

Career paths require more education after high school

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By Eleanor Chute,
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More and more high school graduates are finding they need postsecondary education to open up career possibilities.

"The days of a high school graduate getting a career straight out of high school are pretty much over," said Jason Kiker, education research analyst for the Association for Career and Technical Education.

James Stone III, director of the National Research Center for Career and Technical Education, thinks some high schools do prepare students for work after graduation -- such as those in a partnership between high schools and the Chicago Transit Authority.

However, he said, "When you slice and dice the labor market data, you find almost half of the jobs they expect to show up are more in the middle skill range. The U.S. Department of Labor defines that as high school plus some postsecondary education and training."

That doesn't necessarily mean everyone needs a four-year degree. Shorter postsecondary programs -- such as certificates, apprenticeships and associate degrees -- can open doors to some careers.

Of all jobs expected to exist in 2017 in the 10-county region, nearly half will require more than short-term or moderate-term on-the-job training, according to the Three Rivers Workforce Investment Board.

For those jobs requiring more training or education, a total of 10 percent will require a postsecondary vocational award or an associate degree, approaching as many as the 13 percent that will require bachelor's degrees. Some other jobs will call for a degree plus experience, advanced degrees, work experience or long-term on-the-job training. There are no regional figures for certificates.

Community colleges, trade unions and for-profit career schools offer training in many fields, ranging from the trades to career and technical education.

Some students begin their studies in high school at their district's career and technology centers, sometimes called vocational-technical schools, such as A. W. Beattie, Forbes Road, Parkway West and Steel Center.

In recent years, the trend has been toward vo-tech schools offering programs that meet industry standards, thus enabling students to be better prepared for work or to enter postsecondary schools with advanced credits.

Students who show they've met industry standards have a credential that can be a labor market advantage, Dr. Stone said.

That's particularly true in industries, such as automotive, where a master mechanic is valued, or Cisco computer network certification that shows competency.

Dr. Stone said certifications in the retail and hospitality industries are less recognized and less consistent.

In some industries, employers pay particular attention to what a noted instructor thinks of the student's performance, he said.

Programs that build on high school vo-tech education and two-year postsecondary programs are called 2+2. Those that follow a pathway to a four-year school are called 2+2+2.

The state Department of Education has launched efforts to develop better "articulation agreements" between schools so credits can more readily transfer.

Paula Rendine, the tech prep coordinator who works on the link to high school students for Westmoreland County Community College, said students can earn from three to 29 credits transferable to WCCC while in high school.

The 29 credits in computer systems electronics would put a student about halfway to an associate degree.

Aaron Volpe, a tech prep student who is a 2008 graduate of Derry Area High School and Eastern Westmoreland Career and Technology Center, started this fall at Westmoreland County Community College with 29 credits.

"Back when I first started [in 10th grade], tech prep didn't seem that important. Now it gave me a good advantage," Mr. Volpe said. "It was a field I was interested in, and it was pretty much free credits."

No matter what the field, Ms. Rendine said, students still need to have strong academic backgrounds in English, math and science. Trades such as welding take higher math, including some trigonometry.

She said classes in demand include computer technology programs; welding; machining; graphics; heating, ventilation and air conditioning; electronics; drafting; and business.

An example of 2+2+2 is the industrial technology program at California University of Pennsylvania, which involves robotics and uses a curriculum developed with Carnegie Mellon University.

Students can start in high school vo-tech programs at Beattie and Mercer County career centers and McKeesport Area and Connellsville high schools.

Successful students can earn a semester's credit at California University while in high school, speeding up their path to an associate or bachelor's degree from California.

The first three students to earn credit and choose California entered the university this fall.

Jason Mols, a 2008 McKeesport Area graduate, started California University with 15 credits. He's aiming for a bachelor's degree, saying, "I would be learning more, getting more advanced in what I want to do and probably making a higher salary in the long run."

But even if those in the high school program don't choose California, Stanley Komacek, chair and professor of applied engineering and technology at California, said students are learning about computers, design, programming, mechanics and electronics, all skills that could apply to a wide range of technology fields.

Dr. Komacek said California would like to expand this approach to graphics and printing.

Students don't have to start in the vo-tech program in high school to advance in the trades, technical and career fields. The programs are also open to both traditional and nontraditional students who didn't take vo-tech in high school.

At Community College of Allegheny County, skilled trade programs are offered at the new West Hills Center.

Gretchen Mullin, acting dean of academic affairs at CCAC's North campus, which includes the West Hills Center, said welding; heating, ventilation and air conditioning; and automotive technology are among the most popular programs and are considered priority occupations by the state.

"The vo-techs are important, but you don't have to necessarily be in the vo-tech to do a trade career," she said. "Anyone who is interested in the trades can do well."

Some of the programs at CCAC are offered in connection with local trade unions. The CCAC classes form part of the education provided by the unions for their apprentices.

Many local unions offer free training for those who are accepted into their apprenticeship schools.

Jason Fincke, executive director of the Builders Guild of Western Pennsylvania, said the building trades unions run 17 apprenticeship schools in the area. Apprentices get paid for work they do while they are being trained but generally not for the hours they are in school.

Applicants must apply to the unions, be at least 18 years old, have a high school diploma or GED, have a valid Pennsylvania driver's license, have access to a car to get to job sites and be drug-free.

He said the trades have elaborate training facilities, such as the electricians on the South Side, the plumbers in North Fayette and the carpenters, who have broken ground on a \$15-million training center in Collier.

The various union schools take applications at different times of the year. They require a written test -- which can include algebra, geometry and a bit of trigonometry as well as reading comprehension -- and an interview.

The Greater Pennsylvania Regional Council of Carpenters posts a sample written test on its Web site at www.greaterpacarpenters.org. (Look under careers and training and then under the apprenticeship program.)

Some free pre-apprenticeship help is available for those who aren't ready for the tests, including a course by the Minority and Women Educational Labor Agency.

When considering a trade, career or technology program, Dr. Stone urges students to choose something they like doing, not just something with the best pay.

Otherwise, he said, "You aren't going to be very good at it and won't last very long doing it."

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