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How Gen Z Is Becoming the Toolbelt Generation

Te-Ping Chen | Photographs by Philip Cheung for The Wall Street Journal

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America needs more plumbers, and Gen Z is answering the call.

Long beset by a labor crunch, the skilled trades are newly appealing to the youngest cohort of American workers, many of whom are choosing to leave the college path. Rising pay and new technologies in fields from welding to machine tooling are giving trade professions a face-lift, helping them shed the image of being dirty, low-end work. Growing skepticism about the return on a college education, the cost of which has soared in recent decades, is adding to their shine.

Enrollment in vocational training programs is surging as overall enrollment in community colleges and four-year institutions has fallen. The number of students enrolled in vocational-focused community colleges rose 16% last year to its highest level since the National Student Clearinghouse began tracking such data in 2018. The ranks of students studying construction trades rose

23% during that time, while those in programs covering HVAC and vehicle maintenance and repair increased 7%.

“It’s a really smart route for kids who want to find something and aren’t gung ho on going to college,” says Tanner Burgess, 20, who graduated from a nine-month welding program last fall.

Though he’d originally figured he’d go to college, the route began to feel less appealing during the pandemic, when he watched his parents—both tech workers—gaze at their computers all day and realized he didn’t like the idea of spending his life seated before a screen.

After reading up on the skilled trades, he settled on welding. “I thought it was cool because it had a lot of fire,” says Burgess, who’s now helping install pipes for a new hospital in San Diego.

A secure job track and the prospect of steadily growing earnings didn’t hurt either. After five years at the profession, he says he expects to be making a six-figure annual income, based on what he sees others around him making.

“It feels good at the end of the day, I’m physically doing something and there’s a sense of completion,” he says.

Worker shortage

A shortage of skilled tradespeople, brought on as older electricians, plumbers and welders retire, is driving up the cost of labor, as many sticker-shocked homeowners embarking on repairs and renovations in recent years have found.

The median pay for new construction hires rose 5.1% to $48,089 last year. By contrast, new hires in professional services earned an

annual $39,520, up 2.7% from 2022, according to data from payroll-services provider ADP.

That's the fourth year that median annual pay for new construction hires has eclipsed earnings for new hires in both the professional services and information sectors—such as accountants or IT maintenance workers—ADP says.

Demand for trade apprenticeships, which let students combine work experience with a course of study often paid for by employers, has boomed lately. In a survey of high school and college-age people by software company Jobber last year, 75% said they would be interested in vocational schools offering paid, on-the-job training.

The rise of generative AI is changing the career calculus for some young people. The majority of respondents Jobber surveyed said they thought blue-collar jobs offered better job security than white-collar ones, given the growth of AI.

Nearly 80% of respondents in Jobber's survey said their parents wanted them to go to college. Professions dominated by college-educated workers generally earn more over time. Professional and business services workers, for example, make a median $78,500 compared with $69,200 in construction, according to ADP.

"I'll be honest, it took me a little bit mentally to get on board," says Burgess's mother, Lisa Hopkins, who studied drama and art history before obtaining an MBA. She never had much exposure to the trades, but she says she's thrilled her son has found something he loves with good prospects: "He's already thinking, 'I want to buy my first house by the time I'm 24. I don't have any debt, I'm off to the races.'"

New robotic equipment

Steve Schneider, a counselor at a high school in Sheboygan, Wis., says that for years, students called the vocational education wing "greaser hall," believing mostly ne'er-do-wells and troublemakers wound up there. The fact that it was home to outdated wood and metalworking equipment didn't help its appeal.

In recent years, though, businesses have raised funds and donated new equipment, including robotic arms, he says, adding that those classrooms now sit at the building's main entrance.

"There's still a presumption that four-year college is the gold standard, but it doesn't take as much work to get people to buy into the viability of other options," says Schneider.

Those in the industry are generally positive about their careers: A survey last year of skilled workers by home services site Thumbtack found that 94% would encourage their own kids or family members to pursue similar occupations.

While the skilled trades may be lucrative, they can take a harsh physical toll. In some markets, graduates have had trouble landing positions as new construction has slowed. Most employers prefer to hire those with experience, says Curt Nordal, a Riverside, Calif.-based recruiter specializing in commercial HVAC roles.

Alezet Valerio, 18, started at a construction site in Phoenix nine months ago, right after graduating high school. She was surprised when, in addition to learning how to hang drywall, her supervisors also began training her to run a robot that assists with site layout.

