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FOSTERING RURAL POTENTIAL IN TEXAS

A PLACE-BASED APPROACH TO EDUCATION, WORKFORCE DEVELOPMENT, AND COMMUNITY-CENTERED GROWTH

Executive Summary

Texas stands at a juncture where rural and urban communities depend on strategic investments in education, workforce development, and economic growth. Rural schools serve 17% of Texas's 5.4 million students but face serious gaps in career development, broadband, and resources. Place-based education (PBE) leverages local geography, cultures, and environments to create real-world learning experiences, making education more relevant and impactful. Strengthening PBE, forging higher education-industry partnerships, and implementing targeted reforms will bolster long-term prosperity statewide. Ensuring equitable access to advanced courses, robust credentials, and sustainable community resources is absolutely essential for bridging educational and economic disparities throughout Texas and beyond.

KEY FINDINGS

Rural-Urban Workforce Gaps – Rural Texas contends with outmigration, limited healthcare and broadband access, and reduced tax revenue, while urban centers experience infrastructure strains and housing shortages amid high-demand labor needs.

Education and Credentialing Barriers – Scarce AP, dual-credit, and career-technical options impede many rural students from earning industry-recognized credentials and accessing high-wage careers.

PK-20 Organic Growth Model – A structured pipeline from early learning through postsecondary education cultivates workforce readiness, lowers student debt, and stimulates local development.

Place-Based Education as a Solution – Contextually relevant projects build real-world skills, strengthen civic engagement, and promote economic vitality.

Infrastructure and Industry Partnerships – Engage the Tri-Agency Workforce Initiative to catalyze broadband expansion, industry-education collaboration, and economic incentives to forge a resilient talent pipeline bridging rural-urban divides.

ACTION-ORIENTED RECOMMENDATIONS

Expand Place-Based Learning – Incorporate locally relevant curricula, research projects, and STEM initiatives to prepare students for high-demand careers.

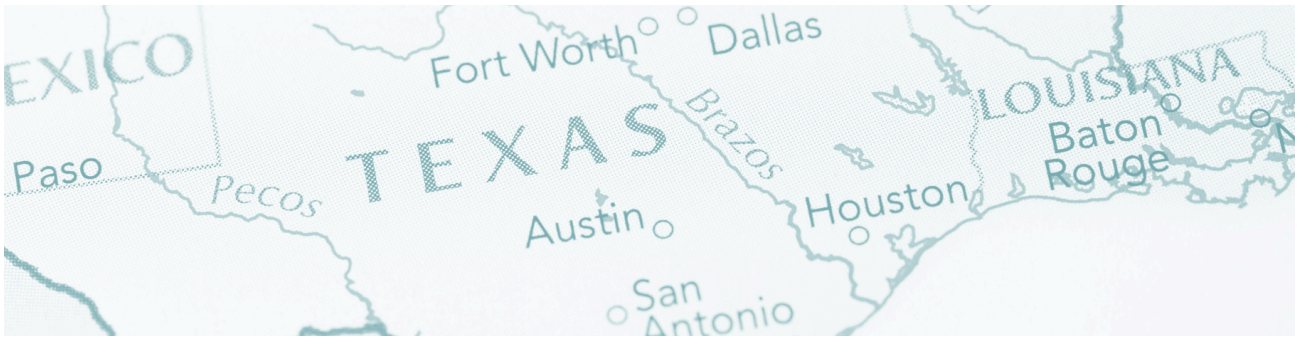
Strengthen Workforce Pipelines – Create school-industry partnerships offering internships, apprenticeships, and dual-credit programs.

Enhance Infrastructure – Invest in broadband, transportation, and tele-education to ensure equitable access to education and workforce training.

Scale Best Practices – Pilot demonstration programs in rural districts, measure results, and adopt scalable policies aligned with workforce needs.

By embracing these strategies, Texas can bridge the rural-urban divide, cultivate a robust workforce, and position communities for sustained social and economic success.

Introduction



Texas stands at a pivotal crossroads where its thriving urban centers and expansive rural regions shape its culture, economy, workforce, and future. The state, which spans 171 million acres and is home to over 30 million people, faces shared and distinct challenges.

