This Isn't Your Dad's Vocational Education

Auto shop is gone. The latest approach to career-oriented education looks a lot like academics.

By Sophie Quinton
National Journal
December 16, 2013

What used to be Dalton High School's wood shop is now free of dust. Instead, it's filled with welding stations, a 3-D printer, and a computer-controlled plasma cutter. Students work with the engineering students across the hall on robotics projects, building their knowledge of science, technology, engineering, and mathematics.

Seventy-four percent of Dalton High's students are enrolled in career, technical, and agricultural courses. But this isn't your father's vocational ed. Here, training for particular careers is considered part of a well-rounded college-preparatory education. "It's not an either/or with us," said Principal Steve Bartoo.

Dalton, Ga., a city of just over 33,000 in the Appalachian foothills, calls itself the Carpet Capital of the World. (Northwest Georgia produces 90 percent of the carpet made in the United States.) It's also home to a fast-growing Latino community. Latinos comprise 48 percent of Dalton's population—although only 9 percent statewide—and 70 percent of the students at Dalton High.

The community is still struggling to emerge from the recession; about 70 percent of the school's 1,640 students qualify for federally subsidized lunches. But despite changing demographics, falling incomes, and declining state funding, Dalton High's students are graduating at higher rates than ever. By combining a rigorous approach to career and technical education, known as CTE, with high academic expectations, the school has lifted its graduation rate from 56 percent to 92 percent over the past decade. Almost 70 percent of the class of 2011 enrolled in college within two years of finishing high school.

Starting this year, all ninth-graders in Georgia will be required to follow a career- or academic-focused "pathway"—in agribusiness, say, or finance—to graduate from high school. In Dalton, educators know that industry-focused courses can help teens thrive—but only when such courses aren't considered a separate track. The lines between electives, college-preparatory work, and career exploration are blurring. Schools that take this seriously can use career courses to elevate every student's education, rather than to warehouse the students lagging behind.

TRACKING? WHAT'S THAT?

Vocational education has been controversial since early-20th-century reformers proposed a divided system of public education—college-preparatory work for some, technical training for others. Critics worried that such a system would track poor, minority, and immigrant children into working-class jobs, restricting their access to higher education and limiting their social mobility.
We're starting to see a resolution to the century-old debate over tracking, said Anthony Carnevale, director of Georgetown University's Center on Education and the Workforce. He described "the melding of the two curriculum types, so that in theory, CTE programs don't stop you from going to Harvard."

The 21st century's information economy demands a new style of career training that helps prepare students for further education rather than diverts them from it, and teaches creative thinking and problem-solving rather than how to perform rote tasks. Think about CTE not only as training relevant to a career but as a way to help students acquire academic skills and think critically in a different way.

Two forces are moving CTE in an intellectually demanding direction. The first is political. Since the 1980s, policymakers have pushed schools to raise test scores and improve academic preparation. In 2006, Congress required schools to offer at least one sequence of career-oriented courses encompassing secondary and postsecondary education to be eligible for any of the $1.14 billion available in federal aid.

The second force is economic. The skilled trades have become more, well, skilled, and employers are demanding advanced credentials. By 2020, Carnevale and his colleagues predict, 65 percent of jobs will require postsecondary training. In many fast-growing fields, such as health care, entry-level workers must return to school to move up. If you're a certified nursing assistant at a hospital, you can't just work your way up to become a registered nurse.

Low-skilled, low-paid jobs in retail and food services are also expected to grow over the next decade. But it has become almost impossible for people with a high school education or less to find the sort of jobs that can support a family, let alone move them into the middle class or beyond.

With college costs rising, credentials that deliver a good return on investment are in demand. Holders of a technical associate's degree can command better salaries their first year out of school—in Texas, $11,000 higher—than graduates with a bachelor's degree in liberal arts, according to Mark Schneider, vice president at the American Institutes for Research, a Washington think tank. Those holding college degrees with a technical bent, whether from a two- or four-year school, fare best. The highest paid in every state: graduates in engineering.

Today, about 85 percent of public high school students complete at least one CTE class, and the demographics of participants mirror almost exactly the general high school population, according to the National Association of State Directors of Career Technical Education Consortium. Of the 16 "career clusters" the consortium has defined, the most popular include health science, information technology, and business and administration.

