Some early childhood education students at Eastern Connecticut State University are expanding their learning and their resumes outside of their Willimantic classroom by taking part in a prestigious research project funded by the Spencer Foundation.

“This is a rare and wonderful opportunity for undergraduate students to directly participate in a research study,” said Professor Jeffrey Trawick-Smith, the project’s principal investigator and ECSU’s Phyllis Waite Endowed Chair and Distinguished Professor of Early Childhood Education. “Our goal in including the students in the nuts and bolts of this project is to expose them to actual research practices and provide a valuable educational experience they can take with them to their careers.”

During the Fall 2010 and Spring 2011 semesters, a small group of ECSU students, comprised of five undergraduate students and one graduate student, with the guidance of Trawick-Smith and his co-investigator, Sudha Swaminathan, have been studying how children's play behavior in pre-school contributes to mathematical thinking.

“Eliza Welling, a graduating senior majoring in Early Childhood Education and Sociology, is participating in this project before stepping into a classroom of her own, with the goal of securing an early elementary school teaching position upon graduation. She said she has learned a great deal by watching from behind the camera.

“I have observed not only the students’ play behaviors, but how a teacher’s reaction to those behaviors impacts the child. When a teacher encourages a child, either by asking supportive questions or lending a needed helping hand, you can see how the child can take that information and find solutions, like they are building upon that positive interaction,” Welling explained. “I've also observed how discouraging unwanted help or interference from a teacher can be to a student. Likewise, when a student who needs help isn’t given it, a child can become very frustrated. These are things I likely would not have learned from a book that will make me a better teacher. I know I can put these observations to work and I am excited to incorporate them into my classroom.”

In addition to learning how a teacher’s actions can and do impact a child’s behavior, Welling said she observed how important mathematical critical thinking skills are to children.

“So often in education, we focus on the elements of reading and writing, and math can fall to the back burner,” she said.

“Watching how beneficial mathematical problem solving can be to students in a variety of situations, I want to be sure that I incorporate math as much as possible and in many different ways in my classroom. I hope to teach my students that math can be so much more than just addition and subtraction.”

With the semester and the study at their close, Trawick-Smith, Swaminathan and the six students partnering with them in this project are beginning to develop findings from their work and expect to release these findings this summer.

Perhaps just as important as the project’s findings regarding play behavior, is the impact of the student/professor partnership. “In addition to the knowledge we’ve gained from the study itself, we’re learning a tremendous amount from the students working with us on this project,” said Trawick-Smith.

“They bring fresh perspectives and new ideas to the discussions and because they have been an essential part of this project from the start, they are truly having an impact on the final product and on us.”