Bloom Where You Are Planted: Reflections on Effecting Campus Climate Change To Retain Minoritized Faculty Scholars in STEM Fields

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When the Royal Swedish Academy of Sciences awarded Dr. Frances Arnold, an American chemist, the 2018 Nobel Prize in Chemistry, she became only the fifth female recipient in the history of this award. Such exceptions aside, women are largely underrepresented, particularly in science, technology, engineering, and mathematics (STEM) and especially at higher ranks in academia. A 2007 committee commissioned by the U.S. National Academies concluded that bias was largely to blame for a gender gap in the participation and status of women in STEM fields. Likewise, a large body of social psychological research has revealed that various factors contribute to creating a “chilly” or outright hostile work environment for women. This work environment signals to women that they are not welcomed or genuinely wanted. These factors are amplified for women faculty of color, who are disproportionately underrepresented in the majority of STEM fields, at all ranks.

In this chapter, we describe an intervention for institutional transformation to tackle barriers faced by women faculty of color at the university that make it difficult for them to succeed. The intervention, which we present in terms of a model to retain minoritized faculty scholars, features six phases of engagement, development, and advocacy by junior scholars and senior faculty advocates. The goal of these efforts is to make a predominantly White research university a more supportive place for a diverse professoriate. We suggest that other predominantly White research universities can usefully adapt this model.
“We all need friends, and friends are there to hold you up when nothing else can. I am very lucky to have a wonderful institution I work for, where I have many friends, and I have many friends outside [the university]... who’ve been there for me” (1).

“No field can afford to ignore or alienate half its potential contributors. If we want talent, we have to welcome it and nurture it, in all its diversity” (2).

Dr. Frances Arnold, an American chemist, was awarded the 2018 Nobel Prize in Chemistry. She is only the fifth woman in history to be accorded this honor (1) and brings the total number of women ever to win a Nobel Prize in science to 19 (2). None of the recipients of the Nobel Prize in Chemistry have been women of color. It is, of course, rare for anyone to win the Nobel Prize. Despite this rarity, the fact that there has not been a single woman of color given this recognition is consistent with a broader pattern whereby women faculty, and faculty of color, remain underrepresented as recipients of prestigious awards and as senior faculty in the academy more generally (3).

A substantial literature documents an array of challenges that slow the advancement of women in science, technology, engineering, and mathematics (STEM) disciplines (4–6). One of the major challenges is implicit bias toward women, which permeates and becomes embedded in the workplace climate. A toxic workplace climate is in turn associated with lower levels of job satisfaction (7) and productivity (8). Working in a hostile work climate has been linked with declines in psychological well-being (9), withdrawal from work (10), feeling less valued and accepted (11, 12), and lessened work satisfaction (13). While hostile work environments affect everyone, research has shown that the academic climate has a greater impact on women faculty than men (14).

Women are particularly affected because women faculty are typically in the minority in most academic departments in STEM fields. Kanter (15) examined how being a “token” in a workgroup (e.g., one or a few women in a group of men) affects individuals in the numerical minority. Being in the numerical minority attracts more attention and greater scrutiny (16). As a result, individuals in the numeric minority are likely to feel increased pressure to perform and may experience social isolation, which can adversely affect their performance (17–19). The situation is heightened for minoritized faculty, who may literally be the only such person in their academic department.

The Case of Chemistry

![Figure 1. Representation of women faculty of color in U.S. chemistry departments.](image-url)
Nationally, women of color are particularly underrepresented in the most research-active chemistry departments (see Figure 1). In 42 of the top 50 chemistry departments by research expenditure (the remaining eight departments did not report their data), there were a total of 19 female faculty of color (data from (20)) out of 1317.5 faculty total. Therefore, women of color represent less than 1.5% of the faculty in these departments. Most chemistry departments have no women of color on their faculty, and of those that do, the most likely number is only one. Therefore, finding mentors outside of the department is often important for these women faculty of color.

