruitment.

■ Backbone intermediaries and regional service centers, coupled with a university partner, provide the critical support needed to acquire grants and implement them.
■ Without support and funding by the state legislature, boards of education, and institutions of higher education, these efforts would not have taken place.

While the challenges of teacher recruitment, well-being, instructional quality, and retention are likely to be ongoing, outcomes from the work in Colorado suggest grounds for optimism:
Removing barriers to additional education and empowering teachers with content knowledge and pedagogy training in a peer community can encourage them to remain in teaching.

[^1]Colorado Department of Higher Education, December 2017), 13.
${ }^{2}$ Colorado Department of Education, "School/District Staff Statistics," https://www.cde.state.co.us/cdereval/staffcurrent.
${ }^{3}$ Kelly Latterman and Sarah Steffes, "Tackling Teacher and Principal Shortages in Rural Areas," NCLS LegisBrief 25, no. 40 (2017); Colorado Department of Education, "Rural and Small Rural Designation," table, https://www.cde.state.co.us/ ruraledcouncil/ruraldesignationlist.
${ }^{4}$ Kaitlin Pennington McVey and Justin Trinidad, "Nuance in the Noise: The Complex Reality of Teacher Shortages" (Washington, DC: Bellwether Education Partners, 2019), 24.
${ }^{5}$ Lucinda Gray and Soheyla Taie, "Public School Teacher Attrition and Mobility in the First Five Years: Results from the First through Fifth Waves of the 2007-08 Beginning Teacher Longitudinal Study" (Washington, DC: U.S. Department of Education, National Center for Education Statistics, 2015), 3.
${ }^{6}$ Desiree Carver-Thomas and Linda Darling-Hammond,
"Teacher Turnover: Why It Matters and What We Can Do about It" (Palo Alto, CA: Learning Policy Institute, 2017), 13-14.
${ }^{7}$ Colorado Department of Education, "Teacher Shortage Fact Sheet," web page, 2017, https://www.cde.state.co.us/ educatortalent/teachershortage2017.
${ }^{8}$ Matthew Ronfeldt, Susanna Loeb, and James Wyckoff,
"How Teacher Turnover Harms Student Achievement" (Washington, DC: American Institutes for Research, 2012).
${ }^{9}$ Gary Barnes, Edward Crowe, and Benjamin Schaefer, "The Cost of Teacher Turnover in Five Districts: A Pilot Study" (National Commission on Teaching and America's Future, 2007), 4-5, https://files.eric.ed.gov/fulltext/ED497176.pdf.
${ }^{10}$ Cole, "Teacher Shortages across the Nation and Colorado."
${ }^{11}$ Concurrent enrollment is an opportunity for high school students to receive college credit for taking a college-level course taught by a qualified high school teacher at their high school, using curriculum from a partnering institute of higher education.
${ }^{12}$ Colorado Department of Higher Education, "Colorado Rises: Maximizing Value for Students and Our State," CRS 23-1-135 (July 30, 2019).
${ }^{13}$ The full report with lessons learned can be found here: https://drive.google.com/file/d/1HkRg4Com7N-TFcM2DMLaxdVDSJdGjXqz/view.
${ }^{14}$ Colin Boylan and Ted Munsch, "The Impact of an Immersion Experience in Alaskan Native Community Cultural Life on Preservice Teachers," Education in Rural Australia 17, no. 1 (2018), https://apo.org.au/node/167531.
${ }^{15}$ Cole, "Teacher Shortages across the Nation and Colorado."
${ }^{16}$ Richard Ingersoll and Michael Strong, "The Impact of Induction and Mentoring Programs for Beginning Teachers: A Critical Review of the Research," Review of Educational Research 81, no. 2 (June 2011): 201-33, https://doi. org/10.3102/0034654311403323.
${ }^{17}$ Generation Schools Network, "Math Teacher Recruitment and Retention Efforts: Signs of Success in Rural Colorado" (Colorado Rural Education Collaborative, 2020).


## Identifying Risks to the Well-Being of Rural Young Children and Families

Rural places are defined by their connectedness-close-knit, supportive communities that work together to meet the needs of children and families. But geographic isolation is another defining feature of rural places, one that often renders rural families invisible to nonrural Americans. Indeed, national conversations about the COVID-19 pandemic
often overlook the nearly 7.5 million rural children in the United States. From food and housing insecurity and critical shortages in child care options to underreporting of child maltreatment and continued inadequate access to healthcare, the well-being of rural children and their families is particularly at risk as the pandemic continues.

