

Diversity in Engineering Teaching – Views from Future Engineering Faculty

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Overview

- Research Question & Goals
- Research Context & Methods
- Themes
- Recommendations

Research Question

How do future engineering educators think about diversity and how do they go about considering these issues in their teaching?

Importance of Diversity in Engineering Education

- Higher education policy
 - NAE report
 - JEE special addition
- K-12 education
 - Discussed differently & published more
 - Diversity Pedagogy

Context

- Engineering Teaching Portfolio Program
- STEM grad students and post-docs
- Component of a larger study
 - 28 participants
- Responses to “How did you go about writing your diversity statement?”

Methods

- Semi-structured open-ended interviews
- Subset of interviews
 - Two female, two male
 - Ethnic self-identification
- Thematic analysis
- Identified diversity themes and issues

Themes

- Use of narratives
- Critical incident
- Use of politically correct terms

Use of Narratives

- Stories

- Specific, not general

- “That I had been traumatized by this woman who jumped down my throat for, you know, saying the wrong thing while trying to be -- have a useful discussion...being traumatized by this silly woman ...”

- Personal

- Personal experiences

Critical Incident

- **Positive incident**
 - Treated people equal
 - Marines: women expected to do the same as men
- **Negative incident**
 - “Traumatized”
 - “Tiptoe” when discussing diversity
 - “Politically correct” when discussing diversity
- **Impacts**
 - Teaching
 - Diversity views

Positive Critical Incident Example

- **Critical Incident:** “Well, for me when I was growing up, I asked my grandfather if he knew Tagalog and he said, you're an American, speak English. So that kind of set the tone --”
- **Impact:** “No, he just said that, and, it was like -- you know, it just kinda clicked right there, it's like you treat everyone like they're Americans, irregardless, you know, pretty, color, sex, all along.”
- **Outcomes:** “When I was inside the Marine Corps, I treated everyone the same. And it kinda freaked people out, because I was the only one that could have a woman in my platoon, and she got treated exactly like everyone else.”

Negative Critical Incident Example

- **Critical Incident:** "...but hadn't written a diversity statement at all, and was sort of tiptoeing around that, because in the CIDR class I had a bad experience on the day that we did -- we talked about diversity. We had this panel, and, um, that was just a very tension-filled day in that class."
- **Impact:** "Everybody was being defensive about possible -- you know, both actual past offenses to their particular group or other groups, um, as well as any potential future intended or unintended offense that we might be making"
- **Outcomes:** "So to write the diversity statement I kinda thought about what diversity-ish things I might have to say and then tried to figure out how to say them in politically correct ways (Laughter), because that seemed important."

Politically Correct Terms

- Developed a vocabulary
- Cautious of words
- Surprised when people were not PC

Recommendations

- Personal experiences
- Dialogue about diversity
- Diversity awareness

Conclusion

- How do future engineering educators think about diversity and how do they go about considering these issues in their teaching?
- Themes
 - Narratives
 - Critical incident
 - Politically correct

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