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# Nicole Forsgren Velasquez and Taylor Martin win \$300,000 One-Year Grant to Study How Students Learn With Online Games

## News Warehouse

### Nicole Forsgren Velasquez and Taylor Martin win \$300,000 One-Year Grant to Study How Students Learn With Online Games

Huntsman Assistant Professor Nicole Forsgren Velasquez and Associate Professor Taylor Martin, of the Emma Eccles Jones College of Education & Human Services, have been awarded a \$300,000 grant that will send them deep into the world of online games.

The 18-month grant comes from the National Science Foundation and the duo will be studying online educational games or "learning games," as they are sometimes called. They hope to discover how students can learn from such approaches and to see if the games can be personalized to better match learning styles and accelerate the online educational process.

Dr. Forsgren Velasquez said that traditionally students might be given a pretest and then later tested again to see how much they have learned. Because she and Dr. Martin will be able to access the back-end information from the games they study, they will be able to see how students actually learn as they solve the problems they face.

"We often have thousands of kids playing these games, so we can detect patterns in the data," she said. "So we might observe that some kids tend to get stuck at a certain point in the game. Other kids might never get stuck."

If they can identify areas in the game where students struggle, they can suggest programming changes that would allow the software to offer students hints at crucial moments, helping them clear obstacles that are slowing their progress, she said.

"We think this is really a transformative area and we think it could mean a lot for learning and education in the country, especially with all of these educational games people are playing," she said.

Dr. Forsgren Velasquez said she doesn't think such games will or should ever replace the kind of classroom and hands-on instruction that students need. Online games, however, are another tool educators can use and this research could make that tool more effective.

"Online educational games can help students who are struggling get up to speed so they aren't left behind in the classroom," she said.

"You can go home and work through a difficult spot on your own time, doing something that's fun, and then you can go back to school and be caught up or even ahead of the class," she said. "It enables learning in a lot of different environments."

The researchers say they will focus mostly on how games can help students in science, technology, engineering, and mathematics. The Utah Legislature has been especially concerned about raising scores in these areas and Drs. Forsgren Velasquez and Martin have been asked to share some of their research with the Utah Legislature in January 2014.

Dr. Forsgren Velasquez said the collected data will help identify how to best help students with different learning styles.

"We think we will have a better idea of different strategies that kids use as they learn and what approaches are useful for which students," she said. "Once we have that back-end data to understand how students are exploring and interacting with the game, we can identify features that can help meet the needs of students with different learning styles."

Dr. Forsgren Velasquez said some of the money will be used to hire two graduate assistants who will help with the research. She predicts it will be valuable experience for the students.

"They can go out into industry and they will now have experience doing real and interesting analytics projects that will augment what they are learning in the classroom," she said.