

# “A brave mind to explore this world”: Student Reflections on a Design, Technology and Society Class

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## Introduction

DES3141 is a new course offered by the College of Design that meets the Liberal Education Requirement, *Technology and Society Theme*. Course topics were chosen with universal appeal to students including: home (focusing on sanitation and electricity); food; health; work; shop; wear; communicate; music; games, and travel.

## Course Objectives

- To understand contemporary design in the context of history
- To consider diverse perspectives between technology and design and their impact on society
- To critically evaluate our design choices and their effect on our global community
- To recognise the roles and responsibilities of designers, producers, and consumers in the creation, adoption, and consumption of technology

## Theoretical Framework

The course was designed for an active learning classroom (ALC). ALCs have been shown to increase student engagement with classmates and the instructor and to promote critical thinking, discussion, and collaboration (Alexander et. al., 2007; Florida State University, 2011; University of North Carolina at Chapel Hill, 2009).

## Method

Several components of the course are described, particularly those relating to the Grand Challenges, sanitation, sustainability, and food. Students' comments were collected from their final reflection papers for Spring 2014 and 2015, coded and assigned a Student Number(SN).

## Demographics

- 28 students
- c. 50/50 male/female students
- c. 1/3 international students, e.g. China, Vietnam, South Korea, Japan, Pakistan, Sudan, Brazil
- Ranged from freshmen to seniors
- Diverse majors, e.g. engineering, psychology, mortuary science, theatre arts

## Results

### Sanitation Lecture

Lecture material was drawn from a range of global sources, including examples from the home countries of international students. This lecture focused on the issues around sanitation and restroom design culminating in an in-class activity to identify water-related issues around the world and what is being done to solve them.



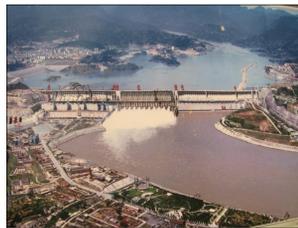
*“I was inspired . . . To help people without sanitary facilities. In the future, I hope to donate to similar causes, and this class is the reason for my new found passion to help with this issue.” (SN15B)*

*“This lecture inspired me to consider sanitation problems that are prevalent in the world.” (SN10A)*

*“The sanitation lecture ended up being more than just a 75 minute lecture for me . . . It has also been a topic of many conversations I have had.” (SN8A)*

### Electricity Lecture

Lecture material concentrated on lighting and alternative power sources in the context of global warming.



*“I am very concerned about global environment and I learned that renewable resource of electricity generation is the biggest issue on earth and it is urgently needed for our environment.” (SN6A)*

*“Since I am from Japan, where there are quite limited resources, we really have to care about these issues.” (SN10A)*

*“Going forward, the provided information will allow for a different perspective on viewing the world and everything it encompasses.” (SN6/15)*

*“I'm really glad we mention(ed) the Three Gorge Dam in China because my parents are both engineers of that project.” (SN25B)*

### Food: Guest Lecturer

Professor and Associate Dean, Michael A. Schmitt, from the College of Food, Agriculture and Natural Resource Sciences, delivered a lecture on “Food and Agriculture Systems: Defining and Combining.”



*“GMO foods could save people's lives . . . Before this class I was against GMO foods because they were unnatural but now finding out what they really are and what they could do I would like to be for GMO.” (SN7B)*

*“The consideration of genetically modified food also made me think about the issues that are facing my generation, for which we have yet to decide on a particular solution.” (SN19B)*

*“This lecture makes me want to explore urban farming in Minneapolis . . . I am interested in supporting these types of farmers, or even growing my own farming crops someday.” (SN15B)*

### Field Trip: James Ford Bell Library

Field trips enabled students to see and touch historic international artefacts. Curator, Dr. Marguerite Ragnow, gave students a hands-on lecture where they were able to handle centuries old maps and related objects.



*“I saw a really big map hanging on the wall in a little secret room that is coming from the same place (as) me. It just so excited me to see something from my hometown Beijing, China.” (SN16A)*

*“The visit made me realize how important (it is to) have a brave mind to explore this world.” (SN25B)*

### In-class Activities

Students were assigned to groups of 3-4 to ensure each group had a mix of majors, including a design major in each group, male/female, and international students.

*“The group activities gave me a good chance to associate with great friends who came from different backgrounds.” (SN21A)*

*“By sharing our opinions on Moodle sites, I could share our group's ideas and have access to other group's ideas, which helped me understand how other group's members thought and acknowledge the differences between them and us.” (SN21A)*

*“If it wasn't for the assigned seats, I am not sure I would have gotten to make this friend.” (SN4A).*

### Video Debate Assignment

Assignments were designed to promote valuable workplace skills. This assignment required students, in pairs, to create a video debating the pros and cons of a technology that linked to a theme discussed in class. Popular topics included GMO crops, water conservation, and E cigarettes.



*“The debate assignment gave me a real world application of working with other people and communicating ideas.” (SN4A)*

*Through working on the Video Debate Assignment “I have gained the modern knowledge and confidence it takes to step out into the real world.” (SN16B)*

### Pecha Kucha Assignment

Students created a PowerPoint presentation about a designer of their choice limited to 4 slides to be delivered in class in 3 minutes. For many international students it was their first public speaking experience.

*“I enjoyed working on my Pecha Kucha even with (the) challenges because I thought the skill of making numerous information into one simple information will be critical in my other classes as well as my future.” (SN12B)*

*“Presentation skills are essential for professional success in the future.” (SN21A)*

*“This presentation gave me another opportunity to practice speaking in front of my colleagues and getting me ready for the real world.” (SN4A)*

### Conclusion

Overall, DES3141 successfully helped students gain an understanding of design, technology, and society in a global context while promoting relationships between international and non-international students to enhance their campus experience.

*“All of the topics were fascinating and helped me to widen my world view.” (SN15A)*

*“I wish I had taken this course earlier in my life and I truly think this course is extremely helpful and powerful that I can say without hesitation that it has a potential to be a life-changing experience for any student.” (SN3A)*

*“In the future I will look back at this class and remember many of the lessons I was taught and think of different ways I can apply my knowledge in order to better the society we live in.” (SN20B)*

*“Going forward, the provided information will allow for a different perspective on viewing the world and everything it encompasses.” (SN6B)*

### References

- Alexander, D., et al. (2007). *Active learning classrooms pilot evaluation: Fall 2007 findings and recommendations*. University of Minnesota.
- Florida State University. (2011). *Instruction at FSU: A guide to teaching and learning practices (7th ed.)*. Florida State University Office of Distance Learning.
- University of North Carolina at Chapel Hill. (2009). *Classroom activities for active learning*. University of North Carolina Center for Faculty Excellence.