The pandemic compounded an array of preexisting health and wellness challenges in many communities.

## Sara L. Hartman

Given these extraordinary challenges, the needs of rural children should be at the forefront of the national conversation, and the need to mitigate the pandemic's effects in rural areas should drive policy decisions and relief efforts. Increasing access to services that promote the well-being of rural young children and their families is of paramount importance.

Sometimes precautions to limit the virus's spread and strategies to address rural families' challenges seem at odds. Stay-at-home orders and social distancing curb the spread of COVID-19 and protect high-risk populations, yet they also increase the isolation of many rural families. With increased isolation and school closures, rural children and their families lose access to teachers, social workers, and other support systems.

Balancing the need to prevent the spread of COVID-19 and the need to keep rural children and families connected to essential services is at the heart of the challenges local and state officials face. Compounding this dilemma is the troubling message that the virus is not spreading in rural areas. In mid-November, 80 percent of U.S. rural counties were in the red zone, indicating a high level of infection and community spread. ${ }^{1}$ To address these challenges, developing and implementing innovative models that increase services to rural children and families should be a priority for state boards of education.

## Early Learning and Child Care

For rural families, the pandemic exacerbates the already-challenging issue of accessing early learning settings and child care, both for schoolaged and younger children. Child care desertsdefined as "any census tract with more than 50 children under age 5 that contains either no child care providers or so few options that there are more than three times as many children as licensed child care slots"-are found in 58 percent of rural areas. ${ }^{2}$

Medical experts recommend that older adults limit interactions that could expose them to COVID-19, yet rural families frequently rely on older family members to help with child care. Although the multigenerational makeup of rural families is a special strength of rural communities, it brings with it added risk and potentially
devastating consequences for rural children's social and emotional well-being during the pandemic. ${ }^{3}$ Child psychologists warn of expected trauma children will experience with the loss of loved ones to COVID-19.4

Even under normal circumstances, rural families drive long distances to access dependable and quality child care, sometimes requiring multiple providers due to a lack of available slots. Since the start of the pandemic, many rural early learning centers have closed or remain at limited capacity due to social distancing protocols. Consequently, new child care deserts have developed. Also of concern, the cost of child care already represents a larger percentage of rural families' spending than for families in nonrural settings, ${ }^{5}$ a situation further exacerbated by the disproportionate impact of economic downturn on rural areas due to the pandemic.

Some rural communities are pursuing community partnerships to address child care deserts during the pandemic. For example, the Maine community of Chelsea is partnering with a local Boys and Girls club to provide additional afterschool child care for rural families. ${ }^{6}$ The partnership provides an innovative model for rural communities elsewhere.

## Public School Settings

When the pandemic began, rural public school systems across the United States jumped into action. Virtual platforms enabled teachers to meet children in person and to prepare meaningful, play-based content for in-person and asynchronous activities. Indeed, early childhood teachers have innovated in their virtual efforts. Yet despite the promise of virtual settings, a host of issues impede these efforts in rural areas.
Inadequate broadband access, a persistent problem in rural areas despite calls from multiple stakeholders to address it, plagues rural schools in particular (see also article, page 12). An estimated 9.7 million children nationwide do not have access to reliable internet in their homes. ${ }^{7}$ Many rural schools purchased hotspots for families that had no internet service, but hotspot delivery has frequently been delayed during the pandemic. Even when hotspots are available and delivered to rural families, there often is not cellular service sufficient to
make them functional. ${ }^{8}$ Also frustrating, some hotspots with unlimited data plans still throttle service speed after a certain amount of data has been used, further degrading rural students' ability to engage in online school. Some rural schools partner with public libraries or local businesses to create hotspot parking lots for families without internet, ${ }^{9}$ but asking families to drive to parking lots so their children can attend school is an inequitable solution.

Rural school districts also face added challenges in providing services virtually to children with disabilities and meals to children who experience food insecurity, especially in districts that cover large areas. Rural children already experience food insecurity at higher rates than nonrural children, and the pandemic has worsened this disparity. In response, some rural districts deliver meals on school buses. ${ }^{10}$ Yet the number of children receiving lunch is often still less than when children are attending school in person. ${ }^{11}$ For schools that continue virtual schooling, focused efforts to identify and serve more children are needed.

