

Gamified CMIS course offers virtual content engagement opportunities

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EDWARDSVILLE - The systems analysis and design course taught by Southern Illinois University Edwardsville's Connie Barber, PhD, is not your average college class. Instead of just listening to someone lecture while they jot down helpful notes, students in this computer management and information systems (CMIS) program course have the added element of gamification.

"One random team gets 150 XP (experience points) and the entire class must call me the system master," Barber told students as they took a group quiz via the education gamification platform [Classcraft](#).

Barber, an assistant professor of CMIS in the School of Business, integrated Classcraft with her curriculum in an attempt to better engage and boost interaction with students, while still impressing upon them important content. The innovative idea derived from student feedback on course evaluations.

“Gamifying a course means that we are taking elements that we’re used to seeing in online games and applying them to a classroom context,” Barber explained. “It’s a unique and interesting way to capture the students’ interest and attention by adding elements of competition, earning points, leader boards and more.”

Within the virtual environment, students are quest masters who have characters, acquire and use special powers, train pets and use their skills to advance themselves and their team.

“Classcraft is similar to a phone game where you have different abilities, and your energy regenerates over time to be able to use your powers,” said junior CMIS major and experienced gamer Joe Whiting. “We use it to engage in group activity during class and it adds some interesting context to homework assignments.”

“I was surprised by it at first, since I definitely didn’t expect a game style class,” he added. “I worried it would be a little distracting, but it does a good job of just adding positive activity to class, like interactive group quizzes.”

“I appreciate that she does this gamified class, because it’s different,” added junior CMIS major Shauna Yeager, who had no prior gaming experience. “It gives me something to look forward to. I get on Classcraft every day so I can complete the next activity, just to get my 10 gold pieces and advance my avatar.”

Barber is collecting data on the innovative course design through a 2017-18 faculty fellowship with the SIUE Center for Science, Technology, Engineering and Mathematics (STEM) Research, Education and Outreach. The fellowship allows SIUE faculty to engage in STEM education projects which focus on design, development and research on teaching and learning at the undergraduate level.

Her research project is titled, “When Your Students are Quest-Masters: Gamifying Information Systems Course Content.” She’s studying whether this type of educational gamification platform is useful in higher education using this type of content.

“While games in education have been shown to improve student motivation, we still don’t fully understand when and how games improve learning,” said Sharon Locke, PhD, director of the SIUE STEM Center. “Dr. Barber’s study will help us understand

the benefits and challenges of gamifying STEM education and bring recognition to SIUE as an institution dedicated to student-centered undergraduate education.”

“I’m collecting data through surveys and within Classcraft,” Barber explained. “I’ll triangulate that with the students’ course grades. I’ll be able to study some of the learning theories of multimedia use to examine what is actually happening within the system.”

She emphasizes that the virtual environment could be effective in a variety of courses due to its usability and customizable elements.

“As educators, we can put in any content we want,” Barber said. “We could use this in an English class, an art history class or otherwise. I can go into the system, set up the course and define exactly what I want the students to be able to do, build in different mechanisms of interaction and apply it to the course content, and decide what students will gain or lose points for.”

“It just adds another level to being excited about coming to class,” she continued. “It blends my hobbies, research interests and the fact that I love engaging with my students. Sometimes lecture is just too boring, even from my side of the lectern. When I hear the students talking about Classcraft during or after class, or I see that they’ve been engaging with the system outside of the class requirements, it validates my efforts.”

The Southern Illinois University Edwardsville [Center for STEM Research, Education and Outreach](#) comprises an independent group of researchers and educators, innovating ways to engage students and the public in science, technology, engineering and math (STEM). Within the SIUE Graduate School, the Center brings together research faculty, graduate students and practitioners to conduct education research. The Center contributes educational expertise to SIUE undergraduate classes and provides professional development for K-12 teachers. The Center boasts a significant library of equipment and resources, which are available for loan at no cost to campus and regional instructors. For more information, visit <https://www.siu.edu/stem/about.shtml> or contact STEM Center Director Sharon Locke at (618) 650-3065 or stemcenter@siue.edu.