

# Strengthening math education one step at a time



Segue • SIUE

October 6, 2017

On this week's episode of Segue, the premier radio show on WSIE 88.7 FM The Sound that discusses the ideas and issues on campus at Southern Illinois University Edwardsville and beyond, Greg Budzban, PhD, College of Arts and Sciences (CAS) dean, sits down for an interview with Nell Cobb, associate chair and professor of teacher education at DePaul University, about their collaboration on The Algebra Project.

Since 1982, The Algebra Project has used mathematics as an organizing tool to ensure quality public school education for low-income children across the United States. Founded by civil rights leader and math educator Bob Moses, PhD, the project develops curricular materials, trains teachers and teacher-leaders, and provides on-going support and development opportunities for its participating teachers and schools. Budzban and Cobb worked in collaboration with educators to transform the way mathematics is taught in schools around the country.

Cobb began her education career as a high school teacher in the west side of Chicago. After receiving her master's in mathematics education from DePaul, she joined the faculty and has taught middle school and elementary mathematics education courses for nearly 24 years.

"When I first became involved with the project, we worked with many elementary schools to transition the curriculum from elementary math to algebraic reasoning," Cobb says. "Since then, I've gone to over 500 public schools and worked with teachers through the transitions, and trained teacher-leaders who would enter classrooms to support teachers in those areas."

The professional development strategy of teachers and teacher-leaders involved with The Algebra Project is essential to the program's success.

"At our professional development conferences, we go through the materials with teachers as though they were students," Cobb says. "We try to bridge the gap between procedural and conceptual learning. Through the experiential learning experience, our teachers draw and learn through symbolic representation. We then see how we can mathematize these experiences."

"Experiential learning is one of the core values of an SIUE education," Budzban says. "This idea expands across all our disciplines and is part of the reason I came here."

Cobb says that when Moses talks about his work in mathematics education, he mentions it is crucial to work with students in the bottom quartile who struggle with mathematics.

"When students are struggling with math, teachers get in this cycle of remediation," Cobb says. "We've flipped the script and tell our teachers not to remediate concepts, but accelerate. We encourage them to introduce students to deep mathematical ideas and engage them through those ideas."

"Engagement truly helps students in their learning," Budzban says. "In the Algebra Project, we try to figure out what other ways we can represent this problem to the students. They were initially challenged by the concept, but now the students are thinking of other ways to represent the problems they encounter."

In February and May, Budzban, Cobb, Moses, and mathematics researchers and educators from around the country gathered in St. Louis for two National Science Foundation (NSF) conferences.

“These conferences were great experiences,” Cobb says. “We were able to bring together like-minded individuals from around the country that work with students from the lower quartile and addressed the students’ as well as the teachers’ needs.”

“Some of these programs often work in isolation, and this conference gave people an opportunity to come together, talk about best practices, share the challenges they face and provide opportunities to strengthen professional equity,” Budzban says.

When it comes to the future for Budzban and Cobb’s work with The Algebra Project, the two professionals are eager to build new relationships. In particular, Budzban hopes to create new alliances with local institutions around the St. Louis area.

“If you’re involved in education in communities that need support in these areas, feel free to call my office at 618-650-5047,” Budzban says. “We are interested in reaching out to help students in your communities get the education they deserve.”

Catch the entire conversation between Budzban and Cobb by tuning in at 9 a.m. on Sunday, Oct. 8, to WSIE 88.7 FM The Sound.

*By Madelaine Gerard, SIUE Marketing & Communications*