Given these challenges, many rural districts are choosing to return to face-to-face in-person school in either hybrid or fully present models. While the shift back to in-person schooling will lessen some problems facing rural children, it may heighten other risks. The U.S. Centers for Disease Control and Prevention (CDC) suggests that in-person schooling will speed the spread of the virus, bringing increased risks to rural communities, further school closings, and increased school uncertainty. ${ }^{12}$ Several health and safety practices for rural schools that return to in-person school should be followed. To start, social distancing measures should be carefully planned, and supports for comprehensive contact tracing should be established. Additionally, to protect the health of teachers, children, and other school personnel, the wearing of face masks should be expected and enforced. The CDC recommends that children over the age of 2 are capable of wearing a face covering. ${ }^{13}$ Given pushback regarding mask wearing in some rural areas, state boards must extend their considerable influence to support these measures. ${ }^{14}$

Innovative instructional models should also be pursued. Schools should consider creating take-home supply packs that permit hands-on
experiences to continue during virtual schooling. School-based pickup for supplies may be challenging for some rural families, but busing systems may be used to efficiently deliver supplies. In rural southeastern Ohio, schools are partnering with the Ohio Valley Museum of Discovery and Community Food Initiatives to provide STEAM (STEM + Arts/Humanities) packs for rural children. ${ }^{15}$ This partnership provides a scalable model for other rural schools.
In lieu of bringing all children back for face-to-face schooling, some rural schools are permitting children who are unable to access internet at home to come into their school building for virtual schooling. In this model, schools create supervised, socially distanced spaces within school buildings where small groups of children can safely attend virtual classes. ${ }^{16}$ Whether continuing with virtual schooling or returning to in-person instruction, rural schools undoubtedly remain on unsure footing.

## Child Health and the Risk of Child Maltreatment

Child welfare is a concern across geographical regions and socioeconomic classes, but during the pandemic, rural families encounter distinct challenges in health care access and visibility to external stakeholders. Since 2005, more than 100 rural hospitals have closed, cutting off access to emergency services and hospital beds. ${ }^{17}$ Testing for COVID-19 is limited in rural areas, making it more difficult to contain its spread. ${ }^{18}$ Although children are less likely to need medical treatment for COVID-19, their caregivers are at higher risk, which creates a level of associated risk for children that greatly concerns child welfare professionals. Having caregivers fall seriously ill and be unable to access health care risks inflicting significant trauma on children, with long-term effects on their social and emotional health.

The pandemic brings with it an unprecedented level of togetherness for many families, which can promote closeness but also increase conflict. With stay-at-home and social distancing warnings issued in many rural places, families with young children are living more isolated lives with less exposure to neighbors, friends, and support services. Children may be

In many rural places, families with young children are living more isolated lives with less exposure to neighbors, friends, and support services.
largely unseen outside their immediate caregiving circle. Given this, it is unsurprising that reports of child abuse and neglect have actually decreased in many rural areas. ${ }^{19}$ Child welfare experts warn that this is due to underreporting rather than an actual decrease in maltreatment.

Adding to the level of concern for rural children and their caregivers, domestic violence reports have increased. ${ }^{20}$ When there is domestic violence in a home, the impact on children is frequently severe. Children are often caught in the middle and may be used as a pawn for manipulating or threatening a member of the household. Decreased reports of child abuse and neglect, coupled with increased reports of domestic violence, heighten the concerns of child welfare professionals.

Additionally, the opioid epidemic affects approximately 30 percent of rural areas. ${ }^{21}$ Child welfare professionals worry that the pandemic is compounding the precarious situation for children of rural families whose members were already struggling with addiction, isolation, fewer economic opportunities, and inadequate access to health care.

To prevent problems and identify concerns, schools and early care providers must maintain close contact with families. Screenings for possible maltreatment often happen during routine medical appointments, yet these have been significantly limited during the pandemic. ${ }^{22}$ Rural health care professionals recommend providing support and resource materials during all interactions with patients. Other ways to reach rural families include sending home information about child abuse, domestic violence, and hotlines in food packages, via school and health care mailings, or through social media and email.

