College and Career Pathways in Rural New Mexico

Strategies and Policy Implications

Prepared by Gary Hoachlander
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Photos courtesy of Gallup McKinley County Schools.

Introduction

New Mexico is dedicated to ensuring that all its young people graduate from high school prepared to succeed in college, career, and life. Over the past decade or so, the state has invested heavily in strengthening career and technical education (CTE) and advancing more rigorous career pathways in school districts throughout the state. More recently, the state has begun to entertain strategies for expanding this emphasis on career pathways to embrace a more comprehensive approach to *both* college and career readiness, one that connects CTE to core academics and introduces much more real-world application into the way students experience not only high school but also their entire secondary and postsecondary educational careers.

Accomplishing these transformational changes is challenging no matter where it is undertaken, but it is especially difficult in rural New Mexico. In 2019–20, 60 of the state's 89 school districts enrolled fewer than 1,800 students; 53 districts enrolled fewer than 900 students, and 35 enrolled fewer than 400. On the average, high school students (grades 9–12) represent about 22–24 percent of total enrollment; consequently, most of these districts were operating high schools with fewer than 200–250 students, and many served fewer than 100.[1]

1 In many of the smaller districts, the high school serves students in grades 7–12, so total enrollment of the high school is greater than just the grade 9–12 population.

To be sure, there are advantages to attending small high schools. Teachers and site administrators are more likely to know their students and be able to give them more personalized attention than occurs in larger urban and suburban high schools. Ties to families and the surrounding community may be stronger, and the high school may be the focus of strong community engagement and pride. Additionally, when districts opt to combine middle school with high school, the decision can offer opportunities for better aligned curriculum and more coherent instructional focus and counseling.

However, small high schools also face substantial challenges to delivering a high-quality education that prepares young people for the increasingly complex world of today and tomorrow. Among these challenges are:

- Limited curriculum offerings, with respect to both core academics, career and technical education, and electives;
- Rigid high school graduation requirements;
- Limited work-based learning opportunities;
- Limited dual credit opportunities, compounded by distance from postsecondary institutions and rigid qualifications for secondary teachers to teach dual credit classes;
- Limited access to adequate broad band connectivity, within schools but especially within the larger community;
- Difficulty recruiting well-qualified teachers, counselors, and administrators;
- Shortage of teachers with a CTE credential or dually credentialed in both CTE and a core academic subject;
- Among the pool of administrator and teacher applicants, insufficient understanding of local context and culture;
- High staff turnover;
- Investments in professional development undermined by staff turnover;
- Isolation from peers in other communities and districts facing similar challenges.

For the past five years, ConnectED has been partnering with Gallup-McKinley County Public Schools. Initially, our work focused on helping Miyamura High School design and implement a school-wide menu of College and Career Pathways. A comprehensive high school of about 1,200 students in the center of Gallup, Miyamura is well-suited to pursue the kind of college and career pathway development strategies used by many other high schools in larger districts in New Mexico and elsewhere.

In spring 2021, our work in Gallup McKinley expanded to include all ten of the district's high schools, including two relatively large comprehensive high schools (Miyamura and Gallup), six geographically remote high schools ranging in size from about 70 students to 350 students, one alternative high school with about 150 students, and one early college high school located on the campus of the University of New Mexico, Gallup. As we gained experience working with the smaller, geographically remote schools, it became apparent that although New Mexico aspires to offering students at least

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three career pathway options, in high schools with fewer than 200–300 students, it is extremely difficult to offer students more than one pathway that includes a coherent cluster or sequence of three or more career and technical education courses.

The challenge, therefore, is how best to deliver high-quality college and career pathways in small, geographically isolated high schools? The challenge is compounded by the reality that many of these high schools in New Mexico serve very high proportions of Native American and/or Hispanic students, requiring strategies that are culturally relevant and responsive to the local community context.

In the remainder of this brief, we 1) outline some strategies for designing and implementing high-quality pathways in small, rural schools, and 2) suggest some state policies supporting these strategies. While the focus is on small rural schools, many of the strategies and policies to be considered would also benefit larger schools and districts in the state. To help validate these strategies and policy suggestions, as well as to make appropriate revisions and additions, we solicited input from district leaders in a sample of small districts throughout the state.

