

INCREASING DIVERSITY IN STEM: Promising Practices for Oregon HB 3072

Chazya Clements, Sona Hodaie, and Genevieve Schaack
University of Oregon
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EXECUTIVE SUMMARY

This qualitative study examines the impact of the Oregon HB 3072 STEM Grant, a competitive grant which was dispersed by the Higher Education Coordinating Commission (HECC). Nine higher education institutions across Oregon were awarded funds for the 2016-2017 school year. Three of the nine institutions were selected in this study: Chemeketa Community College, Oregon Institute of Technology, and Oregon Health and Science University. The study seeks to answer two questions: **What are the promising practices to recruit and retain women and minorities in STEM? What are the impacts of these promising practices on students?**

We engaged 27 study participants through interviews, focus groups, and an email survey. The analysis focused on gathering stories from these institutions' students and program administrators. The stories that we collected highlight how the programs benefit students in terms of accessing resources, exploring academic and career potentials, and building persistence and resilience.

Our research identifies promising practices and challenges that individual sites faced and also aspects that were shared across the three sites.

Promising practices:

- Guiding students through bureaucratic systems such as college applications and registering for classes because students often feel overwhelmed by these processes and need help advocating for themselves on an institutional level
- Providing peer mentorship with older students from diverse communities that serve as models for incoming students in STEM programs.
- Allowing students to take college courses ahead of time, sometimes with a mentor, as a preview of the STEM degree programs to come.
- Interacting with STEM professors and professionals at science fairs is also a powerful way to help students envision themselves as future STEM professionals.
 - Students stated that this experience would be even more powerful if the professionals with whom they meet are also from diverse communities.
- Reaching out to students via text messages and social media as well as through traditional emails.

Challenges:

- Grant timeline did not allow enough time for implementation of new programs at the sites.
- Sites that started new programs had trouble hiring coordinators and student tutors and mentors within enough time.
- Lack of volunteers from diverse communities to serve as mentors.

- Students report a lack pre-enrollment information about available program offerings.
- Trouble tracking students once they graduate high school.
- STEM grant funding will expire on June 30, and there is no guarantee that it will continue.

Student Stories:

- One student, who engaged in Oregon Tech's summer program, reached out to program administration and expressed that, 'If this program didn't exist I would have never been able to have the opportunity to come on a college campus. This means a tremendous amount to me as a high school student to have this type of experience.'
- At Chemeketa, one student, the first in her immediate family to attend college, talked about the desire to be a role model, to show that women, particularly women of color, belong in STEM majors and ultimately STEM careers. Another shared feeling that this programming helped her feel like "...I am doing the right thing at the right time, and I am not missing anything."
- A high school senior who participated in OHSU's On Track clinical shadow experience said, "This really helped me. I always said that I wanted to be a doctor, but this gave me the confidence that, for sure, I love this. This where I see myself, and I want to go on to pediatrics." This exemplifies how this program helps build students' identities as STEM professionals.

Although these programs use a diverse range of strategies to serve students, growing students' persistence and resilience was universal among them all. When the mentorship, science fairs, and college advising are said and done, the ultimate result of these programs is building students' belief in themselves as their own true resources. Students are reminded that they are truly capable and intelligent enough to pave their own pathways to college and careers that are rewarding, challenging, and fulfilling.