

Transforming Undergraduate Education in Engineering Phase III: Voices on Women's Participation and Retention

June 12-13, 2015 | The W Seattle Hotel, Seattle, WA

Breakout Session I: Changing Perceptions and Creating Impressions

What Resonated?

- Changing publication standards
- Training or making room/pathways for all women (not just girls and young women)
- Marketing – What do they know that engineers don't
- Repeating actions – people begin to believe

Conversations

- Engineer faculty in front of room
 - Shift in who faculty is or will be
 - Shift to Forming Nat. Faculty
 - Typically come from unique cultural perceptions (domestic and international)
 - Already have ideas about women, minorities, etc...
- Where are drivers for deans/ presidents to put incentives in place?
- What's in place to empower the right people with cultural awareness, Gender Bias training?
 - Whose responsibility is it to train?
- Men must also believe in gender equality
- Make international connections – tell those stories
- Stand up against marketing that turns women off – (Ex. Geek Squad") – Example of how we keep people out

Solution/Examples

- AALBORG Univ. – PBL
 - Reverse the gateway (from math/sci – Engr. to Engr. – math/sci)
 - Post BAC programs for non-traditional women
 - Start bias training at a young age
 - Diversity should be intrinsic in education
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- Engr. Faculty are comfortable with what's already being done
- We exclude students in Engr. More than any other" ex R1 Institutions
- How do we engage non-traditional students?
- How do we strategically source students to Engr. Programs?
 - (On a national lever- sending students to CC, HBCI, HSI, etc...)
 - Changing how we do math and science
 - Why use math and science as gateway to Engr. Why not the other way around?
 - Math, Sci, Bio, etc... Engr. Is their "cash cow"
- What needs to happen?
 - 1st 2 year paradigm has to shift
 - Those who teach 1st 2 year courses should be treated better.
- If Engr. Is going to become relevant, there must be knowledge/ marketing of what Engr. Is.
- Training – What mechanism is in the system to help
 - Faculty becomes more effective when it comes to implicit bias?
 - Building skills (how to handle tough situation, how to tell people you are worth)
- Follow –up after training
- Diversity and standards are often confused – put a name on it
 - Label programs in a positive way(ex. Affirmative action) other definition of success
 - What's shaping stereotypes?
 - How do we reach students who don't have the GPAs /test scores but may have the skills to become Engr.? How to recognize those who want more to life?
 - Support mechanisms to foster a supportive enrollment.
 - Difference between U.S. and other countries.
 - Other countries – those in higher positions are ENGRs/Sci – role models viewed as problem solvers.
- Don't repeat what's in paper perception vs. reality of situation – light on changes we need to react reality
 - Choir preaching to each other
 - Systematic change that leverage (Includes R1, HBCU, HSL, CC...)
 - How do we find
 - Level of communication from those who matter
 - Fracture the belief system around "this is how it's been"
 - How to change perception of those hiring Engr.