Texas's rural communities stand at a critical inflection point. Without strategic investment in education and workforce pathways, the state risks worsening economic disparities, job shortages, and educational inequities that will limit future growth. Tackling issues like deteriorating roads, limited public services, and the urgent need for better education and training programs call for robust collaboration and innovative public-private partnerships. Shifting demographics further redefine job markets and influence political representation, impacting every corner of Texas.

Rural and urban communities in Texas face distinct challenges that demand tailored solutions. Rural counties struggle with outmigration, shrinking tax bases, and inadequate broadband access, which hinders business attraction, restricts access to educational opportunities and jeopardizes healthcare services. Meanwhile, urban centers wrestle with surging housing costs, crippling traffic congestion, and heightened environmental risks, particularly in flood-prone or coastal areas.

Rural leaders must prioritize fostering targeted economic growth, forging healthcare partnerships, and expanding broadband to secure long-term stability. Urban leaders, in turn, must create innovative housing strategies, champion comprehensive public transit systems, and implement robust plans for climate resilience.

Texas can navigate rapid changes and ensure prosperity by embracing a bold, community-centered rural-urban approach. Leadership must act decisively by:

- **Empowering Rural Communities**: Address population loss, aging demographics, and limited economic opportunities. Invest in infrastructure, broadband, transportation, and education while expanding healthcare access and building resilience in agriculture and disaster management.
- **Fortifying Urban Hubs:** Mitigate infrastructure and housing strains caused by rapid growth. Tackle environmental challenges, economic inequality, and public health needs through mobility and innovation, sustainable development, and equitable education and workforce initiatives.

Strategic collaboration and proactive leadership

will enable Texas to thrive as rural and urban regions rise to meet future demands. Place-based learning connects students to their local environment, industries, and challenges, confirming that education is relevant, hands-on, and career-driven. With 5.4 million students in Texas public schools, 17%—900,000—attend rural schools. Despite this significant population, rural career development and higher academic opportunities (e.g., AP courses, calculus) remain largely unrealized. Rural students face unique challenges, including economically constrained but tight-knit communities, lower school funding, and limited access to professional role models. These barriers restrict their pathways to high-demand, high-wage careers.

At the same time, empowering Texas's thriving economy relies on a nimble workforce equipped with postsecondary credentials and industry-recognized certifications in energy and sustainability, healthcare and telehealth, advanced manufacturing, and technology.

This white paper introduces a PK-20 "organic growth" framework that spans from early education through postsecondary pathways. Using place-based learning, locally focused project-based learning (PBL), and a critical pedagogy of place (Freire, 1970; Gruenewald, 2003), the model aims to foster lifelong learning and sustainable community development. Our vision is clear: Guide rural students from early learning through career pathways and re-skilling, fostering thriving rural economies and minimizing student debt.

With this approach, we aim to achieve the highest levels of student success, strengthen rural communities, and ensure every student can contribute to a vibrant future for Texas.

PRESENT-FUTURE ISSUES IN TEXAS EDUCATION, WORKFORCE, AND RURAL COMMUNITIES

RURAL-URBAN DIVERGENCES

Rural Texas faces a shrinking and aging population, reduced tax revenue, and mounting healthcare and social service demands as young residents leave for urban opportunities. Urban hubs—Austin, Dallas–Fort Worth, San Antonio, and Houston—grapple with labor shortages in technology, healthcare, advanced manufacturing, and energy infrastructure. Expanding postsecondary access and industry certifications can bridge these gaps and drive regional growth.

HIGH-DEMAND, HIGH-WAGE JOBS

Texas's $2.4–$2.6 trillion economy thrives on a skilled workforce, fueling high-demand, high-wage industries.

