Virtual Community of Practice (VCP) to Promote LGBTQ Equality in STEM

VCP Overview

The ASEE LGBTQ Virtual Community of Practice (VCP) was launched in 2015, and we are currently recruiting new members to help expand our network and extend our impact. Members will work together to take action to promote LGBTQ equality in their departments. This community of practitioners will identify approaches appropriate for their department context, share resources, develop and implement action plans, and identify best practices for transforming the climate in STEM.

VCP Activities

VCP activities will commence in February 2018.

- Monthly 90-minute online meetings
- Facilitator training for Safe Zone Workshops (scheduled for spring 2018) (optional)
    - 5 online training sessions (2-hour sessions), occurring on alternate weeks (schedule TBD)
    - New members will receive free online facilitator training from our expert meta-trainers Christian Matheis and Masa Sugie
- Facilitation or co-facilitation of face-to-face and/or online Safe Zone workshops (optional)
- Light assignments outside of meeting time (e.g., previewing presentation for session, reading, planning an agenda, etc.)
- Online advocacy training (scheduled for fall 2018)

VCP Benefits

- Develop a better understanding of LGBTQ issues, particularly in the context of STEM
- Increase your awareness of assumptions, biases, and discrimination; learn effective response and inclusion strategies
- Advance your advocacy and support skills to become a stronger LGBTQ ally
- Learn strategies that are effective in reshaping norms and creating LGBTQ-inclusive departments
- Strengthen your group facilitation skills (these skills are transferrable to other aspects of professional activity, including academic teaching, workshops, and group leadership)

Resources from our current VCP, including past Safe Zone workshop materials, readings, handouts, and information on current VCP members, can be found at diversity.asee.org/lgbtq.

Detailed Project Information

Overview

Despite recent advances in equality for lesbian, gay, bisexual, transgender, and queer (LGBTQ) individuals in the US, students and faculty on college campuses still experience harassment, exclusionary behavior and discrimination. Initiatives such as Safe Zone campus ally training and institutional policy changes are effecting a gradual positive change in climate for LGBTQ individuals, but progress in STEM departments has been slower than in other disciplines. This transformative project links diversity research with a faculty development initiative to promote LGBTQ equality in STEM.

Linking Research with Practice to Improve the Climate in STEM

Our research focuses on understanding the process of developing this Community of Practice, how the members of the community become change agents by integrating advocacy into their professional identity, and what strategies are effective in reshaping norms and creating LGBTQ-inclusive departments. Our research will inform the practice of the Virtual Community.

One of the activities conducted during this VCP are Safe Zone Workshops. Safe Zone workshops are interactive training sessions intended to raise awareness for LGBTQ inclusion in STEM and create a visible network of allies to foster a supportive atmosphere for LGBTQ individuals. The Safe Zone Workshops are offered on campus, online and at professional conferences and are facilitated by members of this VCP.

Background and Motivation

- **Why are diversity and inclusion important on campus?**
  The way students experience their campus environment impacts their learning and development [1], [2]. When universities fail to create an inclusive environment for minority students, both minority and majority students are negatively affected. A commitment to diversity is inseparable from respect for dignity, and there is compelling evidence that diversity among students and faculty is crucially important to the intellectual and social development of all students [3-5].

- **How is this important to our STEM workforce?**
  Diversity is equally important in the workplace, as research suggests that improving diversity in a workforce can have positive effects on innovation and productivity [6]. Given the need to increase our STEM workforce to remain competitive in a global economy, efforts must be made to attract and retain talented individuals to STEM disciplines and professions. To this end, increasing diversity in S&E has become a national priority [7]. The National Academies call for elimination of all forms of bias that may hinder academic career success in S&E [8].