Recently, there has been increased attention to issues of visibility and invisibility in the workplace (8) and the development of programs addressed at improving the status of women faculty in STEM fields (21). The goal of these efforts is to bring together empirical findings and to disseminate recommendations to audiences ready and willing to confront the persistent omission of diverse scholars from the academic ranks in STEM disciplines. One effort aimed at increasing the number of women in STEM academic disciplines is the National Science Foundation’s ADVANCE program. The goals of the ADVANCE program are to develop initiatives to increase the representation and advancement of women in academic STEM careers, to develop mechanisms to promote gender equity in the STEM academic workforce, and to aid in diversifying the science and engineering workforce.

Our university was a recipient of an ADVANCE-IT grant. In implementing this grant, faculty and administrators on the grant’s leadership team were guided by a belief that progress in improving representation and success of women STEM faculty will depend on an ability to effect institutional change at the level of colleges and departments, by improving climate and providing support and mentoring to counter the experiences STEM women faculty have as a result of their minority status. While aimed at women faculty in STEM across the university, the ADVANCE program at our university also explicitly created an initiative, the ADVANCE Scholar program, which was directed at mentoring and retaining tenure-track women faculty of color in STEM. Below we first describe the structure and goals of the ADVANCE program as a whole and then turn to the characteristics and impact of the Scholar program.

**Texas A&M ADVANCE Program: Background**

The ADVANCE program at Texas A&M University was informed by the Psychologically Healthy Workplace framework of the American Psychological Association (22). This framework has five aspects: employee recognition, employee growth and development, employee involvement, employee health and safety, and employee work–life balance. Table 1 describes each of these aspects further.

The ADVANCE program consisted of three components that worked synergistically: activities, social science research, and evaluation, as shown in Figure 2. Activities were designed to support individual women faculty but also in the process change the institution. Social science research studies were conducted so we could understand at a more basic level how to transform the institution. Finally, evaluation was done so we could understand the effects of the activities on individuals and the institution. Each of these components reinforced the others. For example, lessons learned from the Scholar program were brought to department heads through the Leadership Excellence for Academic Diversity program. Feedback from the evaluation team was continuously incorporated into the activities.

Within the activities sphere, there were a total of 12 activities, each aligned with one or more of the Psychologically Healthy Workplace practices. The activities were organized into three broad categories of goals: workplace climate improvement, recruitment and retention, and success.
enhancement, as outlined in Table 2. It should be noted that many of the activities contributed to more than one of those goals. For example, the main focus of the Scholar program was to enhance the success of the individual faculty member, but the existence of the program helped the university recruit new faculty of color; further, enhanced awareness of issues faced by women faculty of color brought attention to the need to improve the workplace climate. Although women of color also participated in many of the activities of ADVANCE, the ADVANCE Scholar program, described further below, was specifically designed to promote the professional advancement of women faculty of color at the university.

Table 1. Aspects of a Psychologically Healthy Workplace

| Employee Growth and Development | • Provide employees with the opportunity to expand their knowledge, skills, and abilities and provide an outlet to apply these gained competencies  
| Employee Health and Safety | • Maximize the health of employees through prevention, assessment, and treatment of potential health risks  
| Employee Involvement | • Allow employees to bring ideas and perspectives as a part of organizational decision-making  
| Employee Recognition | • Allow employees to be rewarded for their contributions and achievements  
| Employee Work–Life Balance | • Help employees to balance the multiple demands in their lives  
| **a** Health and Safety is operationalized in our academic setting as well-being and lack of mistreatment (23). **b** Employee Involvement is one of the more critical Psychologically Healthy Workplace categories (24).

Figure 2. Three synergistic aspects of the Texas A&M ADVANCE program.
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<th>ADVANCE Activity</th>
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<td>Employee Involvement</td>
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<td><strong>Climate Change</strong></td>
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<td>Faculty Staff Interaction Training (FASIT) Program</td>
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ADVANCE Scholar Program

