



SIUE researchers study educational value of EarthCaching

by Megan Wieser
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EDWARDSVILLE - Millions of people are engaging in a worldwide treasure hunt of sorts, exploring the world's unique geological features through EarthCaching, an activity that uses GPS navigation to offer real-time science learning. Adventurers will celebrate International EarthCache Day on Sunday, Oct. 9.

The engaging activity is open to anyone, but may offer educators in particular a creative teaching and learning tool. Southern Illinois University Edwardsville researchers are studying the educational value of EarthCaching as science curriculum through a \$299,546 award from the National Science Foundation.

The research project entitled, “Earthcaching for Pre-service Teachers: Examining Attitudes and Intentions towards Informal Science Learning” is led by principal investigator (PI) Sharon Locke, PhD, director of the SIUE STEM Center, and co-PI’s Georgia Bracey, research associate with the SIUE STEM Center, Tom Foster, PhD, professor of physics, and Shunfu Hu, PhD, professor of geography.

“EarthCaching offers a chance to learn about the Earth, including unusual rock formations and the processes that shape the Earth, such as volcanoes and glaciers,” Locke said. “It’s a form of authentic, lifelong learning in the geosciences, because you are interacting with Earth features in real time, in the field.”

The researchers are looking to determine if EarthCaching is an effective way to engage future elementary teachers with geoscience content.

As part of the project, elementary education majors taking their science content course at SIUE will have the opportunity to try out EarthCaching on campus. They will also be asked to provide feedback on the educational value of new EarthCaches that will be created by the research team.

“In a pilot study funded by the SIUE Graduate School, we found that EarthCachers were motivated by the opportunity to see rare features and to explore, such as searching for fossils,” Locke explained. “If our current study shows that EarthCaches have a positive impact on learning, other universities around the country might decide to integrate EarthCaching into courses for future teachers.

“We are also interested in knowing if teacher candidates develop an interest in using EarthCaching or other out-of-school activities with their own students in the future.”

To learn more about EarthCaching and participate in new challenges, visit EarthCache.org.

By preparing the next generation of leaders in a knowledge-based economy, [SIUE’s Graduate School](#) fulfills the region’s demand for highly trained professionals. Graduate school offerings include arts and sciences, business, education, engineering, nursing and interdisciplinary opportunities. SIUE professors provide students with a unique integration of theoretical education and hands-on research experiences. Students can obtain graduate certificates or pursue master’s degrees, and be part of a supportive learning and rich intellectual environment that is tailored to the needs of adult learners. The Graduate School raises the visibility of research at SIUE, which ranks highest among its Illinois Board of Higher Education peers in total research and development expenditures according to the National Science Foundation. Doctoral programs are

available in the Schools of Education (Ed.D.) and Nursing (DNP). The School of Engineering and the Department of Historical Studies feature cooperative doctoral programs (Ph.D.).