- Healthcare and Telehealth call for primary care physicians, nurse practitioners, allied health professionals, physical therapists, licensed vocational nurses, and telehealth technicians to meet growing needs.
- Renewable Energy Sector need wind turbine technicians, air quality engineers, crude oil delivery drivers, and solar installers to power the future.
- Agriculture and Agribusiness remain foundational while innovative practices are emerging including agricultural managers, technicians, solar specialists, and natural resource conservationist.
- Tech and Digital Fields rely on cybersecurity experts, software developers, data analysts, agricultural scientists, and natural resource specialists to lead in a digital-first world.
- Skilled Trades and Technical Occupations are in increasing demand. Construction managers, electricians, plumbers, and welders offer stable and well-paid careers for skilled tradespeople:
- Manufacturing and Automation Sector demand automation engineers, CNC operators, robotics operators, and welders to drive innovation and efficiency.
- The Education Sector remains a vital sector, with rural schools seeking qualified educators. Recent legislative efforts aim to address teacher shortages and enhance compensation.

Expanding skills and skilled workers in these fields ensures Texas stays competitive and prosperous.

THE ROLE OF EDUCATION AND CREDENTIALS

Education and resultant credentials hold the keys to meeting Texas's workforce demands. Postsecondary degrees and industry-recognized certifications prepare students for thriving careers. However, rural communities face significant barriers—a shortage of educators, limited technology and career-focused programs, unreliable broadband, and inadequate transportation—hindering students from accessing and realizing these critical opportunities. Overcoming these challenges is essential to unlocking Texas's full potential.

PLACE-BASED EDUCATION BRIDGES RURAL AND URBAN NEEDS

Place-based education, rooted in progressive constructivism, connects learning to local environments, empowering students to solve real-world community challenges. Dewey's works (1916, 1925, 1934, 1938) emphasized learning by doing and doing to learn. Bruner's theory (1961, 1973) highlights that learners of all ages can grasp complex concepts with structured guidance. McLeod (2024) affirmed Bruner's approach, emphasizing a progression from hands-on exploration to symbolic understanding, even for adult learners.

Despite contextual differences, rural and urban communities share core principles of experiential learning: relevance, mentorship, collaboration, personal development, and mutual benefit. John Dewey, David Kolb, Kurt Lewin, and Jean Piaget championed experiential learning, emphasizing education as an interactive process tied to real life. This philosophy fosters active participation in a democratic society and builds applicable skills, understandings, and appreciations across environments.

In rural areas, place-based education reveals local opportunities while cultivating transferable skills. Place-based curriculum strengthens local identity, civic engagement, and community pride. Both rural and urban settings use hands-on learning to bridge tailored curricula with local relevance.

Supervised research experiences, central to the National FFA's (2023) motto—"learning to do, doing to learn, earning to live, living to serve"—prepare students for real-world challenges. These immersive programs teach 21st-century learning, literacy, and life skills (Hummel, 2024), like collaboration, critical thinking, problem-solving, and decision-making. **Planned experiences drive entrepreneurship, interpersonal growth, and lifelong employability, equipping students to thrive in any career path.**

A CRITICAL PEDAGOGY OF PLACE: EMPOWERING STUDENTS THROUGH LOCAL ENGAGEMENT

Gruenewald's (2003) Critical Pedagogy of Place empowers students to explore how their environments shape their lives, blending critical social analysis with local inquiry. This approach develops civic-minded, ecologically-aware learners who actively examine social, cultural, and environmental issues in their communities. By engaging in these challenges, students propose data-driven solutions, creating pathways for continuous improvement.
Smith and Smith (2021) provide a framework highlighting how culturally relevant teaching enhances education by respecting and reflecting students' diverse backgrounds. Anchoring lessons in local contexts makes learning relatable, practical, and engaging.

This approach transforms education by:

- **Deepening Understanding:** Core subjects like language arts, STEM, humanities, and social sciences come alive through hands-on, meaningful projects tied to local realities.
- **Driving Empowerment:** Students gain tools to address critical issues such as housing, water quality, food security, healthcare access, and environmental sustainability.
- **Sparking Innovation:** These real-world projects inspire entrepreneurship, create jobs, and fuel local economic growth.

A Critical Pedagogy of Place turns classrooms into launchpads for community-driven change, fostering empowered learners to understand their power to shape their world (Freire, (1970).

EMPOWERING CAREERS THROUGH PLACE-BASED EDUCATION

Place-based projects connect students to local opportunities, linking them with community leaders, industry experts, and government officials. These role models showcase how advanced technology, engineering, and healthcare skills directly shape their hometowns, bridging the gap between classroom learning and future careers.