Perhaps the most impactful way to prevent and identify child maltreatment during the pandemic is for child welfare professionals to make personal contact with homes that have previous or open reports of child maltreatment or domestic violence associated with their households. ${ }^{23}$ Proactive contact may happen via virtual meetings, socially distanced and masked in-person visits, or through phone calls. Organizations such as the National Court Appointed Special Advocate Guardian ad Litem Association for Children recognizes the importance of regular contact with children as
an essential piece in preventing child maltreatment. State boards should support and partner with child welfare organizations. Additionally, school personnel who serve in these roles (e.g., as school counselors and social workers) should be assisted in making personal, frequent contact with children and families, and funding should be directed to support these efforts.

## Conclusion

Although the entire nation is struggling to address challenges created by COVID-19, some challenges are unique to locale. Largely missing from the national conversation about the pandemic are the increasing rates of COVID19 in rural areas, which continue to add to the disproportionate risks experienced by rural children and families. These risks take the form of increases in child care deserts and food insecurity, concerning reliance on older family members for caregiving, lack of access to reliable broadband services, and inhibited reporting of child maltreatment and domestic violence. Child welfare experts across the United States are calling for increased access to resources for rural families, and where very low transmission rates of the virus make it possible, a return to in-person schooling. However, the risks of in-person schooling must be carefully balanced against the risks of remaining socially isolated. Indeed, rural schools that attempted reopening in person often found themselves back to virtual schooling in a matter of a few weeks. ${ }^{24}$ Given this, state boards should advocate for school safety policies that create safer school environments, encouraging social distancing, contact tracing, and mask wearing.

Rural communities' strengths should be leveraged in pursuing solutions. Rural stakeholders must address systemic inequities through innovative school-community partnerships, effective communication channels with families, and additional resources for rural children and caregivers. These practices are key to mitigating challenges for rural children and families. In addition to pushing for increased allocations to rural school systems, state boards should look to create collaborations between rural nonprofits, child welfare organizations, and public school systems. Often these organizations work in siloed systems, but they can

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increase access to services and decrease risks to rural children when they work together. Additionally, state boards should be asking how state organizations can effectively support rural populations in equitable, respectful ways. In particular, outside entities should not adopt a savior mentality when working with rural children and families. Instead, collaborative efforts should recognize and capitalize on the strengths of rural places. It will take collaborative, equity-focused practices to effectively address the challenges that rural children and their families face due to the pandemic.
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Robin Stevens
Member of the Nebraska State Board of Education


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## The NASBE Interview


#### Abstract

Fern Desjardins is a member of the Maine State Board of Education and NASBE's Board of Directors. She was a teacher, elementary school principal, and superintendent in the RSU-33/MSAD 33 school administrative unit district in Aroostook County before retiring in 2017.


Robin Stevens is a member of the Nebraska State Board of Education and spent his career as a teacher and coach, assistant principal, principal, and superintendent in small schools in Iowa and Nebraska.

Sandra Kowalski is a member of the Alaska State Board of Education and Early Development and has been a teacher, principal, and assistant superintendent in rural and urban communities in Alaska. She also served as the director of indigenous programs in the College of Community and Rural Development at the University of Alaska Fairbanks (UAF), and she is assistant superintendent in the Northwest Arctic Borough School District. They were interviewed on Nov. 9 and 17.

## What is your personal and professional connection with rural schools?

Fern: I've lived all my life in St. Agatha, Maine, in Aroostook County near the Canadian border. It has a population of approximately 750 and is part of a two-town school administrative unit, RSU-33, which has a preK-12 enrollment of 240 , with one elementary school and one middle/high school. I attended the K-12 schools in RSU-33 and spent my entire 43 -year career in the school system. Aroostook County is the largest county east of the Mississippi, larger than Connecticut and Rhode Island combined. There are only 9,300 students enrolled across the county, so that gives you an idea of how rural we really are.

Robin: I grew up on a 440-acre farm west of Eustis, Nebraska. I had a graduating class of 18. I got my degrees from University of Nebraska at Kearney, which is about 25,000 people-my big move into an urban area. All my teaching career was in small, rural communities. I started in Cherokee, Iowa, and then moved to southwest Nebraska, with average graduating classes of 25 to 30 . Gothenburg, where I currently live, is a town of 3,000 to 4,000 . I am a representative of the western half of Nebraska-a fairly substantial landmass. About a third of the state's 244 districts are in the western district. We go from Minatare, which averages about 10 per graduating class, to North Platte, which averages close to 300, but many of the 75 districts are closer to Minatare than North Platte.