"It's not at all what I was expecting," says Valerio, who now spends a couple of days a week overseeing the robot's work, making $24

an hour. The job can be exhausting—she rises at 4:30 a.m. every day to get on site before 6 a.m.—but she says she loves the feeling of getting to build something. She's now planning to get a degree in construction management.

"I'm building skyscrapers and building a career out of it," she says.

In Pennsylvania, the trades have seen an influx of workers since the pandemic, says Michael McGraw, executive director of the Pennsylvania Plumbing-Heating-Cooling Contractors Association. In the southeastern part of the state, where McGraw is based, someone graduating five years ago from the trade schools the association runs might have made $35,000 a year; these days it is closer to $60,000, he says. Enrollment in the association's trade schools—where tuition costs around $3,000 a year—has risen across the board.

"After Covid, it seemed a lot of people realized the trades are a life-sustaining career path," he says. As other businesses shut down then, more people realized that the skilled trades were reliable, well-paying paths that weren't going away, he says.

Michael Krupnicki, president of the American Welding Society, has toured two dozen trade schools in the past year, many of which he says are experiencing full enrollment in their welding programs, as is the case with the school he owns in upstate New York. Federal and state initiatives to encourage more training for students have helped spur interest, he says. So has the work of people like Mike Rowe, host of the Discovery Channel series "Dirty Jobs," which put a spotlight on blue-collar work.

"It's not a crisis story like it was a few years ago," says Krupnicki, of the industry's talent shortage. "The pendulum swing has

happened hard and fast in the last five years."

A new study by labor analytics firm Burning Glass Institute and Strada Education Foundation shows that roughly half of college graduates end up in jobs where bachelor degrees aren't needed, and many high-school graduates say they're disinclined to take on college debt.

"Not everyone needs a degree, and it takes the value out of a degree if everyone has it," says George Belcher, 18, a senior in Houston. Belcher long assumed he'd go to college, but as a junior, he grew curious about life in the oil industry, where his father works in government relations. This fall, he'll enroll in trade school at a cost of $14,000 for a two-year degree, and plans to eventually work on an offshore oil rig. "I love the ocean," he says. He also likes the idea of working for weeks, then resting for weeks, a schedule typical with such roles.

Tripled applications

At energy service company Lantern Energy, in Glastonbury, Conn., CEO Peter Callan says in the past year, he has seen more people applying for technician jobs who were on a college track and decided it wasn't ultimately for them. The overall number of applications the company receives has roughly tripled in the past five years.

These days, the recruitment challenge he faces isn't a lack of workers, but finding quality ones. Current applicants tend to exhibit fewer soft skills, such as communication skills, and higher turnover than their predecessors, he says.

Ashley Brown, an Ohio-based lead executive recruiter with Rust

Belt Recruiting, which specializes in skilled-trade recruitment, says that over the past year and a half, it has become easier to fill roles such as machinists, welders and certain maintenance technicians.

“Supply is catching up with demand,” she says.

The number of carpenters in the U.S. grew over the past decade, while their median age fell from 42.2 to 40.9. The same was true for electricians, whose ranks grew by 229,000 workers, even as their median age fell by 2.9 years, according to federal data. Other skilled trade occupations, such as plumbing and HVAC workers, have also trended younger.

At this point, Brown says, the hardest skilled-trade jobs to fill are those that require college degrees—controls engineers, for example, a role that requires production knowledge, as well as robotics programming skills—along with rich practical experience.

“There are college kids coming out with business degrees and wanting to go into plant management,” she says. “But the people we’re going to hire [in many cases] are the ones that have worked 20 years and already know everything about the business.”

Some in Gen Z say they’re drawn to the skilled trades because of their entrepreneurial potential. Colby Dell, 19, is attending trade school for automotive repair, with plans to launch his own mobile detailing company, one he wants to eventually expand into custom body work.

“I always thought it was a hobby,” he says of his love of cars. “Looking into these vocational schools, I realized it was a dream I could really pursue.”

His father Terry Dell, a Spokane, Wash.-based global technical

sales director, says he's thrilled by his son's decision and is investing money he would have spent on college tuition into his son's company. He plans to do the same with Colby's younger brother, who has also lately expressed interest in attending trade school and opening his own welding business, and believes they both have significant potential.

"I expect them to outearn me someday," he says.

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