It is important to emphasize that, while the challenges of delivering high-quality pathways in small, rural communities are significant, our work in Gallup McKinley, as well as emerging work in other districts in northwest New Mexico, continues to unearth significant assets and opportunities. For example, the Four Corners College and Career Pathways Partnership offers an ideal opportunity to focus pathways design and implementation on the opportunities afforded by moving from a regional economy dependent for decades on oil, gas, and coal to one that is increasingly green and focused on the possibilities of an economy much more reliant on hydrogen and other forms of green energy. These kinds of opportunities exist in other regions of New Mexico as well.

Additionally, when pathway design engages community stakeholders in defining pathway themes and objectives, pathways can focus on addressing a range of authentic, community issues and problems. For example, schools neighboring the Navajo Nation are using pathways to address such challenges as housing (e.g., designing and building tiny homes), water purification, irrigation, internet access, heritage preservation, and more.

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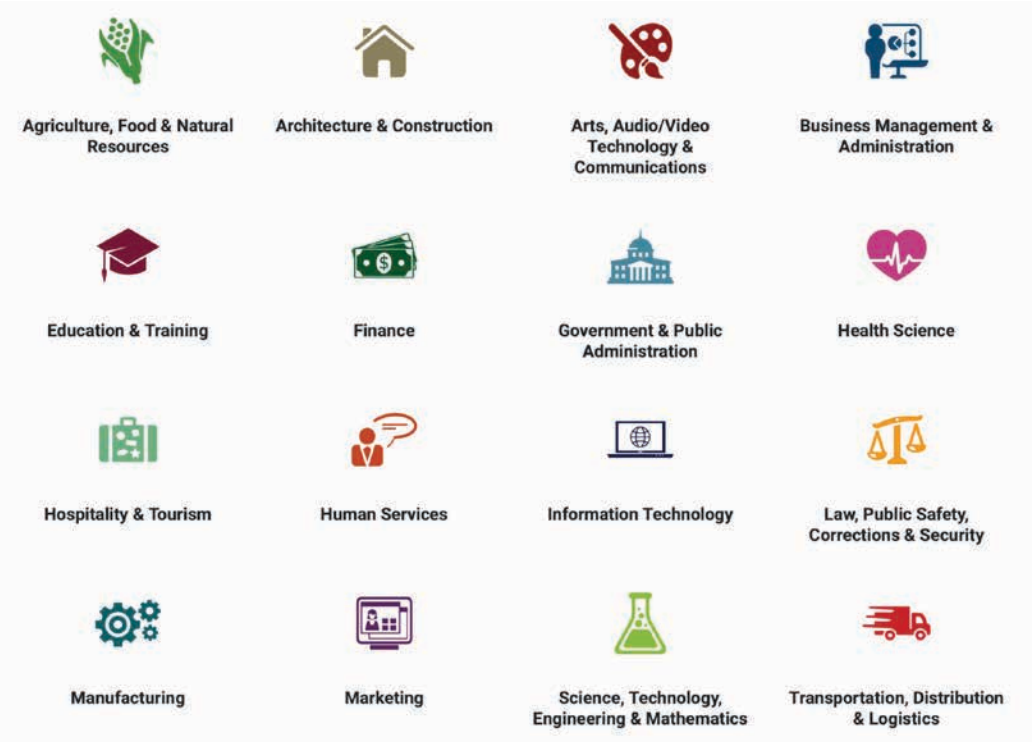
Emerging Strategies

As we have pursued our work with schools and school districts in northwestern New Mexico, there are several strategies for achieving high quality pathway design that are beginning to emerge.

1 "SUPER THEMES" OR "MEGA CLUSTERS"

Like most other states, New Mexico organizes the delivery of CTE and career pathways under sixteen career clusters (see Figure 1). The cluster framework is intended to group career pathways under a broad industry theme that, when well designed, enables students to attain a common knowledge base and set of academic and technical skills that will prepare them for a wide range of career opportunities within a particular cluster sector. For example, the Architecture and Construction cluster is intended to introduce students to the knowledge and skills needed to design, plan, manage, build, and maintain the built environment. It can include coursework in architecture, engineering, and construction management, as well as more occupationally specific preparation is such areas as the construction trades, equipment installers and repairers, welding, and heavy machine operators. Ideally, students engage in a continuum of related work-based learning experiences and also can earn dual credit in a related postsecondary major. They graduate from high school able to transition to postsecondary institutions where they can earn a related two- or four-year degree, or "stackable" credentials valued by employers in the architecture and construction field.