Sandra: I live in Alaska's Northwest Arctic Borough, about 39,000 square miles large. We have 11 villages that are not connected by roads, and I work out of Kotzebue, which is the hub. This is where I'm from. I taught in Deering, one of the smaller villages and in Kotzebue, where I was a teacher and principal. On the state board, in addition to
representing an urban and on-the-road-system communities, I represent a large swath of the state with lots of rural schools.

## How does your background in rural education inform your work on the state board?

Fern: Our goal is to provide equal opportunities to all students, and to do that, we sometimes have to do more for some students. The state board should comprise members that represent state demographics so that decisions that negatively impact some areas or some students can be surfaced and addressed. The pandemic has brought to light some inequities in rural areas. Some rural and underserved areas of Maine did not have internet access. It was impossible to provide equitable online learning without student internet access and learning devices. This past summer, Maine approved a $\$ 15$ million broadband bond to expand internet in our underserved areas. It's not just about rural areas and cities; it's about what are we providing, and what do they need? We do very well with our funding formula by providing targeted funding for disadvantaged students, English learners, and an adjustment for isolated small schools.

There are also advantages to small schools. Because I had a small staff and enrollment, we were able to provide more individualized help and support. Whenever there was a reform going on, I could get right on it with my small staff and have a meeting with parents to talk about it. And as for accountability, I used to tell my staff, "We have glass walls," because everything is visible. Kids go home and talk about what happened at school, and it's the talk of the town. School is the life of the community. There's a sense of belonging and responsibility.

I was the principal of a very small rural elementary school that became nationally recognized by the Blue Ribbon Schools Program when I was principal. That was because of dedicated teachers and staff. That very same school was again recognized as a Blue Ribbon School in 2017 under a different principal. It will remain a high-achieving school because of the culture in the school and communities. School funding determines programs and services, but the people in the school determine the quality and effectiveness of those programs and
services. Money only takes us to a certain point. Afterward, it's about what do we do, and how do we support teachers? I participated in program approval reviews for educator preparation programs because I recognize the huge impact these programs have on the effectiveness of our schools, rural and urban.

Sandra: There are over 200 federally recognized tribes in our state. So not only is Alaska massive in terms of its size, it's also diverse in terms of its populations and geographic areas. The rural perspective needs to be brought to the state board. There are so many implications: funding, equity of access to internet, enriching learning opportunities. There's also a strong push for Alaskan Native people to have more of a voice in what goes on in their own schools. The school system has brought in modern education and technology, but this influx has also caused a lot of damage to Native languages and cultures. Many issues come up when an indigenous culture is ignored on indigenous land. I represent that perspective: We need to acknowledge the land and the people in our rural communities as who they are. Once we can do that in Alaskan Native communities and schools, we'll see people thrive.
I grew up in a public school, but the generation before me were sent to boarding school. Mind you, non-Native children were getting a public education, but the Alaska Native population was taught by religious entities that were moving missions into rural Alaska. To go to secondary or postsecondary, you were flown out of your village to places like Oregon or Sitka in Southeast Alaska. You weren't raised in your home community in your teenage years. If the church was of the mind-set to not accept the Native language and culture in school, that's what happened. So that trauma still exists, and there is still oftentimes this disconnect between families and schools for that reason alone.

Our school is the center of our community. It's where student activities and potlucks take place, principals become natural community leaders, and teachers are loved for their role. But as far as trusting the school and understanding how to support your child in that environment-you have a whole generation who weren't parented through their schooling and didn't know how to parent the next generation for their schooling. We value our schools in rural Alaska, but
we have a lot of work to do to heal. One of my focuses on the state board is to keep bringing up that piece: that Alaska Native communities need a stronger voice and say in how their schools operate, and that is part of the healing that needs to happen.

We have traditional, subsistence-based knowledge in our communities that is good grounds for science study, social studies, for engaging students in writing, for bringing elders in to explain what character and hard work looks like. We have the world around us, with fish and caribou, and we have people who value bringing that knowledge to schools. Another asset we have is strong relationships. A financial adviser who flew in from the city to help teachers set up retirement accounts said, "People here don't think ahead. They don't invest in retirement accounts; I don't see them taking care of their own future." And I said, "You're totally missing it. We're investing in our future by taking care of our elders, bringing fish to our aunties. We take care of each other, and that's our best retirement plan, and we will have people taking care of us."

> Certainly, there are unique assets in rural schools. What are the obstacles to rural students receiving an equitable education?

