## Five Location-Based Challenges Rural School Districts Face: How Leveraging Technology Can Help

Rural school systems face unique challenges due to their remote geographical location. However, some rural districts are leveraging technology in creative ways to address these obstacles. Here’s an outline of five common challenges and examples of how rural districts have applied creative solutions using technology.

<table>
<thead>
<tr>
<th>CHALLENGE</th>
<th>FACTS</th>
<th>POTENTIAL SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long Commutes</td>
<td>Rural students often have long daily commutes that can exceed an hour each way. Travel times to sporting events and other extracurricular activities may take even longer.</td>
<td>Consider equipping school buses with Wi-Fi so students can complete homework during their daily commute or on activity buses. Note: This solution is only viable in rural communities where cellular networks are available.</td>
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<td>Lack of Teacher &amp; Technical Expertise</td>
<td>Rural districts often have trouble recruiting and retaining teachers, especially in specialized or advanced subjects.</td>
<td>Supplement available courses with distance learning opportunities. Leverage video conferencing technologies to bring subject matter experts to students.</td>
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<td>Lack of Access to Courses</td>
<td>Rural students often lack access to the diversity of courses available to their urban or suburban counterparts. Examples may include AP or computer science courses, foreign language, or other non-core classes.</td>
<td>Supplement available courses with distance learning opportunities.</td>
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<td>Lack of Teacher Access to Professional Development</td>
<td>Teachers in rural districts may lack easy access to high quality professional development opportunities, such as those offered by universities or other centers of learning.</td>
<td>Give teachers access to online professional development opportunities and professional learning communities (PLC’s). Supplement in-person professional development events with online collaboration tools to share professional learning and best practices throughout the year.</td>
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Lack of Home Internet Access: Because it is often not cost effective for internet service providers (ISPs) to serve remote areas, rural students may not have Internet access outside of school. Consider extending school library hours to provide students with Internet access before or after school. Partner with community organizations to identify “homework hotspots” where students can complete homework, or make mobile hotspots available for student checkout.

HOW YUKON-KYUKUK SCHOOL DISTRICT LEVERAGED VIDEO CONFERENCING TO MEET THEIR CHALLENGES

The Yukon-Koyukuk School District (YKSD) is a rural school district with a main office located in Fairbanks, Alaska. The district’s ten village schools are located along the Yukon, Koyukuk and Tanana river systems, a geographic area larger than the state of Washington encompassing about 65,000 square miles of territory. Most of the village schools are only accessible via small aircraft or, during the winters, snowmobiles. More than 98% of the district’s 315 river school students are Alaska Natives (Athabascan).

This district leverages technology to address many of the challenges posed by its remote location. For example, YKSD delivers native language instructions from the main office in Fairbanks by using video conferencing equipment installed in every classroom. The instructor provides follow up instruction via in-person visits to the villages. Video conferencing is also used to offer Career Technical Education (CTE) courses such as nursing, medical coding, emergency trauma technician work, and heavy machine operation. Together with a local university in Fairbanks, they are able to offer dual credit for upper-level language arts courses. In addition, the district incorporates local culture in science education by offering a program that teaches students about dog mushing, with a focus on veterinary science. The district also sponsors an accredited statewide correspondence school called “Raven” Homeschool for approximately 1,500 students.

For teachers, video conferencing allows YKSD to bring experts to deliver professional development from anywhere in the country without the expense of flying them to Alaska. Distance learning is available for teachers, paraprofessionals, and even maintenance personnel. Teachers engage in online Professional Learning Communities through the use of web-based tools. Teachers from different villages join together based on grade bands to review curriculum, share best practices, and make data-informed decisions based on assessments and other longitudinal data.

By leveraging technology in creative ways, YKSD provides students and teachers with enhanced learning opportunities that would not otherwise be available in their remote district.
Millard County School District (MCSD) is a rural district in Utah serving approximately 3,000 students over a large geographic area. Because students participating in sports and other extracurricular activities can spend up to four hours on a bus each way, MCSD has outfitted school buses with Wi-Fi so students can work on homework while they travel.

In partnership with a local university, MCSD offers online courses which allow students to earn college credit while still in high school. Online courses are also available through Brigham Young University Independent Study, giving students access to courses that are not locally available. MCSD also developed their own online classes to support students in small, remote schools.

To ensure that teachers are prepared to leverage technology in meaningful ways, MCSD provides high quality professional development for teachers, including an engagement with Team4Tech, an organization that provides services to educational institutions and service learning opportunities to industry. In 2018, ten volunteers from VMWare, two consultants from CoSN, and organizers from Team4Tech visited MCSD. The services provided by the volunteers included detailed professional development in the use of GSuite for Education.
HOW EAST NOBLE INDIANA LEVERAGED PROXIMITY TO A NEARBY CITY TO ENHANCE STUDENT LEARNING

East Noble School District is a rural district just under an hour away from Fort Wayne, IN. Being a rural district in comparatively close proximity to a city presents some particular challenges.

### Problem

Students can drive to Fort Wayne to attend classes at the university, but the commute is too far to fit into the school day.  
The district’s relative proximity to Fort Wayne makes teacher retention and recruitment difficult. Teachers are often recruited away to Fort Wayne after the district has invested in their professional development.  
Students need the chance to explore potential careers through experiences like internships, but the local community does not provide much diversity of opportunity.

### Solution

The district plans high school student schedules so students can take full days off from local instruction to attend classes at the university.  
The district offers teachers sign-on bonuses and a strong, collegial work environment to encourage teachers to stay.  
To allow students to explore potential careers, the district strives to place nearly all graduates in at least one off-campus work experience. That experience may be structured through a mentor/mentee relationship, an internship, or technical education course work. The district also leverages virtual and online field trips as well as online mentors.

### Conclusion

Rural districts have unique needs and can often be strapped for resources. However, as noted in the examples from YKSD, Millard and East Noble, technology can be leveraged to overcome challenges, identify creative solutions and overall enhance the learning experience for students.

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