Figure 1: New Mexico's Sixteen Career Clusters



Source: **https://www.careerpathways-nm.com/explore-career-clusters**

Providing students this kind of rich pathway experience can be challenging in large high schools. Doing so in schools with fewer than 200 students is extremely difficult. In New Mexico's small rural high schools, a career pathway in Architecture and Construction, if it exists at all, will typically consist of two or three woodworking/carpentry classes, a couple of welding classes, and perhaps a class in residential wiring. Rarely are students exposed to architecture, engineering, computer-assisted design, heating and cooling, plumbing, or industrial electricity. Even if qualified instructors could be found, there simply are not enough teaching positions in these small schools to provide the diverse set of course offerings envisioned in the state's career cluster frameworks and recommended programs of study.[1]

What is true for Architecture and Construction is equally true for the other fifteen career clusters. A framework that works well for the state's larger school districts, is very difficult, if not impossible, to adapt in small rural schools. What, then, might be done?

A possible strategy is to give school districts the flexibility to design a "super themed" career cluster customized to local context and the credentials of current teachers. For example, consider a school of about 200 students that currently offers one or two business courses, carpentry 1 and 2, a computer science class, and creative arts. Most of the students are Native Americans living on a nearby reservation. How might this school create a coherent, challenging college and career pathway serving an array of student interests and aptitudes?

This school could focus on building a pathway around an overarching theme such as Business, Leadership, and Entrepreneurship. While unable to offer three or more CTE courses in any particular career cluster, it could nevertheless develop a coherent "mega cluster" in which students are able to pursue business and entrepreneurship in tangent with specific interests in carpentry, computer science, or creative arts. One of the school-based enterprises might focus on creating online platforms for marketing and selling indigenous art directly to consumers, recapturing some of the markup charged by "in-town" retailers buying products wholesale from native artisans.

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1 See *New Mexico Career Cluster Guide*, New Mexico Public Education Department, Fall 2020. This is a very thoughtful and comprehensive guide to planning career pathways, including detailed guidelines for programs of study and connections to related postsecondary opportunities.

2 MORE FLEXIBLE HIGH SCHOOL GRADUATION REQUIREMENTS AND POLICIES

In New Mexico, to graduate from high school, students must complete a total of 24 credits, of which 17 are specific requirements (e.g., four credits of mathematics, four credits of English, four credits of social studies, three credits of science, etc.).[1] This leaves 7 credits that students may take as electives (e.g., art, music, additional core academic courses or CTE courses, student service learning, etc.).

In CTE, while the state encourages students to take four credits of CTE in a single career pathway to completely master the core standards of a career pathway, New Mexico defines a "completer" as a student taking two or more courses in a single CTE program area and completing a capstone course. To become a CTE completer, therefore, a student must devote at least two of the seven electives to CTE (in addition to the 1 required credit in a career cluster); to complete a full CTE four-course sequence, a student would need to devote three electives.

While this still leaves four electives for other subjects such as art or music, it is important to remember that achieving other state priorities requires using electives. For example, completing the State Seal of Bilingualism-Biliteracy (SSBB) may require a student to earn a "C" or higher in four units of credit in a language other than English.

1 Additional required courses include 1 credit of physical education, 1 credit in a career cluster or a language other than English, and 0.5 to 1 credit in health, which may be taken in either middle school or high school.

Additionally, when students fail a required course, "credit recovery" will reduce a student's elective options, unless credit recovery can be achieved after school or during the summer. For students who must work after school and during the summer, the only option to recover credit is through reduced electives. Assuming that electives have real attraction for students and, to some extent, motivate them to stay in school, it is counterproductive to pursue credit recovery through reducing students' elective options.

In short, the state's graduation requirements can be quite limiting. To mitigate some of these limitations, one strategy is to allow certain CTE courses to do "double duty," simultaneously counting for CTE and one of the required core academic subjects. For example, some states now allow Project Lead the Way (PLTW) courses in engineering and biomedicine to count toward core science requirements. Courses in environmental conservation and restoration and sports medicine often play a similar role. California has approved some Business Mathematics and Construction Technology Mathematics courses for satisfying math credits.[1]

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Giving high schools the flexibility to count certain CTE courses for core academic requirements should depend on the state establishing a process for ensuring that CTE courses so designated meet state academic curriculum standards. The review and approval of local CTE courses for academic credit could be managed by the Public Education Department or, as some states have done, a unit created within the state university system.

3 MAKING WORK-BASED LEARNING MORE ACCESSIBLE

Many small rural high schools in New Mexico are in communities where the closest employer, save the school itself, is 45 minutes or more away. Under these conditions, providing students access to a continuum of work-based learning experiences – mentoring, job shadowing, and internships – is extremely challenging. As the state gives more attention to supporting paid internships for high school students, it is essential that such efforts address the special challenges of small, geographically remote schools.

