UC SANTA BARBARA

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In the Interest of Equity

For Sarah Roberts, working with multilingual learners as a middle and high school math and science teacher in the Bay Area sparked what has become the central focus of her still young career: a desire to both understand and foster equity in classrooms and schools.

“In my own teaching,” she reflected recently, “I saw that there was a need for us to provide more concerted learning opportunities for teachers that focused on the content area and multilingual learners.”

She has been working to do exactly that ever since, primarily in mathematics education.

Leaving the classroom for graduate school, she earned a Ph.D. in mathematics curriculum and instruction. Then it was onto academia. Roberts today is an assistant professor of mathematics education in the Department of Education at UC Santa Barbara’s Gevirtz School.

Still driven by that same goal, she has now been awarded a $1.1 million Faculty Early Career Development (CAREER) Grant from the National Science Foundation (NSF) to make it a reality. The award will fund “Understanding the Routinization of Mathematics Language Routines in Middle and High Schools,” which aims to provide multilingual learners with cognitively rich grade level instruction while also engaging students in disciplinary rich language.

“I'm ecstatic that NSF has decided to fund this project,” Roberts said. “I’m excited to work with our school partner, to work with teachers and students to build on the resources they bring and engage them in this work. Additionally, we will be working with a whole team of graduate and undergraduate students to bring this project to fruition —developing their research and education skills and knowledge along the way. I’m thrilled about the potential and opportunity within this project.”

Asked what motivated this endeavor, Roberts again recalled her own teaching experience. “I also saw that there was a key need for us to provide richer learning experiences for multilingual learners, both in terms of language and content,” she said. “I think that this project comes back to what originally drew me to graduate school.”

Roberts’ CAREER project draws on her research with fellow Department of Education faculty member Julie Bianchini for a CPM Research Grant in local schools, helping Integrated Math 1 teachers think about how to use mathematics language routines with their students to access text and communicate mathematical reasoning — particularly to attend to multilingual learners. Roberts and Bianchini developed the CPM project in concert with work they are doing with secondary mathematics and science methods.

The NSF CAREER Program offers the National Science Foundation’s most prestigious awards in support of early-career faculty who have the potential to serve as academic role models in research and education and to lead advances in the mission of their department or organization. Activities pursued by early-career faculty should build a firm foundation for a lifetime of leadership in integrating education and research.

Roberts received her B.A., M.A., and teaching credential from Stanford University and her Ph.D. from University of Colorado at Boulder.

About UC Santa Barbara

The University of California, Santa Barbara is a leading research institution that also provides a comprehensive liberal arts learning experience. Our academic community of faculty, students, and staff is characterized by a culture of interdisciplinary collaboration that is responsive to the needs of our multicultural and global society. All of this takes place within a living and learning environment like no other, as we

draw inspiration from the beauty and resources of our extraordinary location at the edge of the Pacific Ocean.