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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