

Transforming Culture in Engineering Education

BUILDING BRIDGES WEBINAR JANUARY 26, 2016 CHAT TRANSCRIPT WITH QUESTIONS ADDRESSED BY PRESENTERS

- EvaB:Engineering as a whole is better at gender representation than IT is specific efforts for women in IT? ANSWER: WEPAN's partner organization, NCWIT, is focused on IT specifically. Similar to the way many WEPAN members are conducting specific outreach, recruitment and retention initiatives for women engineering students, NCWIT academic allies are doing the same for computer science and information technology. Many of these efforts overlap.
- Paula Plasencia: How can we get a copy of this powerpoint presentation, especially the data slides?
 Glenda La Rue: Everyone attending will receive a copy of these slides.
- Jen S.: Our work to support women in engineering/technology is so vitally important. What initiatives are you (or other schools) doing to help conduct outreach to and create support measures for transgender individuals in these fields? We do not even have any data on trans folks in these fields. ANSWER: WEPAN is aware of two organizations that may be able to inform you of specific initiatives to support transgender individuals. We encourage you to reach out to NOGLSTP.org and OSTEM.org.
- 4. Sally Pardue:Have you considered offering a compressed version of the course as Super Saturdays, such as 4 Saturdays for 5 hours a day? ANSWER: In response to this question, Jo reached out to fellow classmates to get their input. 100% of the students preferred a weekday meeting time and most would not do a weekend at all.
- 5. Charles Pierce:Question for Lisa: Why did you decide not to include first-year students in the course? It seems that is such a critical decision-making time for them.

ANSWER:

Part 1: We thought that they might not be ready in the academic career to think about the professional development skills and were focusing on the transition from high school to college in their first semester. It would be interesting to see if there



Transforming Culture in Engineering Education

would any significant changes in dynamics with inviting first years. Part 2: Student input on this question breaks down as 50% indicating Yes, taking the course as a freshmen would be helpful (reasons: skills could be put to immediate use, connection with other students, meetings were relaxing) and 50% indicating No, not helpful (information would have gone over their head, unsure about engineering or leadership, introversion).

- 6. LTo:Couple of qs: 1) Was the class limited to 15? How would this scale? 2) How was this content different than classes offered by career services, which can also be taken for credit (1 credit) and run through the semester? ANSWER: We limited the course to 20. We thought that too many more than that would make it more challenging for the students to really get to know each other and be vulnerable. Career services has a more narrow focus with topics such as interview preparation, resume writing, etc. We are broader and focus more on personal development, handling bias in the workplace, etc.
- 7. Nickie McDade: Question for Robin: What more can we do to continue to build partnerships between corporations and universities, to really facilitate future opportunities for women in STEMS? ANSWER: We need to make sure that the skills we are training for in college are the skills that industry will need for the future. We need to spend more time together talking about curriculum. Also, we need to better understand what the markers of success are for women who are entering industry. What can we do to mentor more often.
- 8. Sally Pardue: How many of the class participants were already engaged in Society of Women Engineers as a student group, who may also serve to be a network of support and learning ANSWER: About 1/3 were actively involved in a women in engineering student group; 1/3 partially involved and 1/3 not involved at all. Those who were only partially involved became more involved after the course.
- Allie Parrott: Did expanding the program to all STEM students pose any additional challenges? We often experience some conflict when trying to serve students across multiple colleges/disciplines. ANSWER: We didn't see any challenges with expanding to STEM majors.
- 10. Lisa Schlosser: Have you considered all or parts of this class reconfigured to



encourage young women to enter the STEM field?

ANSWER: I believe this is one of the great opportunities. In working with recruiting at Thomson Reuters a good question is when do we start the conversations. It may be good to have something like this for entering students, however the drawback is that they have so much on their plates already. I would like to see a course like this developed for onboarding at industry. It could be a 6 month program that would really help.

- 11. Sally Pardue: Are the students' TED talks available for sharing? ANSWER: Due to desired privacy, we didn't videotape the TED talks.
- 12. Marcy Collinson: I work for Washington State University and we are looking to implement a similar program. We are considering offering this either as a course or as a Tech Camp for women. Is Thomson Reuters looking for additional partnerships for these kind of programs through other universities? I would love to speak with someone from the company more about this... ANSWER: Yes, we could talk about how to do this with Washington State. I have another woman I work with who runs the innovation labs for Thomson Reuters and I would like to bring her into the conversation. But the answer is – sure lets talk!
- 13. Sally Daniel:Does the inclusion of males change the dynamics of the group? Kelly:Yes, males would change the dynamics Ana Dison:My class this semester is great! All are participating and it's about 50/50. When there are just a few males, it has also worked just fine. It's interesting for them to see the tables turned, where they are in the minority. ANSWER: My opinion is that this woman only class provided a safe space for exploration and authenticity. I do like the idea of a course for men. And maybe a couple of overlapping classes that bring the two groups together. It would be good to talk more about the pros and cons of this.
- 14. Sally Pardue: I understand the strength of a stand alone course, but I wonder if there are ways to embed the skills throughout a sequence of existing courses. Are any of our audience taking this approach?

