With the help of a federal grant, researchers from around the country are updating an online tool for algebra students that will launch in Alachua County in January.

On Jan. 16, about 20 Alachua County Public School teachers will receive an updated version of Algebra Nation, an online program that helps students grasp Algebra 1, Geometry and Algebra 2 concepts, said Philip Poekert, project director of the Virtual Learning Lab. The Virtual Learning Lab, which is compiled of researchers from UF's College of Education, the University of Colorado and Study Edge, are personalizing the Algebra Nation program with an $8.9 million-dollar grant from the U.S. Department of Education's Institute of Education Sciences.

With the new development, students will be given suggested actions based on their activity and data collected from past users to help improve their math performance, Poekert said.

“We're just trying to take something that's good and make it better,” he said.

Algebra Nation initially launched in January 2013 as a free online program tailored specifically to Algebra 1 students in Florida, aiming to improve end-of-course exam scores. Since then, it has grown to include Algebra 2 and
Geometry courses and has expanded into South Carolina, Michigan, New York, Alabama and Mississippi, Poekert said.

Follow-up research found that students who consistently used the program performed better on their end-of-course exams, said Carole Beal, a UF education professor and principal investigator for the Virtual Learning Lab. She believes these results can be improved even further by making the experience more personalized.

“There are a lot of resources available but the student chooses what to do, and sometimes students don’t always do the most effective thing,” Beal said.

Based on the videos students watch, practice problems they complete and other activity, the program will identify what course of action would be the most beneficial to that student, she said.

“Sometimes students don’t balance watching videos and solving problems very well,” Beal said.

Katelyn Snell, a 7th grader at DeLand Middle School in DeLand, Florida, said her Algebra 1 teacher frequently uses Algebra Nation in the classroom. While the 12-year-old said she doesn’t use the website much outside of school, the new personalization aspect may prompt her to log in more often.

“If I’m struggling with something and tutoring isn’t that day, then I can do that instead,” she said.

Justin Lessem, a UF accounting senior, helps moderate discussions on Algebra Nation. The 21-year-old answers questions posted to the website by guiding students through problems and explaining concepts, he said.

Lessem said he is looking forward to the personalization because he believes the suggestions will help to identify students’ strengths and weaknesses. Lessem said once students have identified areas of weakness, they can work more effectively.

“Throughout the year you see the same students on there and then after a couple months they’re the ones helping other students, so it’s really great to watch them grow,” he said.

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