- **What is the campus climate like for LGBTQ students and faculty?**
  Even though recent years have seen significant advances in LGBTQ equality in the U.S. through legislation and social acceptance, research shows that LGBTQ students and faculty on college

campuses still experience exclusion and discrimination. The following examples taken from a survey of 5,100 college students, faculty and administrators illustrate this problem [13]:

- 29% of LGBTQ students and faculty experienced harassment and discrimination within the last year
- 20% of LGBTQ respondents feared for their physical safety on campus
- 37% of students were not comfortable in the classroom
- 30% of LGBTQ individuals seriously considered leaving their institution due to negative experiences and perceptions

- **But are there barriers to LGBTQ inclusion in STEM?**
  STEM departments have lagged behind other disciplines in terms of improving the climate for LGBTQ students and faculty [9], [10], [11], [12]. Research has shown that there are aspects of STEM culture that serve as impediments for advancing LGBTQ equality in our disciplines, and this translates into a chillier climate for LGBTQ individuals in STEM. One study compared the academic climate and career consequences for LGBTQ faculty in STEM versus other disciplines, and the findings show that [11]:
  - STEM faculty experienced the highest level of discomfort on campus, in their departments and in the classroom
  - STEM faculty who experienced discomfort were 2.6 times more likely to consider leaving.
  - STEM faculty who are out were more likely to experience discomfort on campus and in their departments than STEM faculty who were not out.

  More research is needed to explore the aspects of STEM culture that promote or hinder LGBTQ inclusion, and how interventions like Safe Zone workshops might improve the climate.

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Works Cited

[1] E. T. Pascarella and P. T. Terenzini, *How college affects students: A third decade of research.* vol. 2. San Francisco: Josey Bass, 2005.

[2] E. T. Pascarella and P. T. Terenzini, *How college affects students: Findings and insights from twenty years of research* vol. 2. San Francisco: Josey Bass, 1991.

[3] P. Gurin, "The expert report of Patricia Gurin," 1998.

[4] R. D. Reason, B. E. Cox, B. R. L. Quaye, and P. T. Terenzini, "Faculty and institutional factors that promote student encounters with difference in first-year courses.," *Review of Higher Education,* vol. 33, pp. 391-414, 2010.

[5] H. Smith, R. Parr, R. Woods, B. Bauer, and T. Abraham, "Five years after graduation: Undergraduate cross-group friendships and multicultural curriculum predict current attitudes and activities," *Journal of College Student Development,* vol. 51, pp. 385-402, 2010.

[6] C. Herring, "Does diversity pay?: Race, gender, and the business case for diversity," *American Sociological Review,* vol. 74, pp. 208-224, 2009.

[7] National Academy of Sciences, National Academy of Engineering, and Institute of Medicine, *Expanding Underrepresented Minority Participation: America's Science and Technology Talent at the Crossroads*. Washington, D.C.: The National Academies Press, 2011.

[8] National Academy of Sciences, National Academy of Engineering, and Institute of Medicine, "Beyond bias and barriers: Fulfilling the potential of women in academic science and engineering." National Academies Press, Washington, D.C., 2006.

[9] D. Bilimoria and A. J. Stewart, "" Don't Ask, Don't Tell": The academic climate for lesbian, gay, bisexual, and transgender faculty in science and engineering," *NWSA Journal,* vol. 21, pp. 85-103, 2009.

[10] E. A. Cech and T. J. Waidzunas, "Navigating the heteronormativity of engineering: the experiences of lesbian, gay, and bisexual students," *Engineering Studies,* vol. 3, pp. 1-24, 2011.

[11] E. V. Patridge, R. n. S. Barthelemy, and S. R. Rankin, "Factors impacting the academic climate for LGBQ STEM faculty," *Journal of Women and Minorities in Science and Engineering,* vol. 20, 2014.

[12] D. Riley, "The Island of Other: Making space for embodiment of difference in engineering," in *ASEE Annual Conference and Exposition*, Atlanta, 2013.

[13] S. Rankin, G. Weber, W. Blumenfeld, and S. Frazer, "2010 State of higher education for lesbian, gay, bisexual and transgender people," ed: Campus Pride, 2010.