

# High schoolers serve apprenticeships to learn skilled jobs

By Charlotte Observer, adapted by Newsela staff

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Olympic High student Maceo Ruckers-Shivers calibrates equipment at Bosch Rexroth on April 24, 2013, in Charlotte, North Carolina.

By springtime, a lot of high school seniors are cruising to the end of school. Maceo Rucker-Shivers cannot afford to join them.

His class work at Olympic High School's math/science school in Charlotte, N.C., and his after-school job at nearby Bosch Rexroth Corp., are preparing him for work as a machinist technician. His supervisors at the German company are watching to see whether his skills and work ethic justify paying his tuition at a community college after graduation.

"You have to bring your A-game every day," Rucker-Shivers said.

His career-focused studies led him to discover a passion for building precision manufacturing equipment. "Machines excite me. They really do," he said, beaming.

Rucker-Shivers may represent the future of public education.

## Forging Closer Links

It is a future with closer links among K-12 schools, community colleges and private employers, influenced by the European apprenticeship model. It is one where the “college for all” mantra yields to a recognition that for many students, training for skilled jobs is more meaningful than a four-year degree. And it is one where promising students can start earning money right away—sometimes while they are in high school—rather than taking on college debt.

According to “Pathways to Prosperity,” a 2011 report from the Harvard Graduate School of Education, America’s current approach to academics is not only failing the students who drop out of high school. Almost half the students who enroll in a four-year college leave without a diploma, the report notes. And minority and low-income students finish college at a lower rate.

The recommended solution is to have multiple pathways to adulthood, with employers playing a greater role in shaping those paths. In European vocational systems, the report says, employers and educators not only develop the next generation of workers; they also help the young people become adults with responsibilities. Charlotte-Mecklenburg Schools Superintendent Heath Morrison is among those pushing this model.

The 2013-14 school budget in Charlotte calls for creating career-tech hubs at traditional high schools and launching new magnet schools focused on internships and career skills. Olympic, a model for the school district, got a head start when it split into five career-themed academies in 2006. Business partnerships, career exploration and real-life projects were central to the new approach.

“All that testing stuff and all that rote memorization stuff is not going to help you in the real world,” said career development coordinator Michael Realon. Before coming to Olympic to teach business, economics and math, he worked for trade associations, including the Charlotte Apparel Mart, and he now connects Olympic to the business community.

## The “eHarmony” For Exploring Careers

Realon says Olympic helps students explore career prospects, starting with an online assessment of their skills and interests, which gives them a list of their 20 best career “matches.”

“We tell them it’s like eHarmony. It’s going to connect you to your soul-mate career that will make you happy,” Realon said, comparing the assessment to the dating Web site.

Rucker-Shivers knew he enjoyed working with this hands. He helped build Habitat for Humanity houses. He also took classes in drafting, carpentry, wood shop and principles of engineering.

Three of Olympic’s five small schools have career academies, with advisers from private industry

helping educators create classes to prepare students for jobs. At the math/science school, which Rucker-Shivers attends, the themes are energy and engineering.

Last summer, Rucker-Shivers landed a paid internship with Siemens, a German manufacturing behemoth. He worked three days a week, shadowing machinists and engineers, and spent two days studying a design process called mechatronics at a community college. It opened his eyes to the world of high-tech work.

“Siemens is three minutes from my house, and I didn’t know it existed,” Rucker-Shivers said, marveling at the opportunities nearby.

Siemens has a tradition of apprenticeship, paying young people—generally high-school graduates—for a combination of classroom work and on-the-job training. Now a few high school students get a chance.

## “Not a Kid Anymore”

Realon says students who get apprenticeships earn

*9to*

10 an hour, including the time they spend finishing high school and attending CPCC.

Five out of 10 summer interns were offered apprenticeships, but not Rucker-Shivers, who learned another lesson. “You’re not a kid anymore.” You have to take initiative, he said, and solve problems to make the grade.

In January, Bosch Rexroth started hiring high school interns in the plant that makes manufacturing equipment. Rucker-Shivers was chosen, along with Carla Bailey, a senior at Hopewell High in Huntersville, N.C.

Companies don’t participate in the program just to be helpful—they have their own business interests in mind. Technical machinists must know math and physics, but textbook knowledge is not enough. It is tough to find workers who can jump in. In Germany—and even at the Bosch plant in Greenville, S.C.—apprenticeships are an established way to recruit talent.

“The skills we need have been lost,” said Mark Rohlinger, who works in technical plant management in Charlotte. “The hands-on, practical stuff really makes or breaks people here.”

Rucker-Shivers and Bailey have been calibrating machines and writing up instructions for various jobs. The internship covers the rest of the school year and the summer. Rucker-Shivers took it with the hope of earning a full-fledged apprenticeship, with paid tuition and continued on-site training. Instead of having to borrow for a traditional college education—“student loans are a killer”—he

would get a free education and near-certain employment.

Bosch staff will not discuss pay, but Realon says a national report shows machinist technicians can earn

60,000 to

100,000 a year.

## **Hard Work Pays Off**

Educators' enthusiasm about high-tech career training is tempered by one reality: Creating labs at schools is expensive. That is another benefit of partnerships. A school district may not be able to afford to create machine shops at high schools, but students can go to the actual workplaces.

Meanwhile, Rucker-Shivers recently got good news about his own economic future.

His hard work paid off: He got an apprenticeship with Bosch.