Distance technologies are vital in overcoming geographic barriers in remote areas, ensuring students can explore professional opportunities from anywhere (Connolly, 2020).

- **Learning Management Systems (LMS):** Streamline education with course delivery, progress tracking, quizzes, and feedback.
- **Collaboration Tools:** Foster teamwork and communication among students and educators.
- **Productivity Tools:** Help students stay organized and manage tasks efficiently.
- **Digital Simulations:** Create interactive, hands-on learning environments.
- **Assistive Technologies:** Ensure inclusive education by supporting students with special needs.

Additional resources, such as communication platforms, digital games, and online learning tools, expand access to high-quality education. These innovations inspire students to envision thriving careers within their communities. By leveraging technology and local engagement, place-based education equips learners to **turn hometown challenges into transformative learning experiences.**

THE PK-20 ORGANIC GROWTH MODEL: BUILDING SUCCESS FROM BIRTH TO CAREERS

The PK-20 Organic Growth Model fosters lifelong learning by starting with early childhood education, 3PK, and expanding opportunities through postsecondary achievement. This structured, intentional approach reduces dropouts, prepares students for careers, and revitalizes local communities.

- Early Homeschooling: Learning begins in the womb and continues as parents naturally teach children foundational language, culture, and social skills. Initially informal, this process evolves into a structured approach by age four or five, laying a solid foundation for future education.
- PreK: Continues to build critical literacy, numeracy, and social-emotional skills. Sparks curiosity with nature studies and place-based lessons that connect learning to the environment.
- Elementary School (Grades K–5): Strengthens core reading, math, and science competencies. Fosters engagement with place-based projects, such as exploring local history or studying local plants and animals.
- Middle School (Grades 6–8): Inspires collaboration among students and community members with STEM projects focusing on single variables, like water quality testing or soil analysis. It encourages students to map community assets, identify needs, and develop solutions. It also provides early career exposure through local and virtual business visits, internships, and job shadowing.
- High School (Grades 9–12): Expands STEM research to tackle multi-variable challenges, such as analyzing long-term environmental data or examining relationships between light, water, and plant growth.
- Offer college dual-credit and career and technical education (CTE) courses leading to industry-recognized certifications in, for example, IT, welding, and healthcare. Connect students with internships, co-ops, and virtual opportunities to gain hands-on experience.
- Postsecondary (13–20): Provide pathways to degrees, certifications, and stacked credentials through community colleges or specialized programs. Partner with industries for advanced training in high-demand fields like manufacturing, cybersecurity, and telehealth. Make education affordable with scholarships, paid apprenticeships, employer sponsorships, and state/federal aid. Develop habit of lifelong learning.

The model ensures a seamless transition from early learning to career readiness, lifelong learning, and engaged citizenry, equipping students with the skills, knowledge, and opportunities needed to thrive in a rapidly changing world.

TRACKING SUCCESS: TEKS, ESSENTIAL ELEMENTS, AND RUBRICS

Schools can achieve meaningful outcomes by using rubrics to evaluate progress in key areas:

- **Curriculum Alignment:** Do place-based lessons meet academic standards while addressing local workforce and economic needs?
- **Teacher Training:** Are educators receiving support in STEM, project-based learning (PBL), and community engagement?
- **Student Engagement:** How many students participate in research projects, internships, and postsecondary credit/certification programs?
- **Postsecondary Transition:** What percentage of students earn industry-recognized credentials, enroll in and complete postsecondary education, and secure jobs after high school?

OVERCOMING RURAL CAREER DEVELOPMENT CHALLENGES

While place-based education opens doors, rural communities face unique hurdles:

- **Limited Local Industries:** Fewer large employers and professional mentors can restrict career exposure.
- **Low Funding:** Smaller tax bases often mean fewer resources for labs, counseling, and extracurricular programs.
- **Geographic Isolation:** Distances from colleges and specialized training centers create accessibility issues for rural students.
- **Student Attachment to Place:** Strong ties to family and farmland can be advantageous if they align with local job opportunities.

