

STEM CELLS FORMING IN SOUTHWEST WASHINGTON

Science, technology, engineering and math skills a focus of local education push

story by jodie gilmore

While Washington State ranks first nationally in the employment of engineers, it ranks 38th in the production of science and engineering bachelor's degrees, according to the Washington Higher Education Coordinating Board. This means Washington employers are forced to recruit elsewhere for these and similar positions.

This is nothing new, but many are on a mission to make it a thing of the past.

To create a regional workforce that can meet employers' needs, said Lisa Nisenfeld, executive director of the Southwest Washington Workforce Development Council (SWWDC), "we need to raise achievement at all levels" for science, technology, engineering, and math (STEM) occupations.

STARTING THEM EARLY

At the heart of the problem is a dearth of high-school graduates who possess sufficient STEM skills.

Ben Bagherpour, vice-president of operations at Vancouver-based SEH America, said, "Engineers don't run the machines. I need operators who have critical skills such as multitasking, problem solving, troubleshooting and teamwork so they can run the machines and make timely decisions based on the data available to them." Otherwise, said Bagherpour, he couldn't remain competitive with other SEH plants around the globe.

Evergreen School District superintendent John Deeder is working closely with Bagherpour to establish a conduit between high schools and industry through internships,

plant tours and in-class speakers.

"The goal is to give kids a picture of what's out there – show them how their knowledge of math and science can be applied," said Deeder.

The program will also better enable teachers to provide information to students.

"When I bring math and science teachers [to SEH]," said Bagherpour, "some say they have never seen a manufacturing facility before." If that is true, he wondered, how can those teachers know and explain which STEM skills are applicable to high-tech manufacturing?

The SWWDC has several programs in place to bolster students' interest and skills, as well (see www.northbankmagazine.com).

KEEPING THEM COMING

Southwest Washington's higher educa-

tion institutions have been working hard to increase the number and skill level of STEM graduates.

"We need to figure out ways to encourage students, and it has to start really early, in middle school," said Dr. Karen Schmaling, vice chancellor for academic affairs at Washington State University Vancouver.

A recent report from the Georgetown Center on Education and the Workforce forecasts that by 2018, the percentage of jobs requiring an associate degree or higher will grow from 42 to 45 percent. But Southwest Washington's educational participation is quite low, according to Scott Bailey, regional economist.

Bailey said the ratio of full-time community college students to the adult population aged 15 to 44 in Clark County is only 3.5 percent – the second lowest in the state. ►

Southwest Washington firms report difficulty with entry-level workers demonstrating many critical skills

Skill	Much Difficulty	Some Difficulty
Speaks so others can understand		41.0%
Listens actively	9.6%	29.6%
Reads with understanding		26.7%
Observes critically	5.6%	37.9%
Cooperates with others		11.9%
Resolves conflict and negotiates	9.8%	32.9%
Uses math to solve problems and communicate	4.3%	41.4%
Solves problems and makes decisions	16.9%	37.2%
Takes responsibility for learning	10.1%	29.6%
Uses information and communications technology	5.5%	38.3%

Source: 2010 Washington State Employer Needs Survey



At the university level, the state average ratio is one student per 70 adults; this area's ratio is one per 314 adults.

Local educational institutions are attempting to improve these numbers. For example, Renee Schiffhauer, director of admissions for Everest College–Vancouver, said they had formed a new team to present at local high schools.

WSU Vancouver recently expanded its course offerings to include freshman and sophomores, and Schmalings said they had also implemented extensive academic advising services for their computer science and engineering students, to encourage students to stay with their STEM majors.

WSU Vancouver's applied technology building, which will include specialized lab facilities and clean rooms, will open this fall. Bob Knight, president of Clark College, said the design of Clark's new STEM building was almost finished, and awaited funding.

Clark has also placed several interns at Insitu, a high-tech firm located in White

Salmon. According to Bill Freemel, vice president of human resources at Insitu, there are currently 50 college interns at his firm – but only 20 are local.

CONTINUING EDUCATION – BUT FOR WHAT?

Those that are already working, or have been displaced from their jobs, also need to brush up on STEM skills. Tina Cruz, spokesperson for Worksource Vancouver, said she commonly hears from unemployed workers that they need to upgrade their computer skills and that employers really want workers with a degree.

Local colleges, such as Clark and Everest, work closely with Worksource to provide training. Also, community colleges provide custom training to local firms through the state Jobs Skills Program and grants from the American Recovery and Reinvestment Act. For example, Brendan Glaser, dean of Workforce and Continuing Education at Lower Columbia Community College said

his department had provided training in several areas, including continuous process manufacturing and ISO certification, for several firms in Longview.

But, said Cruz, many of those looking for work complain that the amount of qualifications and experience required by many companies doesn't jibe with the pay companies are offering. She said that workers laid off at \$22/hour are now often being offered only \$12 to \$13 per hour.

Scott Bailey, regional economist, said “no one is willing to pay” for a better educated workforce. He cited significant cuts to education budgets at the state level as one problem; another issue, he said, are companies that complain our workforce isn't good enough, but who maintain their headquarters in foreign companies to avoid paying U.S. taxes – which help fund our education system.

“They save themselves dollars,” said Bailey, “but what does that do to our public services?” **NE**