Even at elite colleges, the concept of career preparation—rather than immersion in pure academic study—is gaining ground. At the private liberal-arts colleges ranked highest by *U.S. News & World Report*, the number of graduates in vocational majors—think education or nursing, rather than English or biology—increased from less than 11 percent in 1987 to 29 percent in 2012, Victor E. Ferrall Jr., a former president of Beloit College, wrote last year in the *Pacific Standard*. 
TURNAROUND AT DALTON HIGH

Years ago, when Debbie Freeman was an eighth-grade teacher in Dalton, Latino students were treated differently than their white peers. Many of the Latino children were not native English speakers, and, for that reason, fell behind academically. Almost reflexively, Latinos were placed in remedial classes when they entered high school. They weren't expected to catch up.

When Freeman became Dalton High's principal in 2006, she helped the school adjust to a student body that was majority Latino. "It doesn't matter, the ethnicity," Freeman says now. What matters is poverty at home, "the kinds of opportunities the kids do and do not have."

The city hired the Southern Regional Education Board to help overhaul the curriculum. Dalton High eliminated all low-level courses and added more Advanced Placement and International Baccalaureate classes. The school helped students get tutoring and increased the number of field trips, exposing the teens to more learning experiences.

Existing CTE programs were aligned to certifications by industry, which made them tougher and gave students a foundation for postsecondary study, and new programs were added that reflected the needs of nearby labor markets. Auto shop was eliminated. Home economics became "culinary arts." Classes were introduced in graphic arts and video production, and the school started offering a science, technology, engineering, and math curriculum designed by Project Lead the Way, a national nonprofit. All CTE courses emphasize entrepreneurship and marketing, to show students they can turn whatever they're learning into a small business.

Raising the bar for students pushed teachers to do more. Teachers started to meet in small groups to share best practices. Many made more time to mentor students. While Dalton High continues to enroll recent immigrants with only a grade-school education, the combination of higher expectations and extra support has still narrowed the achievement gap.

All on a shrinking budget. While state grants help to pay for new CTE programs, state education funding has dropped an average of 15 percent per student since 2002, according to the Georgia Budget and Policy Institute. Dalton's local per-student spending has slipped by 11 percent—it's tax revenue by 21 percent.

Dalton-area manufacturers have stepped in as advisers to local schools and community colleges, to help match the schools' curricula with employers' needs. "In general, in our company, almost every job has to have a higher skill level than it used to," said Brian Cooksey, director of operations training and development at Shaw Industries. The carpet and flooring maker is looking for workers who can fix and reprogram machines that control automated factory floors. That means finding electricians who also understand computer programming and industrial systems.

PATHWAYS TO SUCCESS

Education in Georgia is in rough shape. Last year, the high school graduation rate was just 70 percent. Social mobility, scholars say, is one of the lowest for any state in the country. Fifty-seven percent of public-school students are poor, and improving their prospects for education and employment is deemed critical to the state's economic future.
Georgia's "career pathways" initiative is something of a turnaround strategy for all of the state's public schools. State Superintendent John Barge says the goal is to ensure that students leave high school prepared for what comes next, whether that's a job, a two-year college, or a four-year degree. "I'm convinced that in K-through-12 education, we could do a much better job helping to prepare children for their next step," he said in an interview.

Career education in Georgia's public schools now begins in kindergarten. This year, all high school students must pursue a chosen pathway, with its sequence of three courses in a particular discipline. A student who chooses the "agribusiness system" pathway, for example, might take classes in basic agricultural science, then in agricultural management, followed by agricultural marketing. A student in the "world languages" pathway might take three additional classes in French.

Georgia's Legislature approved the plan in 2011, and the state education department has worked with colleges and industry leaders to define 17 career clusters—and multiple pathways for each—that matter most to Georgia's economy. School districts choose which pathways to offer or suggest their own, with the expectation that they'll consider local needs. Not every school offers every pathway, particularly in rural districts. To ensure access to a range of courses, the state is developing online classes, and some districts are working with nearby technical colleges to let high schoolers take courses on campus.

For a pathways approach to serve students well, educators and policymakers must think of career exploration and vocational training not as a substitute for college preparation but as a supplement. And they must keep in mind that a student's path after high school doesn't always unfold as planned.

Yet a strong high school can't compensate for a weak economy, particularly in Dalton, where the unemployment rate remains around 10 percent. Not long ago, Principal Bartoo saw a recent Dalton High graduate at a football game. The student was well qualified for college but was working full time as a creeler, maintaining the yarn supply for a local factory's carpet-making machine. "This is a kid who would probably do very well at a higher-skilled type of job, but they're not there," Bartoo said.

That's why Dalton High is pushing students to think like entrepreneurs. Its graduates are the future of the local economy. Rather than waiting for existing employers to start hiring, they'll need the skills to build the jobs of the future for themselves.