



## **Preventing a Leak: Two Perspectives on Creating Supportive Environment for Graduate Student Colleagues**

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Debate continues about whether there exists a leaky pipeline for women in STEM fields within academia, as well as the causes of leaks – points in an individual's career where women are more likely than men to choose a non-academic pathway. Statistics on MS and PhD degrees awarded in STEM fields indicate that one of these leaks occurs during and immediately following graduate school. Here, we present two perspectives, that of a full professor and a graduate student, on how to create an environment in which geosciences graduate students can thrive psychologically and professionally. We recognize the challenges faced by many underrepresented groups, but here we focus specifically on gender diversity from the perspective of white women. From the perspective of a faculty advisor overseeing a research group, the goal is to treat each member of the group as an individual and to develop a mentoring relationship that most effectively fosters that individual's development as a scientist, while maintaining a cohesive, collegial group dynamic. Among the recommended ways to achieve this are: maintaining flexibility in the work schedule, with success evaluated by outcomes; consideration of work-life balance; respect for diverse approaches to problem solving; recognition that individuals can be most productive, satisfied, and engaged when their individual contributions are acknowledged and valued; and respect for different choices for a career path and for changes in those choices during graduate studies. From the perspective of a graduate student, it is important that an advisor demonstrates a clear commitment to treating each member of a research group as a valued individual with differing needs. In addition to the recommendations above for achieving a positive and supportive research group, as a graduate student it is useful to have multiple mentors and role models who have had different career tracks and can provide diverse perspectives and advice. Graduate students can also take it upon themselves to enhance retention of underrepresented groups in STEM through forming local support and networking groups or advocating for better institutional policies (e.g., paid parental leave policies for graduate students). Supporting and encouraging graduate students who undertake activities aimed at increasing diversity in STEM is another way that advisors can create a better working environment for their graduate students. Success for women in STEM fields and their retention over the long term can depend upon the experiences they have in graduate school and whether they believe it is possible to create a career path that works for their individual needs and work-life balance.