There are several ways that this could be done. First, the state could charge the Regional Education Cooperatives (RECs) with developing regional systems of work-based learning, paying special attention to meeting the needs of students in small rural high schools. Features of the system might include building a network of employers in the region to serve as virtual mentors, advisors for teachers and students seeking to develop authentic, cross-disciplinary projects, and evaluators of student work, particularly capstone student presentations. The RECs could also be charged with collectively building a library of digital job shadowing experiences.

1 To a limited extent, New Mexico already allows this. Forensic Science can be used to fulfill a science requirement if the student has completed either biology or chemistry and is concurrently enrolled in Integrated Science III. Similarly, the state allows Financial Literacy to count as a math credit.

Second, the state could make school-based enterprise an explicit form of work-based learning. While school-based enterprise can be an effective strategy in high schools of all sizes, it is especially useful in schools where there are few employers nearby. Under the supervision of a teacher, perhaps working in partnership with a virtual employer, students could undertake such activities as building a virtual gallery for marketing and selling indigenous art, developing a computer support business that sets up and repairs Chrome Books and other school-based electronics, managing a school store, designing and managing a hydroponic community garden, or working in partnership with online retailers to distribute returned merchandise that retailers are unable to resell.

Students working in school-based enterprises should be considered "interns" and be eligible for paid internships, especially through state sponsored internship initiatives. Paid internships should also be a permitted use of funds through other state initiatives, such as the Innovation Zones grants.

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4 MAKING DUAL CREDIT MORE ACCESSIBLE AND FOCUSED

Under New Mexico's Dual Credit Program, all high school students can enroll in college-level academic and career-technical courses offered by public postsecondary institutions or tribal colleges. New Mexico is one of fourteen states that fund dual credit course work. Consequently, student tuition is waived by postsecondary institutions, and the state also provides funding to LEAs to offset some of the costs for textbooks and instructional materials.

From 2009–10 to 2019–20, the number of students enrolled in dual credit doubled from 10,808 to 21,757. Since March of 2020. COVID has severely decreased enrollment to 16,587.[1]

While the Dual Credit Program aspires to making dual credit opportunities available to all students and while enrollment has increased dramatically over the past decade, the reality is that opportunities to engage in dual enrollment are quite limited, especially in rural schools. There are several reasons for this. First, colleges severely limit the number of high school students they will enroll. For example, the University of New Mexico Gallup allocates fewer than 100 dual enrollment slots to Gallup McKinley County School District, which serves more than 3,000 high school students.

Second, many rural schools are located 45 minutes or more from a college offering dual credit. To the extent that students are expected to take dual credit on the college campus, geographic distance and access to transportation can raise major barriers.

Third, while dual credit courses can be taught on high school campuses (in 2019–20, 28 percent of courses statewide were taught in high school), this option is less feasible

1 Dual Credit Annual Report for academic year 2020–2021, New Mexico Higher Education Department and New Mexico Public Education Department, 2022 Agency Report, p. 9. **https://webnew.ped.state.nm.us/wp-content/uploads/2022/02/Dual-Credit-Report-2022_final.pdf**.

in geographically remote small schools.[1] To the extent that dual enrollment instruction relies on college faculty, faculty are more reluctant to travel the long distances to teach on a high school campus. Although high school teachers can teach dual credit, meeting the qualification requirements established by the colleges has proven to be difficult. Particularly challenging is the requirement that teachers have a master's degree in the content area being taught.

Fourth, while students can take dual credit courses online (about 28 percent of courses were delivered remotely in 2019–20, and, because of COVID, the percentage rose to almost 60 percent in 2020–21), CTE courses are less well-suited for online delivery. Hence, with delivery on either the high school or college campus more limited, rural schools are less able to use dual enrollment as a strategy for expanding CTE offerings, including capstone courses in the senior year.

There are four strategies that could help alleviate some of these challenges. First, the state could create stronger incentives for high school teachers to earn the credentials necessary to teach dual enrollment on the high school campus. Incentives might take several forms – state paid tuition, reimbursing the cost of books and other instructional materials, a paid bonus for completing the credential, and paid stipends for teaching dual credit on the high school campus.

1 Dual Credit Annual Report for academic year 2019–20, New Mexico Higher Education Department and New Mexico Public Education Department, 2021 Agency Report, p. 30. **https://webnew.ped.state.nm.us/wp-content/uploads/2021/02/SY-2019.20-Annual-Report-PDF.pdf**.

