FORWARD thinking

Although there are many more women employed in academia than there were 30 years ago, significant challenges still remain. For nearly two decades, Drs Rachelle Heller and Catherine Mavriplis have been working towards addressing the gender gap.

Could you provide a brief introduction to the Focus on Reaching Women for Academics, Research and Development (FORWARD) to Professorship project and explain why it was created?

CM: FORWARD started in 1996 as a programme to advance women and underrepresented minorities in STEM, including the deaf and hard of hearing, through the undergraduate to graduate level juncture. It soon became obvious to us that the structure of our FORWARD to Graduate School workshop could easily be adapted to address the graduate school to professorship juncture. FORWARD was developed to fill the gaps for women and underrepresented groups by providing information about the ways in which these populations can make successful transitions in STEM. The FORWARD to Professorship workshop covers the nuts and bolts of applying for and succeeding in a tenure-track professor position.

What are your respective roles in the project and what inspired your involvement?

RH: The project truly is a collaborative effort, and I do not think of it in terms of specific roles. That said, Catherine’s memory for people we’ve met, articles we should relate to and tasks we have on our to-do list is much better than mine. So, I would say Cathy is the project memory. I am happy taking care of the administrative details. Together, we consider speakers, projects and new pathways to implement.

CM: We never set out with any respective roles, but we certainly brought different strengths and perspectives to the project. Our colleagues at Gallaudet University for the Deaf and Hard-of-Hearing, Charlene Sorensen, H David Snyder and, more recently, Paul Sabila, have provided much needed insight into the culture and challenges for the deaf in science. Each of us also brought our experiences from different disciplines and institution types. But together, we drew upon each others’ strengths to spark creativity and come up with a unique programme that addresses a comprehensive set of challenges.

How does the FORWARD project compare to other educational or career support programmes?

RH: FORWARD was ahead of its time: in the 1990s, individuals were not organising workshops to discuss issues and skills necessary for women’s advancement in academic STEM.

CM: At the time, as one of our participants said, the workshop provided information that was not available anywhere else. We really see it as ‘insider information’ that should be available to everyone: that is why we endeavoured to provide it for free to participants who were serious about becoming a professor in science or engineering. Furthermore, the uniqueness of FORWARD is gathering women from across a wide geographical, disciplinary, institution-type and ethnic background to converse in one time-intensive session about solutions to the challenges of becoming and succeeding as a professor: breadth and depth in a short powerful experience.

Are there any noteworthy achievements as a result of the programme that you wish to highlight?

RH: We have had a few notable successes. Firstly, we have interacted directly with over 400 women and indirectly impacted over 1,300. Secondly, through the Pay It Forward grant, 10 local adaptations of our model were created and offered to targeted geographic, social or discipline groups. Two models have become institutionalised, one at Massachusetts Institute of Technology and the other at Arizona State University.

CM: The greatest success of the project is definitely seeing the smiles on the faces of more than 1,300 doctoral women who thrive on science and engineering, when they recognise that they are not alone and can foresee a path for themselves to becoming successful researchers and professors. Beyond that gratifying moment, the creation of a legitimate structure for faculty development that has been institutionalised, adapted and adopted by several different groups and institutions across the US and Canada is a very tangible and enduring success.

Do you hope to use FORWARD as a global model for increasing the inclusion of women and minority groups in STEM leadership roles?

RH: The workshop model is adaptable, as we have already shown. FORWARD is an easily localised model – we have already seen it in use outside of the US where it was well received. Issues of advancement for women are bound into the social fabric of a community and our model supports adapting the programme to address social issues. For example, technical issues in funding vary from country to country. We urge organisers to conduct a session on funding with local leaders. Additionally, the ‘Having It All’ work-life balance panels are designed to bring in colleagues who have addressed their advancement within the social structure. We expect that our forthcoming book will incite new partners to advance the FORWARD model.
Equality in academia

On the path to the predominantly male upper echelons of STEM fields in academia, women and minority groups face many challenges. The long-standing FORWARD to Professorship project was one of the first to support such individuals to access these realms.

IN THE US, the number of women employed in STEM academia has increased considerably over the last three decades, but progressing from doctoral and postdoctoral level to professorship has remained a predominantly male pursuit. At the end of their doctoral research, women are faced with the difficult choice of pursuing an academic career, working in private industry or government, or following another life path. Although most institutions now acknowledge that life events such as starting a family can impact a woman’s ability to progress in academia, many women doctoral students are dissuaded from an academic career for a number of reasons – often influenced by what they have observed in their own institutions. These include the small or non-existent number of females already employed in professorships and the challenges of breaking into a rigid male-dominated culture, as well as a lack of clarity around the pathway to professorship.

WORKSHOP MODEL

Over the past 15 years, the Focus on Reaching Women for Academics, Research and Development (FORWARD) to Professorship project has been addressing these challenges for women, as well as other underrepresented groups such as individuals who are deaf or hard of hearing. The project was originally devised by Drs Rachelle Heller and Catherine Mavriplis at George Washington University, USA, and Drs Charlene Sorensen and H David Snyder at Gallaudet University, USA, in the late 1990s, when support for women’s progression in academia was sorely lacking, mentoring was rare and no other similar initiatives existed. FORWARD was designed to demystify the process and bring women together to hear from women (and some men) who had successfully advanced their academic careers.

Funded by the National Science Foundation under the ADVANCE Leadership Award programme since 2001, FORWARD’s primary method is a two and a half day workshop with a range of sessions on topics which include teaching styles, communication and negotiation skills, writing, seeking research funding, creating a career plan and discussion on work-life integration. Speakers, mentors and peers who can offer solutions to a variety of the challenges faced, or simply the encouragement to devise one’s
The interactions of participants with the many peer, academic and other mentors are central to FORWARD’s success.

Ultimately, Heller and Mavriplis are aiming for the wider adoption of their model by the academic community, in order to effect systemic change for diversity in academic STEM departments going forward. “Women want to be STEM professors. Providing them with access to information, key contacts and a variety of role models is inexpensive and fairly easy to achieve with a workshop structure such as FORWARD to Professorship,” Mavriplis enthuses. Furthermore, the experience of the workshop is empowering for participants, speakers and organisers alike, and benefits the careers of all involved.

The project is the subject of a forthcoming book to be published by Elsevier, FORWARD to Professorship in STEM: Inclusive Faculty Development Strategies That Work. Heller and Mavriplis have found the process of compiling the book a useful opportunity to reflect upon FORWARD’s impact. They plan to disseminate the book widely. “Gathering the 11 teams who adapted the workshop to their regional, discipline or minority group focus and synthesising the experiences of these diverse groups contributed to a deeper understanding of what we had created and its importance,” Mavriplis concludes.