ANSWER: WEPAN members have access to several opportunities for engagement in conversation like this.

(1) Through WEPAN-L listserv (members only email listserv)

(2) Attending the WEPAN Change Leader Forum (This year June 14 – 16,



2016)

(3) WEPAN members-only online communities to feature forums, blogs (soon to be unveiled)

Sally, I see you are with Tennessee Tech, which has been a long-time institutional member of WEPAN. I will message you separately. (Glenda)

15. Charles Pierce: Thanks for the responses regarding first-year students! Are there certain elements of this course that could/should be directed towards first-year female students? (I teach an introductory engineering course and am generally concerned about the retention rates of female students. I've found that a significant portion switch to non-STEM majors.)

Ana Dison:We include a discussion on Imposter Syndrome...that might be something to incorporate ASAP.

Njoki Mwangi:For retention, I recommend CONNECTION. For resilience and motivation: SELF-KNOWLEDGE.

Njoki Mwangi:For confidence: PRESENTATION.

Njoki Mwangi: If you can encourage the female students to work together, that helps. As Candisse said, sometimes we tend to gravitate apart when we are a minority in a group. Ironic. :)

ANSWER: In thinking about this course and listening to the students and the focus groups we conducted it seems that it is important for freshmen to be engaged with a like community. As far as actual classes I would think the Emotional Intelligence and Values and Strengths would be a good start. If we can provide these women with a few skills to help navigate some of the issues and also have them feel really good about their skills and who they are...we can win and keep women in these programs.

16. Laura: I teach a 10 week, 1 credit seminar for freshmen about women in STEM, looking at the research around the gender gap, providing industry speakers and career information, and talking about challenges and resources available, among other things. We do a final project involving biographies of STEM faculty at our intstitution, but I am looking for other fun projects to get them more familiar with the literature about the gender gap in STEM fields. I would welcome any conversation around this topic: <u>laura.palumbo@rutgers.edu</u>

ANSWER: WEPAN members have access to several opportunities for engagement in conversation like this.

- (1) Through WEPAN-L listserv (members only email listserv)
- (2) Attending the WEPAN Change Leader Forum (This year June 14 16,



2016)

(3) WEPAN members-only online communities to feature forums, blogs (soon to be unveiled)

Laura, I see you are with Rutgers, which has been a long-time institutional member of WEPAN. I will message you separately. (Glenda)

17. Sally Pardue: May we know who the other attendees are, in case we want to reach out to one another?

ANSWER: Sally – see my comment above for ways to engage in conversation with others interested in this. WEPAN typically does not share contact information of other webinar attendees, and so the best way to do this is to activate a conversation through the means described above.

COMMENTS VIA THE CHAT WINDOW:

Ana Dison: I have been teaching a similar class for about 8 years now. Instead of journaling, we do 5 minute papers at the beginning of class. This gives students an opportunity to think about the topic or to reflect on a previous discussion.

Laura:Ana- I also teach a similar class, and I like the idea of 5 minute papers. Our class is voluntary, and I don't want to give these students extra homework.

Ana Dison:It's also a great way to get the class started as students trickle in or for those who arrive early. Ours is not for a grade and we don't do extra homework either. I try to keep it self-contained.

Sally Pardue: GREAT analogy of particles and properties!!

Paula Plasencia: Thank you Njoki for a wonderful explanation of this program. I gained alot of information and see first hand the benefits of this program.

Njoki Mwangi:You are so welcome!

Kelly:Jo, thank you for bringing up the intersectionality of identities

Njoki Mwangi: I love to share physics analogies in everyday life, Sally. Thanks! Njoki Mwangi: Intersection compounds challenges, yes.

Paula Plasencia: Thank you Candisse for sharing your experience in the program and how it has impacted you.

Candisse Fejer:Late reply, but you're so welcome! It was a great experience and I'm



Transforming Culture in Engineering Education

grateful for the opportunity to share it. Hopefully it's helpful.

Sally Daniel: I work at a community college and think that this sort of class would be great here for 2nd year students--or even for spring semester of 1st year.

Ana Dison:We target our class to second year students but do get all classifications. We teach the course both fall and spring and I've found that first year, first semester students in the course is just not a good idea. They have little to share in the way of the discussions. Second semester first year students can work but I don't generally advertise to them. We open our class to all engineering students so we get a few guys in there as well...

Elaine Collins:We have a partnership with a nonprofit called Braven to offer a 3 unit career accelerator/leadership course for URM and women students is STEM and business. part of the course is online. For the in-class of the course, students work in groups of 5-7 with a career course from local industries. San Jose State University.

Angela Bennett: I think this leadership material would also be very valuable to graduate women in engineering.

Laura: Angela- agreed!

Laura:Thanks for an interesting webinar! Sandra Soto-Caban:Thank you for all the information! Marcy Collinson:Thank you! William Mills:Thanks for a great webinar! saba:Thank you! Nilcy Strand:Thank you for all this information! Charles Pierce:Thanks for the feedback and a great webinar!