Final Report: Internationalizing Electronics Engineering Technology Curriculum

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I teach electronics engineering technology at Kirkwood Community College in the Industrial Technology Department. For a number of years I had highly promoted the study abroad options at Kirkwood Community College to my students and I only ever had one student who actually participated in one of those programs. However, by working to internationalize my curriculum all my students are now receiving some of the benefits of an international perspective.

I tried to internationalize my curriculum in a couple of different ways in fall 2021. I used the “Getting To Know Your Students Questionnaire” developed by the Asia Society in the first day of class for my first year cohort of students. Besides helping me to learn about the students in general, this questionnaire helped us to get an autistic student connected to our learning services department since he mentioned his autism in the survey, but the college had been unaware of his condition. I referred back to these questionnaires a couple of times during the semester and they helped me to make better connections with both my American and international students since it gave me some conversation starters and it helped me better understand some student backgrounds.

The second year cohort students completed the Asia Society student modules early in the fall semester. Students had a favorable impression of these modules and they were happy that they did not take too long. These modules also helped to lend credence to some of the other international activities we did as the year progressed. One of these activities was Global Conversation sponsored by IREX. The Global Conversation was integrated into one of the classes for the second year cohort in fall 2021. The students had four conversations with students from a university in Iraq and two other conversations with all students participating in this project. Some students reported having a very positive learning experience from these conversations. I was able to observe some students get a broader perspective on the world by this activity. In addition, the students used the concept of design thinking which was introduced in the Global Conversations curriculum in a separate contest. They received an honorable mention in that contest. I also tried to have the second year cohort do this solar energy project that was created by the Asia Society in their Technical Physics I course: <https://asiasociety.org/files/uploads/26files/Clean_Energy_Manufacturing_Solar_Phone.pdf>. The students were able to do roughly the first half of the work described in this project, but we ran out of time in the semester to complete the later steps. I hope to have next year’s students completed the entire project with some modifications (more electronics, less CAD).

In spring 2021 the second year cohort students did a virtual exchange with electronics students from the University of Bordeaux. The University of Bordeaux had their students working on three interesting projects that our students were able to join. The University of Bordeaux students had been working on these projects for two months before our students jumped on board. This exchange took place on a weekly basis for the first 8 weeks of the term. There were three separate projects/groups: a UV detector, a spoon for Parkinson’s patients, and a fall down detector. Overall, the projects benefited my students academically and have resulted in some development of team and leadership skills especially for two of the groups that put their full efforts into the endeavor.