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MATC hosts summer camp to get girls interested in tech fields

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Two years ago, while attending a conference in Texas, Nina Milbauer and Lori Kelley heard a speaker expound on the dwindling number of women entering the computer sciences field.

This was not news to Milbauer or Kelley, information technology instructors at Madison Area Technical College.

In fact, Milbauer wrote a thesis on the subject en route to earning a graduate degree from the University of Illinois at Springfield. Her research showed that from 1999 to 2006, the number of women enrolled in MATC's IT Network Specialists degree program dropped from 41 percent to 18 percent.

But the speech did spur Milbauer and Kelley to action. On the flight home to Madison, they came up with the concept of Girls Tech -- a summer camp for girls entering 6th through 9th grade where they could learn about a variety of fields, including architecture, biotechnology, computers, electronics and engineering, from volunteer women instructors and professionals.

Last week, MATC hosted its second annual Girl Tech program -- with another session scheduled Oct. 30-31, when students across Wisconsin are out of school due to the state teachers convention. In addition, Girl Tech has been such a hit that representatives from two other Wisconsin technical colleges, as well as from Illinois-Springfield, visited MATC's Truax campus to observe the program with hopes of starting similar regimens at their institutions.

Milbauer said she doesn't know why women's enrollment in the computer sciences program at MATC dipped so severely in recent years, though she noted MATC's numbers had been high, relative to national statistics.

"Now MATC's numbers have come back down to what the national numbers show," she said.

According to a 2005 study by the Information Technology Association of America, a trade group, the percentage of women nationally in the IT work force declined from a high of 41 percent in 1996 to 32.4 percent in 2004.

Milbauer said multiple factors likely play into the fact that women are not seeing informational technology as a viable career path.

"It comes partially from parents raising their kids in a way of, 'Oh, this is what guys do.' Maybe not intentionally, but at a subconscious level, perhaps. And it comes from girls not seeing other women doing this -- them not having role models in the area."

Added Kelley: "I think sometimes there is the perception that girls can't do these subjects or that boys are better at it. And I'll actually see that in some of my classes, where the girls are a little intimidated.

"So a focus of this camp is to open their eyes to what they can do. It's all very hands-on and involved to get them some real experiences."

Among other things, students in the Girl Tech program created a map during a civil engineering session from measurements they made in the field; made animated movies using the computer program "Alice" and went on a wireless treasure hunt during an information technology class; performed forensic analysis of a crime scene in a biotechnology lab; and built a solar-powered model car after learning how electricity is generated.

"It gives you a future reference for what you might want to do, plus you can meet new people and make new friends," said Sophie Auerswald, who will be an eighth grader at River Bluff Middle School in Stoughton next year. "If you don't know what you want to do when you're older, it really gives you a head start looking at technology and what you can do."

Kennedy Stieff, who will be an eighth grader at Prairie View Middle School in Sun Prairie, liked the Girl Tech program so much last year that she enrolled again this summer.

"One of my favorite things in school now is science and math, and it's because this introduces you to it," said Stieff, who now has her heart set on being a forensic scientist. "This last year in school, I could just relate to those classes more because of what I learned here."

THE girls-only setting seems to sit well with the students.

"I really think it makes it easier because the boys aren't always interrupting and making stupid comments," said Erin Engbring, who will be an eighth grader at Patrick Marsh Middle School in Sun Prairie next year. "I think we can get through more stuff than we'd be able to otherwise."

The girls also appreciated the fact that the classes were taught by women.

"It kind of inspires me to see all the teachers and the other women in the field," said Stieff.

Milbauer and Kelley said the Girl Tech program is aimed at middle schoolers instead of older girls because research shows that by the time students reach high school, they often already have a set of core interests, and it's sometimes too late to pique a person's affinity for new subjects.

"By that time, they tend to be a bit more closed-minded to various options," said Milbauer. "So it's important to get to them now."

Rebecca Parish, an MATC instructor in the architectural technician department, was thoroughly enjoying her time with the Girl Tech participants last week as she showed the students how to design a home using the 3-D building software, "Revit Architecture."

"I think a big part of this is just making the girls aware of what the career options are out there," said Parish. "Just so they kind of know what they have to choose from. Unless you get that trial and error, you're not going to be able to get a sense of what you like or don't like. It's all about exposure to different subjects."

Parish, who estimates that 20 percent of her students at MATC are women, also has first-hand knowledge of how important it can be for younger females to have women instructors.

At the conclusion of a semester-long architecture class, Parish said that "half the women students took the time to individually come up to me and say how wonderful it was to have a woman teacher.

"I think it is important for women and girls to see people who are succeeding to know that they can do it themselves. It was the first time that part of it really hit me."

Ted Mims, chair of the computer science department at Illinois-Springfield, visited MATC last week to take a look at the Girl Tech program. Mims says Illinois-Springfield hopes to implement a similar program next year due to a national decrease in the numbers of men and women entering the computer sciences field.

"We have some programs now where zero percent are women," said Mims. "But I think this is an excellent way to get girls exposed to computer sciences. You could actually see the excitement in their faces as they learned and they wanted to do more and more. I think it is an excellent program."

In 2007, the Girl Tech program had 58 students for three full days of classes.

This summer, 45 girls attended the program, which lasted five half-days. Milbauer and Kelley believe the fact the program ran five days may have cut down on attendance, because parents often find it hard to arrange transportation for their kids for a full week.

According to self-survey results about Girl Tech following the 2007 session, 98 percent of the girls said they would rate the overall experience of the camp as either "great" or "good." In addition, 100 percent of the parents rated the overall experience of their daughters as either "great" or "good."

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