What in the World are They Learning?
Capstone Engineering Design Experiences
Across National and Cultural Borders

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Why Do It?

- What students who have been say
- What educators say
- What employers say
- What politicians say
- What the international customers say
Three Top Reasons Why Engineering Students are Reluctant to Participate in Overseas Exercises as Part of Their Undergraduate Learning Experiences

- Increased time to graduation
- High cost
- Can not be away from “community”
International Capstone Engineering Design Course Elements

- Real-life international/global problem
- Web-based sights and sounds
- Multidisciplinary design team
- Intercultural communication module
- Globalization module
- Partnerships
Class Schedule

- Customer Interviews taped during fall
- Interview clips are posted on the web
- Student design team uses interviews to generate solution concepts
- During spring break, the team travels to present solution concepts
- Detailed analysis is completed after the trip
Rural Cooling Plant

To be able to convey a true image of a typical rural milk cooling plant, six plants (busheyi, kabwohe, kashaka, kigoma, kyamuhunga, and rentula) were visited. The following collection of quick time movies and still images provide a tour of a typical plant.

Plant Building and Surroundings
Design Projects
Design Projects
Assessment

- Critical thinking (Watson and Glaser, 1994)
- Global Awareness (Corbitt, 1998)
- Attitude (Kisaalita, 2004)
- Interethnic communication apprehension (Neuliep and McCroskey, 1997)
Difference between Pre- and Post-Test Scores: Combined Questions and Scores

EXPERIMENT

CONTROL

Students

Students
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Allyson Tippie (2003)

“..up until this project I was never able to apply my knowledge to anything other than a test. This project has opened my eyes to the opportunities of the real world in which I will be able to apply my knowledge....To me, this priceless and significantly increases the value of my degree.”