Small Texas District MAKES BIG GAINS

By Tom Farmer

Handling the Funding Challenges
Having the superintendent and board endorse a curriculum shift is one thing, but funding it is quite another, particularly in a rural school district. Rallying the community to support a local bond issue was step one for the board, and the second step was the passage of Texas House Bill 5 in 2013, which brought significant change to state CTE funding. In effect, HB 5 serves as an equalizer among districts of varying size by increasing funding when CTE courses are added. The bill also requires all freshmen to choose one of five endorsement areas—STEM, business and industry, public service, arts and humanities, or multidisciplinary—and they then may work toward a distinguished level of achievement within their endorsement area.

“[CTE] courses now are weighted funding, so they actually tend to pay for themselves because they’re based on the number of students participating. So you get more state-allocated funding every time you offer a CTE course,” said Dominguez, who testified in front of the state legislature and the Texas Workforce Commission about Somerset’s shift to more career-focused curriculum.

Further addressing the funding challenge, Somerset’s Associate Superintendent of Instructional Services Phil Chavez says the district has pursued all available resources along the way to bolster a broad array of CTE offerings: agriculture, architecture and construction, arts, audio/video tech and communications, business, career development, corrections and security, distribution and logistics, health science, hospitality and tourism, human services, IT, law, manufacturing, public safety, STEM and transportation. Additionally, the district’s funding sources include the Title VI Rural and Low Income School Program.

“Somerset does not have the business and industry tax base most inner-city districts have, so we must rely on state and federal funding,” Chavez said of the community that is home to 1,600 residents within 88 square miles of mostly farmland. “Somerset has effectively leveraged state career and technical education funds and federal Perkins grant funds to offer a plethora of CTE-coherent course sequences.”

Connecting With Business and Industry
STEM/CTE is a natural fit in districts like Somerset that have low percentages of students who are deemed college-ready, though college preparation is still emphasized as evidenced by the recent opening of an early college high school in the area. Skills that students acquire through CTE courses can often lead to high-paying careers with companies such as Toyota Motor Manufacturing Texas, which operates a plant just up the highway from Somerset.

Toyota officials have long recognized the benefits of CTE courses and have even lobbied heavily in favor of HB 5. Mario Lozoya, director of government relations and external affairs for Toyota Texas, helped shape the law and has been active in Somerset and other area school districts, visiting STEM and CTE programs and suggesting specific courses that might eventually yield high school graduates who possess the technical skills and certifications needed by skilled maintenance technicians at Toyota. “There’s a shortage of people with those skill sets,” Lozoya

C all it the perfect storm, an answer to prayers, an inevitable shift in light of a changing job market or a natural evolution in education. Whatever the reason, CTE and science, technology, engineering and math (STEM) are gaining momentum in Texas, even in rural school districts, thanks to support at the top, weighted funding and business/industry connections.

A perfect example is Somerset ISD, where everyone in the rural community is pulling in the same direction—toward improved college- and career-readiness via real-world, hands-on experiences for students. As part of targeted improvements and upgrades in this economically disadvantaged school district, longtime superintendent Saul Hinojosa and a supportive school board have put K–12 STEM superintendent Saul Hinojosa and a supportive school board have put K–12 STEM
Welcome to Somerset
Students Find the Right Track

Enrique
Teacher Jonathan Boykin’s Principles of Engineering course was the highlight of the school day for Enrique when he was a freshman. That’s where he learned about airfoils in the aerospace module. “Students can model their own wings and actually put them to the test,” Enrique said. “I’m very familiar with the traditional aircraft airfoil, and I wanted to experiment. So, I made a modified airfoil and I decided to test it. I’ve always wanted to test a wing or an aeronautical design of my own using a wind tunnel tester, so I found this very helpful.”

An aspiring aerospace engineer, Enrique discovered that his airfoil design produced downforce instead of lift. “For an airplane, that wouldn’t actually be good, but for a car that would be good because that’s like a spoiler on the back of sports cars. They want the car to stay on the road.”

With that experiment under his belt, Enrique was motivated to take Boykin’s robotics course as a sophomore, when he used the TETRIX® Building System to design a robot for the SkillsUSA® Robotics: Urban Search & Rescue competition—just another building block in a solid STEM career foundation.
Destiny

Adjacent to Boykin’s classroom is another module lab, this one focused on biotechnology, for students who are interested in the sciences that lead to jobs in medical or related fields.

Destiny took the course in part because she had experienced a module lab at Somerset Junior High School. She came into the course with thoughts of a career in the medical field, and she left with plans to pursue the career of her dreams.

Lab facilitator Sierra Alcoser, like Boykin, does not just assign chapters to read, conduct a couple of experiments and administer tests. She brings learning to life, giving students opportunities to experience what it’s like to work as a researcher, nurse, doctor, surgeon or physician’s assistant when they explore modules such as Immunology, Genetics, Body Systems and Heart Fitness.

If you think you want to be an engineer because you think it’s X when it’s really Y, you get to college and discover it’s hard. Because you start in engineering classes from the very beginning, you’ve lost a semester of college. It’s better to figure that out now.

Progressing through Boykin’s engineering, robotics and STEM courses is as much a discernment process as a knowledge grab. Take Joel, for example. “He wants to do things that are more mechanical engineering, but he really likes cars,” Boykin explained about one of his students. “He’s trying to find a merger of the two. I don’t know if he’ll end up on the engineering side or on the automotive repair side in the end, but he likes those pieces, and he’ll find the fit that works for him.”

On the health-care side, teacher Sierra Alcoser witnesses the same scenario playing out on a regular basis in the freshman biotechnology course. “Each module is dedicated toward one specific topic. Allowing students to rotate into a topic and be there for seven to 10 days, focusing on that one topic, allows them to try it out. Once you get to college, you don’t get to try out a new major; tuition won’t let that happen. Here, they can say, ‘I really love immunology. I want to be an immunologist.’ The rotations allow them to try out specific careers.”

Just a few years ago, prior to the passage of HB 5 and before a bold decision by the local school board and superintendent, such career-rich experiences for Somerset High School students would have been few and far between. Now, the pathways to numerous careers have been well established, giving students countless opportunities to experience and experiment before making a big decision that not only shapes the rest of their lives, but also directly impacts the workforce available to local businesses and industries.

Tom Farmer is the communications manager for Pitsco Education. E-mail him at tfarmer@pitsco.com.