Robin: Connectivity is the first thing that comes to mind. But the pandemic has magnified lots of issues, including early childhood opportunities. States and localities closed down childcare centers and preschools across all areas of the United States, and it really had an impact on the families of western Nebraska. Some things are not different for rural areas. There is poverty everywhere, not just in Lincoln. There is poverty in Minatare and North Platte. The pandemic magnifies poverty.

Sandra: In many cases, students in rural Alaska perform less favorably on our state tests and other assessments. Unlocking that is something school leaders, teachers, and school boards are trying to find meaningful ways to do, and the state board supports innovation and vision seeking from local leaders. We're working toward building that capacity in our rural communities. We're looking at our charter regulations and the ability to create tribal compacts for education. These are longer term
efforts we want to advocate and support to give local communities ownership. The federal and state accountability system does filter down into what happens in classrooms to some degree, but what's missing is the sprung-from-community piece, which is just inherently there in Western education and other communities. We need to create that in rural Alaskan Native communities.
We're one of those rural areas where the impact of [the pandemic] is just starting to be realized. We can have a village of 300 where there is no medical facility for a COVID patient with serious symptoms. They are flown into Kotzebue, or if they need more serious care, into Anchorage-so several hundreds of miles and at great cost. Kotzebue is the most impacted; we have remote learning only in Kotzebue. In the villages, we have instituted all the safety protocols. If we don't have enough square footage, we have students coming on A and B track-two days a week rather than four. All of our teachers, like much of the country, have to be ready to teach remotely and in person at the same time.

Added to that, we don't have consistent internet. If I'm at my apartment in Kotzebue it wouldn't be a quality call, and it costs me five times what it would in Fairbanks. It's unaffordable, low quality, and doesn't work well for distance learning. And that's Kotzebue. The villages are even more challenged, so all of our teaching has to be planned so that it can happen offline and remote. But we're still using technology. We have a refresh cycle: All our studentissued devices are brought into the school on a schedule, disinfected, and then teachers put refreshed content on them, parents pick up the devices, and for the next two weeks students are calling into classes, usually with their parents' cellphones, and engaging with the content on those devices. We're using Microsoft OneNote: The student does assignments on their device at home, and as soon as the device walks into the building, it syncs and teachers can retrieve assignments. It's not what we prefer, but we're finding ways.

The state has determined that if a student is on remote learning they are default present, so it looks like we have excellent attendance when in reality we don't. We saw the loss of connection in the springtime. This year to try to address this, on Wednesdays teachers reach out to students they haven't had contact with,
and we've created a different attendance code to track those students. I see social media posts where parents are feeling pretty miserable because they feel like their students' grades or lack of follow-through on assignments is a reflection on the parents, who are already stressed. So it's not just a loss of connections with students, it's the relationship with the entire family that's affected by this pandemic.

Fern: With student enrollment decreases, rural schools may not be able to afford the staff needed to offer diverse courses in-house: world languages, upper-level science and math, Advanced Placement. Or different staff: having the same teacher teaching algebra I and II, geometry, and trigonometry, and the art teacher, music teacher, and PE teacher are teaching kindergarten to grade 12. Fewer course offerings means less flexibility for students. Yes, juniors and seniors can take early college classes online, but some kids prefer that in-person interaction with teacher and peers.

Our kids' exposure to cultural diversity or diverse ideologies is very limited. The limited diversity of teachers and students may streamline the thoughts and opinions shared in classroom discussions. Minorities in rural schools can have a challenge in forming social groups. There are fewer extracurricular and co-curricular activities and thus less of an opportunity to develop social and leadership skills.

But are these things an issue of rural versus urban, or is the real issue school size? Can we make a distinction, or are they so intertwined that they cannot be separated? Whether our state board is discussing improved career and technical education or expanded internet access, the amount of funding will be partially determined by enrollment. And enrollment in rural areas is less than in urban areas.

## Is recruiting and retaining teachers in rural schools an issue for you?

Robin: Most definitely. The farther west you go in Nebraska, the more difficult recruiting and retaining teachers is. We have built in some flexibility with certification, and provisional certifications are available for substitute teachers, which, with permanent staff in quarantine, is becoming a huge issue. The pandemic has
magnified the teacher and substitute shortage. From the standpoint of choices students make in college, our schools are microcosms of society. Do they go into education? Well, it's not terribly lucrative, especially early on. They look for $\$ 60,000$ jobs right out of the chute, and you can't blame them. My wife and I spent our professional careers in education. We didn't badmouth the profession to our daughters; we loved it. But neither of our daughters teach.