Second, the state could also create incentives for college faculty to travel the longer distances that are necessary to serve rural schools. The state might also consider creating financial incentives for colleges to create cadres of "itinerant" faculty, with a faculty member traveling to two or more high school campuses during a typical school week.

Third, the state could explore policies that would better enable "team teaching" between college faculty and high school teachers, with the college faculty serving as "the teacher of record," supervising the high school teacher who would assume the primary responsibility for instruction on the high school campus. While this approach could require periodic on-site visitation by the college faculty member, much of the supervision and evaluation could be done virtually, reducing the travel burden.

Fourth, to increase the number of high school teachers able to teach dual enrollment, the state might consider developing an alternative dual credit credentialing program, specifying circumstances under which the requirement for a master's degree might be waived. This might be more appropriate for teachers teaching CTE courses than for those teaching core academic subjects.

The state could also create incentives for college faculty to travel the longer distances that are necessary to serve rural schools.

5 RECRUITING TEACHERS, COUNSELORS, AND ADMINISTRATORS

COVID has created major challenges for recruiting educators of all types in many districts throughout New Mexico, but even pre-COVID, small rural schools were facing acute difficulties attracting and retaining staff. ConnectED has been working directly with several small schools that have had five or more principals in five years and where annual teacher turnover is fifty percent or higher. Not only are these rates of turnover very destabilizing – for students, other teachers, and the community – but also, they make it difficult to provide a consistent menu of academic and CTE offerings. Additionally, they dilute and undermine local investments in professional development.

There are many reasons why recruitment and retention are problematic. Although in many rural schools, there is a cadre of teachers who have taught at the school for many years, they typically make up only about half of the faculty. Unable to find enough teachers locally, districts recruit teachers and administrators from afar, with many teachers recruited from countries other than the United States. In many cases, these teachers arrive in the community with little or no understanding of the conditions under which they will be living and working. The logistics of living somewhere that requires a 45-miinute drive to buy groceries, gasoline, or other household supplies cannot really be understood until they are experienced. And for many, the experience is simply more than they bargained for. Even the existence of teacherages, providing free housing, often is an insufficient incentive for enticing teachers to stay for more than a year or two once they arrive at a rural school.

In our four years of working in northwest New Mexico, we have come to better understand some of the issues surrounding recruitment and retention. However, this is a challenge being experienced throughout the state, one only exacerbated by COVID, and we are reluctant to make policy recommendations in this area without considerably more study.

Consequently, we strongly encourage the state to undertake an in-depth examination of educator recruitment – teachers, counselors, principals, and district administrators – throughout New Mexico. Such a study might have the following objectives:

- Carefully document the magnitude of the problem and how it differs from community to community; gather data, at least for a representative sample of districts and schools, on recruitment and retention, including the pros and cons of recruiting teachers from abroad.
- Assess the effects of incentives being used for recruitment and retention including teacherages, signing bonuses, retention bonuses, and higher annual pay for teaching in geographically isolated areas.
- Assess the design and feasibility of a state-supported "grow your own" teacher program aimed at recruiting and training teachers from within rural communities not only to improve retention but also to advance racial, ethnic, and cultural diversity and skills such as bilingualism; the assessment should include the need for mentoring prospective teachers, training in culturally relevant instruction, and financial support to cover costs associated with teacher preparation.[1]
- Examine strategies that districts and schools might employ to help new teachers recruited from outside the community build strong bonds with each other and the surrounding community.

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6 TEACHER CREDENTIALING TO MORE EFFECTIVELY SUPPORT COLLEGE AND CAREER PATHWAYS

Teachers with multiple endorsements (e.g., a 6–12 secondary license in social studies and an additional endorsement in business education or information technology) are valuable assets in any school offering college and career pathways. They are especially valuable in small schools, because they can expand the school's ability to deliver a more diverse curriculum within the constraints of total number of full-time equivalent teachers the school is able to hire.

For example, if a small school has a social studies teacher with a business education endorsement and a science teacher with agriculture endorsement, the school can offer two clusters of CTE courses, one in business education and the other in agriculture, while still delivering three or four sections of social studies and science. Without dual endorsements, the school either must find two part-time teachers, one with a business

1 Illinois provides a state-funded loan of up to $25,000 for candidates accepted into the state's Grow Your Own Program to cover costs associated with attending either a public or private teacher preparation program. The state forgives the loan after a graduate has taught in a hard-to-staff school for a minimum of five years.

endorsement and the other with agriculture. Or if its only option was a CTE teacher with a single CTE endorsement, it would be able to offer a college and career pathway only in that particular field.

