The Value of a Good Question
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There’s no better way to learn than to ask your own questions. I quickly came to this conclusion after being offered the opportunity to conduct my first independent research project at NAU. In partnership with sustainable energy mentor Karin Wadsack, Dr. Jacqueline Vaughn, NAU Professor in Politics and International Affairs, and the NASA Space Grant Program, I was able to design and manage a research project of my very own. Ultimately, I wanted to figure out the most effective methods and techniques for teaching the fundamentals of renewable energy systems to college students.

The challenge: how to research

Thankfully, my mentors provided me with valuable guidance on how to properly approach and carry out my project. They helped me narrow down my questions and provided me with a basic overview of how to analyze and present the qualitative data.

My project, which came to be known as the NAU Energy Literacy Project, had two goals. The first was to “increase awareness and improve the understanding of energy efficiency and renewable energy systems at the university” and the second was to “identify and assess student interests in energy to better inform university administrators in their decision making.” In my attempt to accomplish these goals, I designed a 50-minute presentation to give to nine introductory engineering classes. These presentations covered a wide array of topics, including details of renewable energy projects on campus, statewide energy standards, and on-campus opportunities for student involvement.

Following each presentation, I asked students to write down answers to two questions. These questions asked what they learned from the presentation and what more they wanted to learn. The questions I asked had no answer choices and required completely open-ended responses. This allowed students to more precisely identify what they learned and what more they wanted to learn. They had no boxes to check off or circle, just a blank sheet of paper to write down their responses. The responses were exciting to see, and ultimately gave way to unanticipated, yet very positive results.
Even though each response was unique, there were clear similarities. Out of the 212 respondents, 92% expressed an interest in learning more about energy. Specifically, 60 students wanted to learn more about energy system operations, production, storage, and distribution; 46 students wanted more information on NAU’s energy utilization and goals for the future; and 45 students wanted to know more about opportunities for on-campus involvement in energy-related initiatives. Ultimately, I concluded that students were very interested in learning more about energy, and showed a desire to get more involved.
At the end of the project, I realized that conducting my own research let me contribute to my community in a real, tangible way. This was very rewarding.