There is also concern about student behavior and therefore working conditions. We need to provide better training, not only for staff coming into the profession but to those already there who never were trained to handle some of the issues we have. We need more counselors. We need more people who are involved with mental health. With justice and social concerns front and center, it puts a strain on the school system and on teacher colleges.
Fern: It's the same in Maine. We have shortages in some critical areas. Rural schools pay a little less, and benefits are not the same. There are fewer applicants. Our teachers spend more time planning because they are teaching biology, chemistry, and physics, whereas a teacher in an urban school may just have five sections of biology. So what do rural teachers do? They leave for schools where they have less prep time and they can be the best teacher they can be. Economics of scale comes into the picture: Rural schools require the same services as larger schools, but fewer students benefit.

Guidelines for the safe return to in-person instruction this fall—with social distancing, smaller class sizes, maximum numbers in the cafeteria, having adequate staff to supervise students—have forced schools to hire added staff. Some units created positions to deliver and coordinate remote and distance learning. Because of the need for additional staff, our governor, Janet Mills, signed two executive orders to provide flexibility. Anyone applying now does not and will never have to take the Praxis. Anything missing on an application for recertification was automatically extended to July 1, 2021. Governor Mills opened it up even more by allowing anyone with a bachelor's degree to get an emergency teacher certificate, valid for a year. And certification reciprocity is now offered for teachers, specialists, and

> We're trying to reverse the loss of teachers with onboarding that is culturally and community based.
administrators who were issued comparable certificates in another state or country.

A statewide committee has been revising the rule for credentialing. Some of the changes being recommended include different pathways to teacher certification by grade spans and endorsements-combining some endorsements and eliminating some. Two years ago, they tried to rush a change in the rule. They brought it to the state board, and it was rejected and sent back. This time, the rulemaking is a grassroots effort where everybody is represented, and I think we are going to end up with a much better rulemaking.

Sandra: We're trying to reverse the loss of teachers with onboarding that is culturally and community based. And we're starting to realize that in order to recruit more young people into education, we have to understand what they're trying to get when they pursue education. One of the things we know about Native youth in general is that when you ask them what they want out of a college career, it's usually, "I want to bring something back to my community." We're learning at UAF that a lot of students who sign up for a six-week precollege program in the summer want to learn and teach their native language. So we have this inkling, not hard data yet, that if we can help people learn their indigenous language and culture, we will be able to retain more of them as teachers, even if at first they're not going to college to learn to be a teacher.

## What other resource challenges are rural schools facing?

Fern: Some rural communities do not have the capacity to raise additional funds to support public education. They are limited in the number of businesses that can generate property tax revenue or provide employment. It is hard to attract young families unless there are employment opportunities. The pandemic is beginning to change this, with more people working from home. That is going to work to our advantage in rural areas.

Sandra: There is a base student allocation in Alaska with multipliers for regions based on the cost of educating students. That formula is decades old and needs to be revised, but it's
always a challenging political topic in Juneau. As a result, funding has not kept up with increasing costs. We used to have differences between rural and urban. I don't think we have that anymore; what we have is a lack of funding for education across the board. The other challenge we have for rural schools is preschool funding. It's an astronomical cost but necessary. We need to figure out how to provide for our young children in Alaska, and in rural areas in particular.

Robin: I really hope we can get some stimulus from the national government, especially in education, early childhood education in particular. The sooner the better. We need to incentivize teachers in pay and support. That is generally a local issue, but somehow, someway, we have got to make our legislators and local boards understand that if you truly want to have the best people-and education is a people profes-sion-then we have to start paying them and incentivizing them. Another thing we should push at the local level is the idea of it taking a community to develop a child. If we are going to make Gothenburg the best it can be, we need to partner up with our community, whether that be businesses, local government, or whatever the case might be.

As I watched the election results come in, I was so concerned about the rural-urban divide. All you had to do was look at every state: The more urban the area, the more blue the state, the more Democratic, the more liberal in its thinking. The more rural, the more red, the more Republican, the more conservative. We have to figure out a way to bring those two togetherrural and urban-and not just in Nebraska. It is an issue in nearly every state in the union.

## We the Media

## Family Engagement during the Pandemic

Teachers use formative testing to make such determinations, but this information may not reach parents. According to a Learning Heroes survey, parents still have an inflated view of their children's ability, with 92 percent believing their children are at or above grade level in reading and math. Only 37 percent are.

