

**Advancing Diversity in Ag+STEM Disciplines
through an Inclusive Mentoring Program Model**

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Introduction & Need for LCT Strategy

Developing an institutional culture that reflects a commitment to inclusion, diversity and equity is key to helping enhance student transition, academic achievement, academic adjustment, persistence, retention, and degree completion among undergraduate and graduate students, especially those from underrepresented minority (URM) groups. The goal of this presentation will be to highlight strategies and best practices which has helped advance diversity and equity in Ag+STEM disciplines through an inclusive mentoring program model. The program that will serve as the focus of the presentation is the Mentoring@Purdue (M@P) program which was established in 2012 at Purdue University and was designed with the primary goal of improving the quality of graduate school experiences for women and URM students by offering best practices and advice to utilize in their mentoring relationships. A secondary goal of the M@P program is to increase the number of women and URM students pursuing post-secondary STEM-based agricultural and life science degrees in the College of Agriculture at Purdue University.

Program Structure and Impacts

The M@P program achieves its goals through six primary strategies: 1) M@P Summer Scholars Program (M@P-SSP), 2) M@P newsletter, 3) M@P Resource Guide, 4) Invited Lecture Series (ILS), 5) monthly workshops, and 6) Peer Mentoring Program (PMP). The M@P-SSP focuses on preparing students from 11 Minority-Serving Institutions (MSIs) to enter graduate school and has hosted over 100 scholars. Past scholars from three cohorts (n=64) were recently surveyed (Johnson, Esters, Knobloch, & Proctor, 2019) and 85% of participants agreed that the program provided them with resources that enhanced their readiness for graduate school. The data also showed that 73% of scholars agreed that participation in SSP increased their interest in pursuing graduate education. The M@P Newsletter is distributed to stakeholders to provide readily accessible mentoring tips and information. The M@P Resource Guide outlines the graduate school application process to assist students seeking advanced degrees and has been distributed to over 1,500 students.

Surveys conducted with past M@P scholars (n=68) (Vollmer, Esters, Knobloch, & Getz, 2019) who have used the guide have shown that 72% believe it has better prepared them for graduate school. Every year, the M@P program hosts the ILS and monthly workshops that focus on addressing the mentoring needs of graduate students as well as serving as a resource for faculty and staff. An evaluation of M@P workshops, which consisted of 361 participants and 21 workshops, revealed that 15 of the 21 workshops had a strong effectiveness rating (4 on a 5-point scale). The PMP connects graduate students with one another through peer mentoring to create a community of scholars that support one another. The PMP has engaged 22 scholars in critical discussions over topics ranging from developing a mentoring philosophy to the inequitable access to mentoring across gender and race. Evaluation of a recent PMP cohort (n=6) using a scale of 1 (*none*) to 5 (*definitely*) showed that participants felt engagement in the program enhanced their ability to navigate cross-cultural mentoring relationships ($\bar{x}=4.10$). Each of the programs described and tools has shown the capability of the M@P program to effectively impact the experiences of women and minority graduate students.

The impacts of the M@P program include presentation of more than 50 workshops and professional development on issues of diversity and mentoring, presentation of scholarly works

at over 35 national conference; development and presentation of over 50 scholarly products; and engagement of over 1,000 students, faculty, and staff at Purdue University. Over the past five years, graduate student leaders of the M@P program have engaged nearly 2,000 faculty, staff, and students on 11 MSI campuses and over 500 undergraduate students at professional conferences about graduate school opportunities in Purdue University's College of Agriculture.

Program Organizational Structure

The M@P program is led by two co-directors. However, graduate students are key members of the leadership team. To a large degree, the M@P program is coordinated by graduate students who are mentored by the program directors. The organization of the program is a flat hierarchy, where each graduate student plays a leadership role for a particular aspect of the project. The M@P program utilizes an empowered mentored-leader program model for developing leadership and professional skills of graduate students while being social agents of change. Graduate students hold various leadership (i.e., coordinator roles) that provides them with authentic leadership training to help cultivate professional and personal development skills. Through these leadership roles, students gain experiences that enhance their leadership skills such as program management, budgeting, strategic planning, grant writing, critical thinking, and program evaluation & assessment. A guiding principle of the M@P program is to empower students through mentorship to develop leadership and professional skills through authentic leadership and professional experiences.

Advice to Others

With appropriate administrative support, other institutions can, and should, replicate aspects of the M@P as they consider developing programs to address Ag+STEM diversity as well as to help prepare graduate students with the skills they need to be leaders in food, agriculture, natural resources and human sciences (FANH) disciplines.

References

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