



Citizen Schools

UNC Charlotte grad students step up to aid middle school students

By Melba Newsome

Acey Boyce and Katelyn Doran are both graduate students in Computer Science. It's not unusual that they would spend several hours each week poring over lessons plans, guiding students through complex assignments and working on new video game designs. What makes them stand out is that they are doing this with a bunch of students from Martin Luther King Middle School.

Boyce and Doran are part of UNC Charlotte's collaboration with Citizen Schools, the Boston-

based initiative founded in 1995 to extend the school day for students in low-performing schools. In the 10-week after-school apprenticeship program, community professionals lead hands-on workshops in everything from cooking to health care to engineering to science.

"Our focus is on middle school because that's where we lose the kids. That's when they decide if school is for them or not," said Cassie McIntyre, director of civic engagement

for Citizen Schools of North Carolina.

This innovative model seems to be working. Nationally, nine of out 10 Citizen Schools' students passed state math and English exams. They also go on to graduate at a 20 percent higher rate than their peers who do not participate in the program.

"Right away, we identified UNC Charlotte as an organization that could provide good volunteers for Citizen Schools," said McIntyre. "In exchange, we were giving them a way for their students to get experience working in the classrooms."

The partnership is in its sixth semester. So far, about 20 students from the Computer Science and Psychology departments within UNC Charlotte's College of Computing & Informatics have led the



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apprenticeships at Eastway and Martin Luther King middle schools, both Title One schools where more than 50 percent of students receive free or reduced lunch and lag behind their peers in academic performance. In exchange for their participation, the students satisfy a community-service requirement or receive one class credit.

U.S. STUDENTS SLIP IN RANKINGS

In a recent survey comparing the knowledge and skills of 15-year-olds in 70 countries, the United States slipped in the standings, ranking 14th in reading skills, 17th in science and 25th in mathematics. It’s hard to keep pace when, compared to other nations, U.S. students have a shorter school day and school year. They currently spend just 20 percent of their waking hours in the classroom. Severe budget cuts are causing a further reduction in classroom time and school resources.

While some families can address the gap with enrichment programs and online learning, many low-income kids lack those opportunities. Citizen Schools was established to fill that gap.

Each participating student spends an extra 12 hours per week in a learning environment, giving them the time and flexibility they need to get engaged and pursue their interests. Educators provide the kind of experiential teaching that makes learning relevant and fun. In the process, the students gain a greater appreciation for and understanding of science, technology, engineering and math (STEM) skills.

The partnership between the Computer Science Department and Citizen Schools began when the Diversity in Information Technology Institute at UNC Charlotte received a \$2 million National Science Foundation grant to fund the STARS (Students & Technology in

Academia, Research, & Service) Alliance. The mission of the alliance is to recruit more women, under-represented minorities, and persons with disabilities into the computing field.

COMPUTING FIELD NEEDS BOOST

“There is a national need for more people in information technology and computing,” said Karen Bean, UNC Charlotte’s program coordinator for the Diversity in Technology Institute. “Over the last few years, there has been a decline in the number of students who entered and stayed in the field of computing. We’re trying to turn that around by building a community of students who might not have not thought about computing as a career.”

Joining forces with Citizen Schools made sense but getting the game-design apprenticeship off the ground at Martin Luther King was not without its challenges. The students didn’t have computers, so Boyce and Doran had to use their own for the lessons. The program took a big step forward the next year when Citizen Schools set up a computer lab on campus. A \$5,000 grant from the University’s Chancellor’s Diversity Fund was used to purchase laptops for the projects.

The apprenticeship teaches basic video game development using a program called Gamemaker. “There are so many misconceptions about computer science,” said Boyce. “A lot of students love video games but they don’t realize that someone has to make them and that this is what computer science is all about. We show the students all the cool things we can do with computer science. It’s also one way to get them interested in math and science.”

By the end of the apprenticeship, the students have created the artwork,

developed and designed the game levels, and created a back story for their games.

But Doran said their learning goes beyond the technical. “They also learn how to give and receive constructive criticism and hone their speaking skills by presenting their game to the class,” she said. “It’s well worth the effort for us, too. By working with Citizen Schools, we have an entire study population at our disposal for research and feedback.”

BUILDING GIRLS’ SELF-ESTEEM

Meanwhile, the Department of Psychology’s involvement with Citizen Schools takes a different tack.

Developed by doctoral students and led by department interns, a “Beautiful Girls” curriculum was designed specifically for the girls at Eastway Middle School to increase self-esteem and help adolescents feel good about their bodies.

“There is a holistic health perspective where they learn about nutrition and get to sample foods they probably haven’t had before,” said Suzanne Schoenefeld, the liaison between the Psychology department and Citizen Schools. “The girls learn that being beautiful isn’t just one set perspective and that everyone is beautiful in their own way. At the end of the course, they have also learned to be kinder and more respectful of each other.”

Schoenefeld and Doran are quick to point out the less tangible benefits they get from impacting the students’ lives. “These kids tell us, ‘I want to go to college,’” Doran said. “That’s huge. Six months earlier, a lot of them didn’t even plan on finishing high school.”

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