This hit home at the first parent-teacher Zoom conference with my daughter's teachers. Her teacher reported she was "below grade level" on reading. I knew she was stumbling a little, but it was still a surprise. My husband asked, "How is she doing compared to her peers?" He was trying to understand whether our daughter's delay was unusual given the circumstances: Was she on track before? What could we do?

Emotional Needs. Parents are the first to admit they are not teachers, but even being a facilitator of learning can be overwhelming. Parents need to address their children's social-emotional learning too. Learning Heroes' Windy LopezAflitto recently noted that even being disconnected from a favorite lunch lady or other support staff can affect learning. Rekindling school relationships can motivate students and build their confidence. A virtual lunch with my daughter's teacher made all difference for her last spring, and all I had to do was ask.

State boards should seize every opportunity to help schools strengthen bonds with families. By nurturing relationships and setting clear expectations, schools will give new life to state policies that strive to give all children an excellent education.


Renée Rybak Lang
Communications Director


Robert Hull
President/CEO

## from the President's Pen

## Mind the Gaps

If you have ever traveled in London, or any other major European city for that matter, you are probably familiar with the recurring call as you alight from a subway car. Riders of the London Underground are reminded to "mind the gap" between train door and platform so they may avoid injury. For decades, the education leaders in the United States have heard that same resounding call: to mind the gap of student achievement. State boards of education have been laser focused on the gaps among subgroups since the early 1970s. Yet there has been little success in actually closing them.

Achievement gaps occur when one group of students (e.g., grouped by race/ ethnicity, gender) outperforms another group and the difference in average scores for the two groups is statistically significant (i.e., larger than the margin of error). White-black and white-Hispanic achievement gaps narrowed substantially in all grades and in math and reading in the 1970s and the first half of the 1980s but then stalled. Some of the gaps even grew larger in the late 1980s and the 1990s. The most recent results from the National Assessment of Educational Progress show that, with scant exceptions, achievement gaps in every grade and subject continue to grow despite the Herculean efforts of states, districts, and schools.

Even though our past efforts may not show the desired results, minding the achievement gap remains a moral imperative for all state boards. However, it is time to stop talking about a single achievement gap and start talking about
the myriad subgaps under that umbrella. The larger achievement gap comprises several access and opportunity subgaps: access to high-quality teachers, access to rigorous curriculum, access to technology, access to early learning, access to counseling services, access to appropriate health care, access to extended day/year programs, opportunity to attend schools with diverse teachers and leaders, opportunity to engage with peers in projectbased learning...and the list goes on.

We need not abandon the many excellent strategies used to close the achievement gap-setting benchmarks and tracking progress and personalizing learning, for example. Rather, we ought to take a strategic look at the many access and opportunity gaps that exist and strategically align resources and interventions in each of those areas. What state-level policies within your purview can address the many subgaps listed above? Does your board's strategic plan address each? What data are you reviewing to monitor your progress on these objectives? How are you, as state policy leaders, holding yourselves accountable for addressing these widespread disparities?

Until we mind the many subgaps and fissures that bedevil our complex educational system, we will not close the larger achievement gap that looms in front of the majority of our students. Are you minding the right gaps? Where are the access and opportunity gaps that you need to bridge in your state? Click here for event info \& register today!

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## USING STATE POLICY TO IMPROVE SCHOOL LEADERSHIP



Using State-Level Policy Levers to Promote Principal Quality Lessons from Seven States Partnering with Principal Preparation Programs and Districts

EFFECTIVE SCHOOL LEADERSHIP is crucial to school improvement and advancing equity. To support it, states can use seven levers, according to a new RAND study. It includes examples of efforts in seven states, including: Revising state standards to address educational equity and other areas as Georgia did, updating administrator credentialing as California is doing, and requiring principal preparation programs to work with districts as Florida has done.


[^0]:    ${ }^{1}$ Hayes Mizell, "Why Professional Development Matters" (Oxford, OH: Learning Forward, 2010); Anna Toropova, Eva Myrbert, and Stefan Johansson, "Teacher Job Satisfaction:
    The Importance of School Working Conditions and Teacher Characteristics," Educational Review (January 8, 2020),

[^1]:    ${ }^{1}$ Cynthia Cole, "Teacher Shortages across the Nation and Colorado: Similar Issues, Varying Magnitudes" (Denver:

