In 2014, twenty-four secondary science teachers began a path of personal growth through the Integrating Crosscutting Concepts in Iowa Science Classrooms (ICCISC) project. A three-year grant awarded to UNI Science Education faculty from the Iowa Department of Education Title IIB Mathematics and Science Partnership funded the ICCISC project. The purpose of the program was to help teachers meet science standards. This was to be done using research-based instruction and helping students prepare for STEM-related fields. In the first year 24 teacher-students (teachers) focused on improving science education in their own classrooms and classrooms across the state. More teachers were added to the program in the second year and the program had 47 teachers at its peak. The teachers learned from, inspired, and collaborated with each other. They changed the way they taught, implemented changes their respective classrooms, and redesigned activities and units to best teach the material. A special bond was created amongst the teachers and they continue to inspire and collaborate with each other when needed.

The teachers participated in a two-week ICCISC summer institute. They interacted with faculty and Area Education Agency consultants to learn about crosscutting concepts that span across subjects. Two teachers who took part in the ICCISC, Dr. DeEtta Andersen and John Paulson, were willing to share their take-aways from the project as well as some insight into their paths to become science educators here in Iowa.

Dr. DeEtta Andersen, a high school science teacher at Center Point Urbana High School, has wanted to teach since the 5th grade when she realized that she could teach math as well as her own teacher. But it was the enthusiasm for learning and making discoveries of her 9th grade science teacher that directed her toward a biology degree at Iowa State University and later degrees from The University Of Iowa and Walden University. This enthusiasm has spilled over into her teaching career. Not only does she take her students to a local quarry to learn about Earth Science, but she has Skyped with a local farmer to discuss erosion control and has two free range Russian box turtles in her classroom. The first two activities were a result of her work at ICCISC but all three give students hands-on experiences and opportunities for her students to ask questions to better understand the world and natural phenomenons.

According to Dr. Andersen, some of her favorite take-aways from the project included meeting and learning new activities and approaches from other teachers. She has also become more familiar with the Next Generation Science Standards (NGSS), and left the program with new curricula, methods of instruction, and methods of assessment. Dr. Andersen’s classroom material is now more aligned to the standards. Her experiences with the project have led to opportunities beyond her classroom. She has made connections with state level science education leadership and is currently working on a variety of state projects in science education as well as being asked by national companies to
Mr. Paulson’s ICCISC colleagues and leaders have inspired his teaching career. He was one of several teachers who decided to continue an extra year in the project, even though the three-year grant had expired. He said that the ICCISC project created a close-knit group of inspired and self-driven teachers who “supported each other and were driven to understand and perfect their art.” They were encouraged to “continue thinking even when answers were just out of reach.” The project completely changed his assessment practices as well as providing inspiration, professional management, and growth in his teaching content. He went on to say that the ICCISC “helped give me the gumption to follow my gut on my teaching pedagogy.”

There are multiple reasons why both John and DeEtta encourage students to pursue degrees from UNI. DeEtta said UNI has a “great science education program” while John said that UNI provides opportunities to go “deep into content in the STEM areas.” Both agreed that the project impacted their teaching, for the better, provided personal growth, and an opportunity to inspire fellow teachers across the state.

The ICCISC project was a collaborative program that allowed teachers to learn from each other and develop new and improved curricula alongside UNI faculty that was more relevant and streamlined towards students. John and DeEtta had a positive experience with the UNI in Science Education faculty and shared that they were “passionate and thought provoking” and a “joy to work with.”