Schools can nurture rural career development and strengthen community connections by addressing these challenges through targeted support and leveraging place-based education.

STUDENT-DIRECTED RESEARCH

An organic growth model builds career readiness through research experiences tailored to students' development:

- **Grades 3–5:** Explore essential science topics, such as local wildlife, environmental issues, or community history.
- **Grades 6–8:** Conduct single-variable STEM projects, like water pH testing or soil analysis.
- **Grades 9–14:** Tackle long-term, multi-variable research, culminating in capstone projects or associate degrees.

These experiences enhance rigor, teamwork, and real-world problem-solving while instilling pride in students' communities. Guided career pathways grow organically from supervised exploratory experiences tailored to individual interests.

Building Sustainable Pipelines for Rural Growth

Rural communities can retain and attract young professionals by creating targeted opportunities that connect education to meaningful careers.

1. **Community Engagement**
   - Establish steering committees with local leaders and businesses to design place-based curricula and offer internships.
2. **Industry Partnerships**
   - Encourage companies to fund scholarships and host job rotations, creating clear, direct paths to employment.
3. **Virtual Connections**
   - Invest in broadband to enable tele-internships, remote mentoring, and online dual-credit courses, breaking down geographic barriers.
4. **Cluster or Corridor Models**
   - Collaborate with neighboring districts to share resources like specialized labs and vocational centers. Consider culture, travel time, and transportation costs when making these decisions.
5. **Economic Development Corporation**
   - Engage with the local or regional economic development corporation to ensure the relevance of programs to local workforce demands.

Conclusions and Next Steps

1. **Policy Alignment:**
   - Advocate for state and local funding for broadband, transportation, and school-industry partnerships.
   - Offer employer incentives for rural internships and apprenticeships leading to high-paying jobs.
2. **Expanded Collaboration:**
   - Develop regionally relevant programs and foster partnerships among K-12 schools, community colleges, universities, and intermediaries.
   - Engage the community through town halls, parent-teacher meetings, and business forums to ensure solutions align with local needs.
3. **Scaling Best Practices:**
   - Use pilot programs in rural districts to showcase successes, such as reduced dropout rates, industry-recognized credentials, and improved test scores.
   - Leverage telepresence and online platforms to bridge distance gaps while maintaining the benefits of place-based learning.
4. **Building the Future—One Community at a Time:**
   - This organic model benefits all of Texas. Rural areas gain a skilled workforce, while urban hubs attract new talent aligned with industry needs.
   - More students will see clear paths to well-paying careers near their hometowns, strengthening local economies and promoting statewide equity.

State Senator Perry warned, “Rural Texas is hard” (Carver, 2024). But Texas can create a homegrown talent pool that bridges gaps between rural and urban communities by uniting the critical pedagogy of place, PK-20 (beginning age 3/preK) coordination, and industry-recognized credentials. Education will catalyze schooling, workforce development, and community-centered growth.

TOGETHER, THESE STEPS CAN SECURE A BRIGHT, EQUITABLE FUTURE FOR ALL TEXANS.

Key Takeaways for Transforming Rural Education in Texas

- **Place-Based Education:** This approach connects lessons to real-world local issues , helping students see the value of their learning within their communities.
- **PK-20 Organic Model:** This model provides a seamless path from childhood learning at home to PreK to postsecondary studies, reducing dropout rates, student debt, and unemployment.
- **Age-Appropriate Research:** This program engages students in progressive, hands-on, community-based STEM projects in grades 3–5, 6–8, and 9–14, fostering local pride and critical skills.
- **Rural Focus:** This focus tackles challenges like geographic isolation and fewer industry opportunities through collaboration, broadband expansion, sharing of limited funding, and innovative distance-learning tools.
- **Broad Stakeholder Involvement:** Collaboration unites schools, businesses, and policymakers to develop long-term, scalable solutions that reflect local needs and opportunities.

By embracing these strategies, Texas can lead educational innovation, build strong, capable students, revitalize rural communities, and create a skilled workforce. **Combining Texas traditions with leading-edge progress ensures a future that benefits all Texans.**

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