JSU program sells teachers, students on physical sciences

By Alex Scarborough-Anderson
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IMPACTSEED coordinator Nouredine Zettili, center, works with Dawn Alves and Hollie Terry at a SEED event at Jacksonville State University.
Photo: Stephen Gross/The Anniston Star

JACKSONVILLE — When Nouredine Zettili began teaching physics at the college level he noticed a common thread among freshmen students: They simply weren’t ready to learn.

Students struggled to grasp some of the basics in physical science.

Concepts were lost on freshmen and Zettili, a professor at Jacksonville State University, couldn’t teach the material without returning back to the basics.

Instead of fighting the tide, Zettili decided to look for the root of the problem and discovered it started for students in high school.
"When I started teaching freshmen physics I noticed that most students did not take physics in high school and the ones that did I wish never did," Zettili said. "A couple of students said it was taught by the football coach.

It seems that some of the principals do not seem to know the difference between physics and physical education."

Since it was evident that it was the students who were failed before coming to college, Zettili decided to intervene at the high school level.

In 2000, Zettili developed a program for professional development to give high school teachers the tools to teach physics at a higher level that will prepare their students for college and encourage an interest in physics.

The program developed to include chemistry and is known today as IMPACTSEED (Improving Physics And Chemistry Teaching in Secondary Education).

Zettili has run the program for the past six years and a new two-week summer session for area high school teachers began again Monday.

The program serves 11 counties and 18 school districts, funded by the No Child Left Behind initiative in coordination with the Alabama Commission for Higher Education.

Teachers from all over the state and a few from Georgia flock to the JSU campus to be a part of IMPACTSEED.

The program gives teachers the knowledge and tools that would otherwise be unavailable.

In any given year a physical science teacher might be happy to receive $300 from her school to budget for the year. IMPACTSEED lets them walk away with more than $2,000 worth of materials to take back to their students.

Teachers in the program could not help but rave about the help that Zettili’s program provides.

Rick Brown, an 11th and 12th grade chemistry teacher from Woodland High School in Randolph County, sees the program as a lifesaver for him and his students.

"In Alabama, it's whatever you can scrape together, so the materials they provide helps in that respect," Brown said.

Gresha Thurmond, an Anniston High School physics teacher, echoed Brown's sentiments.

"It's been great so far," Thurmond said of her first year in the program. "I'm really excited about the new equipment it's going to bring into the physics department at Anniston because currently we don't have a lot. Hopefully it will encourage more students to take physics at Anniston because right now there’s just not any interest in them."

The equipment the program provides allows teachers to move away from the blackboard and get students involved in experiencing the real world application of
"Students need real-world applications for science," Thurmond said. "They don't really understand it when it's just on paper. You have to make it three dimensional for a student for them to get a better understanding."

Zettilli said that JSU has seen an increase in the number of students majoring in chemistry and physics, a result he correlates to the impact of their work at the high school level.

In addition to providing teachers with the knowledge and materials to better teach, Zettilli and other professors often travel to Alabama high schools to put on demonstrations to encourage students to pursue a career in physical sciences.

Crowds of almost 300 students have sat in on two-hour long demonstrations of magnetism, electricity and modern physics.

"The students love to see things they don't see every day," Zettilli said. "Shooting sparks over long distances and demos get students attracted to the sciences because of the curiosity."

That curiosity has translated well from the high school level to the college classroom.

Zettilli said professors have seen a far smoother transition for high school students into freshmen courses, along with a revived interest in the sciences.

IMPACTSEED has continued to flourish into its sixth year and Zettilli sees no end in sight for continuing its work.

"I never thought myself that we would be offering this program for six years," Zettilli said. "It has gained momentum of its own. There's a need and as long as there is a need you can't fail the teachers."

Zettilli is proud of the success of IMPACTSEED, but is quick to point out the commitment of the teachers who take part in the program.

"The teachers who participate in the program are the real heroes because they have no incentive for doing this other than dedication from them to do a better job with their students next year," Zettilli said. "When they come here most of them pay for the gas money from their own pockets. This is their summer vacation. They are taking time off from their vacations to be a part of this program."

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