Currently, there are few if any advantages for a teacher to obtain additional endorsements, other than being more attractive to schools than a teacher with a single endorsement. The state could change this with financial incentives for obtaining multiple endorsements. These might include state-funded loans for completing an additional endorsement, a financial bonus upon obtaining the endorsement, and loan forgiveness after three to five years of teaching in both fields at a hard-to-staff school. The state could also modify the existing salary schedule to provide annual stipends for teachers teaching in multiple fields.

It is worth noting that online instruction can accomplish many of the benefits of hiring teachers with multiple endorsements. Like multiple endorsements, online delivery of core academic subjects can reduce the pressures on small schools to devote an entire teacher FTE to a single content area, be it academic or CTE. However, the quality and effectiveness of online instruction, particularly in the sciences and many CTE fields, are still very limited with respect to providing students the desirable hands-on learning needed to become proficient in these areas. Additionally, in many small rural schools, internet band width and reliability still leave much to be desired.

7 ALIGNMENT WITH MIDDLE AND ELEMENTARY SCHOOLS

Closely related to encouraging teachers to earn multiple endorsements is the opportunity many small rural high schools have to better align their college and career pathway initiatives with middle school and elementary school. In many cases, rural high schools are already operating as schools serving grades 7–12 or 6–12. In other cases, many high schools are co-located with a middle school on the same campus. And in almost all cases, elementary, middle, and high schools are rarely located very far from each other.

This proximity creates opportunities for close collaboration and alignment around pathway design and implementation. It is possible to be much more systematic about aligning career awareness, career exploration, and instruction in middle school with pathway opportunities in high school. Similarly, in many respects, it is easier to build a well-coordinated system of work-based learning.

To this end, as the state pursues its Innovation Zone Initiative, piloting more structured alignment among elementary, middle, and high schools should be an explicit objective.

8 CREATING A SMALL SCHOOL COMMUNITY OF PRACTICE

Creating and delivering high quality college and career pathways in small rural schools is a challenging business. While strategies must always be adapted to respect local context, both challenges and opportunities, there is still much that has more universal application and benefit. Helping these schools and districts learn from one another is another role the state could support, creating a statewide community of practice that encourages peer-to-peer sharing of what has worked and what has not. To some extent, the Regional Education Cooperatives provide some opportunities for this kind of collaboration, especially for superintendents within the service region.

However, a strong case can be made for creating a statewide Community of Practice that would expand sharing of knowledge and expertise, and perhaps also serve a vehicle for more systematic piloting of promising practices. For the most part, this Community of Practice could operate virtually, supported by a New Mexico non-profit or an office within the Public Education Department. The Community might come together in-person once annually. Additionally, selected schools or districts could be invited to host experiential site visits, either in-person or virtually, to share innovations, successes, and challenges.

In conclusion, delivering high quality college and career pathways to students in rural New Mexico is challenging. Many communities are taking steps to address these challenges. State policies and regulatory changes of the types suggested here could greatly accelerate opportunities for the young people who live there. Every young person in New Mexico deserves to be able to graduate from high school prepared for lasting success in both postsecondary education and career.

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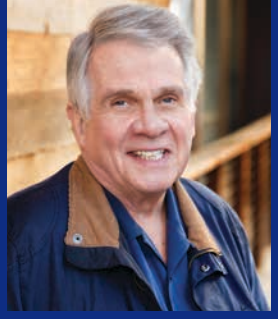

About the Author

Gary Hoachlander is president of *ConnectEd: The National Center for College and Career*. Beginning his career in 1966 as a brakeman for the Western Maryland Railroad, he has devoted his professional life to helping young people learn by doing – connecting education to the opportunities, challenges, and many different rewards to be found through work. Widely known for his expertise in college and career pathways, career and technical education, high school improvement, and many other aspects of elementary, secondary, and postsecondary education, Gary has consulted extensively for the U.S. Department of Education, state departments of education, local school districts, foundations, and a variety of other organizations. He earned his B.A. degree at Princeton University and holds Master's and Ph.D. degrees from the Department of City and Regional Planning, University of California, Berkeley.

Prior to founding ConnectEd, Gary spent thirty years as the founder and president of MPR Associates, Inc., one of the nation's leading education consulting firms, which was acquired by RTI International in December 2012.

ConnectED: The National Center for College & Career

2150 Shattuck Ave, Suite 750, Berkeley, CA 94704
(510) 849-4945

www.connectednational.org