Encouraging Mentoring Best Practices through a Graduate Peer Mentor Training Program

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Introduction/Need for Innovation or Idea

The National Science Foundation (2013) reported that only 17.8% of bachelors, 13.1% of masters, and 6.9% of doctorate degrees in science and engineering were awarded to underrepresented minorities (URMs) in 2010. Moreover, women and URMs are underrepresented in the Agricultural and Life Science (ALS) disciplines (Esters & Knobloch, 2012); in fact, in 2012, only 4% and 4.3% of master's ALS degrees were awarded to African American and Hispanic students, respectively. Further, 3.3% and 3.4% of ALS doctorate degrees were awarded to African American and Hispanic students, respectively (Food and Agricultural Education Information System, 2013). An analysis of the failure of the STEM pipeline reveals a disparity among URMs in STEM degree attainment at the undergraduate and graduate levels (Estrada, et al., 2016). Further, less than half of students enrolled in STEM disciplines graduate (Wilson, Iyengar, Pang, Warner, & Luces, 2012).

Mentoring has been recognized as an effective strategy to decrease attrition and increase the persistence of women and URMs matriculating through graduate programs (Kendricks, Nedunuri, & Arment, 2013). Mentoring can be defined as a relationship in which a more experienced individual assists or guides a less experienced individual and provides instrumental and psychosocial support (George & Neale, 2006; Noe, 1988). Instrumental support includes professional development, networking with other professionals, and challenging work (Kram, 1988; Noe, 1988). Psychosocial support includes counseling, empathy, and socialization to familiarize students to discipline-specific norms (Noe, 1988).

Peer mentoring is a relationship in which a more experienced student assists a less experienced student improve academic performance by providing the mentee with advice, support, and information (Collier, 2015). Colvin (2007) found peer mentoring to be more influential than faculty advisors and professors. Further, research indicates that group peer mentoring can increase student satisfaction, retention, and persistence (Mullen, 2010).

How It Works

Recently, a Peer Mentoring Program (PMP) was created as part of an existing college-wide mentoring program within the Purdue University College of Agriculture (CoA). The Mentoring@Purdue (M@P) program seeks to increase the number of women and URMs receiving post-secondary STEM-based agricultural and life sciences degrees. This is achieved by using mentoring as a tool to overcome and navigate barriers that URMs and women face in higher education, such as discrimination, sexism, stereotypes, microaggressions, and a lack of role models. On a larger scale, M@P aspires to create a culture of mentoring through engagement activities that not only teach mentoring strategies, but also create environments where students and faculty are encouraged to cultivate quality, supportive mentoring relationships.

The PMP advertised its launch via email to graduate students in the CoA. Students submitted an application, curriculum vitae, and a statement detailing what they hope to gain from the program, their greatest strength they felt they would contribute to the program, and how they would help new graduate students navigate challenges. The PMP meets monthly, and to date

have discussed topics including an introduction to mentoring, mentoring across differences (e.g., gender and race), and how to maintain healthy mentoring relationships. Participants submit a monthly report to the PMP Coordinator, providing information such as their progress in the program, their own personal and professional growth, and how the program can help them to meet their mentoring goals. Following the monthly report, the PMP Coordinator follows up with the participant during a monthly meeting, during which their monthly report is discussed, as well as the participant's feedback on the program. Additionally, participants answer prompts on a Blackboard discussion board to further the conversation and reflect on what was discussed in previous meetings. Finally, to further enhance community building efforts among the PMP participants, monthly socials events were organized.

Results to Date

The PMP coordinator administered a five-question survey via Qualtrics. When asked what participants liked about the PMP, participants unanimously agreed that they enjoyed having the ability to openly discuss challenges with other graduate students who may have experienced similar problems. A majority of participants also stated that they favored the informal environment of the meetings. When asked about strategies to improve the PMP, participants provided a variety of answers; however, frequent reminders of scheduled meetings and increased interactions with participants was mentioned most often. When asked if program participation has improved their ability to mentor others, all participants agreed that they have a better understanding of how to mentor, as well as how to be a better mentee. Participants stated that participation in the PMP has helped them reflect on their approach to mentoring and has improved their listening skills.

Future Plans/Advice to Others

Future plans for the PMP include: (a) continuing to expand the program, (b) increase participation in monthly meetings, (c) adding an additional team member to assist the Coordinator in the planning, facilitating, and execution of the program, (d) exploring the possibility of meeting twice a month, and (e) developing a program evaluation tool to assess the effectiveness of the program. During the spring 2017 semester, the group was split into two smaller groups to accommodate student schedules. Attendance during the May and June meetings were lower than the two previous meetings because students were busy finishing the semester or away at conferences. Advice for those interested in starting a peer mentoring program is to have two team members coordinate the program to ensure the program runs smoothly. Additionally, continuous interaction with program participants is encouraged for planning efficiency.

Costs/Resources

The cost for the PMP is minimal with costs not having exceeded $70. Most of the costs were related to the social, which averaged about $15 per person. There are plans to have a dinner/social event during the summer to celebrate the success of the program as well as participant accomplishments.

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