Inspired by a program initiated by the ADVANCE program some years earlier at Iowa State University, the ADVANCE Scholar program was established explicitly to promote the professional advancement of our university’s tenure-track women faculty of color in STEM fields. It was overseen by the university’s Office for Diversity, with sustained involvement by the Vice President and Associate Provost for Diversity and the Provost. The program was designed to provide a two-year mentoring opportunity to women faculty of color who were accepted into the program. Each college with STEM fields was invited to identify tenure-track women faculty of color in their college, and these women were invited to attend an informational session about the program. Those interested in participating in the program were asked to complete an application in which they were to identify what professional goal they wished to focus on during the two years of the mentoring experience. The applications were reviewed by a committee of senior faculty, many of whom were members of minoritized groups, and all those interested in joining the program were accepted into it. Once accepted, they were each assigned to an internal mentor who helped them identify an eminent scholar who could serve as their external mentor in their discipline. Invitations were sent by the Provost to the eminent scholars, who were also offered an honorarium and travel support to meet with their mentee. Scholars in term were also provided with travel support to attend a conference to meet with their eminent scholar or to meet them at their institution.

Thus, the program was structured as a professional development opportunity whereby selected tenure-track women faculty of color (“scholars”) were each paired with a prominent, highly influential STEM faculty in their discipline at another institution. These “eminent scholars” agreed to serve as mentors to the scholars, providing concrete guidance and support to achieve their professional goals. Further, each scholar was paired with an “internal advocate” at the university. This person was a senior faculty member not in the scholar’s discipline. The role of the internal advocate was to be a sounding board and help the scholar navigate the tenure process at the university. The internal advocates, in turn, met a few times each year to share strategies and discuss ways of enhancing the program. In consultation with their internal advocate, the scholars identified specific professional goals and identified potential faculty in their discipline who could serve as eminent scholar mentors. Eminent scholars were invited to serve in the capacity of mentor for a period of one to two years. Guidelines for ways in which the scholars could be mentored by the eminent scholars were developed by the Office for Diversity in consultation with the internal advocates and were shared with the external mentors. A more detailed account of the program and a discussion of factors affecting women faculty of color in academia can be found in ref. (25).

In what follows, we describe a model for institutional transformation that emerged from our reflections of the benefits of the scholar intervention. A basic premise of the model is that in order to retain women faculty of color at predominantly White research universities, there needs to be an acknowledgment of the pervasive and inhospitable campus climate for women faculty of color at the university, and specific mechanisms must be implemented to counter the isolation and pressure of the impact of the toxic climate. Another important aspect of the model is the role that senior scholars of color at a university can play to reduce the barriers that impede professional visibility of junior scholars of color at the university.

The Model to Retain Minoritized Faculty Scholars (see Figure 3) features six phases of engagement, development, and advocacy by ADVANCE scholars (junior women faculty of color) and senior faculty members. The ultimate goal of this engagement is to make the university a more supportive place for a diverse professoriate. Although we arrived at the model from insights obtained from efforts to support women faculty of color at our (predominantly White) research university,
we believe that the model could serve as a useful conceptual framework for other such universities. In what follows, we comment on each of the six phases of engagement, providing context and illustrations from our own university.

**Figure 3. Model to retain minoritized faculty scholars.**

**Phase 1: Recruit from a Robust Pool of Eligible Scholars**

In 2003, our university embarked on a faculty reinvestment program with a goal of increasing the number and diversity of faculty at the university. During the reinvestment program, a net total of 447 new tenure-track faculty were added over and above attrition, with representation of women faculty (particularly at the assistant professor level) increasing substantially, from 79 STEM women faculty in 2002 to 168 STEM women faculty in 2009. However, the proportion of women hired from underrepresented minority groups in STEM fields at the university’s main campus was,
unfortunately, still very low (only one in social science and eight in science/engineering/geosciences).

Decision makers, even those committed to egalitarian principles, may have explicit or implicit biases against women (5) or people of color (26). To tackle this problem that we believe contributes to the low levels of recruitment of women and minoritized faculty, our university implemented an interactive implicit bias search committee training program adapted from the ADVANCE team at the University of Michigan. Awareness of bias (27) was raised with key committees that routinely make decisions on the recruitment, retention, and advancement of women. By providing formal training on bias in the search process, it was hoped that more minoritized faculty would be considered when recruiting new faculty.

**Phase 2: Engage Recruited Scholars in Diverse Mentoring Networks**

In order to improve the representation of women of color faculty, the institution recognized that it needed to address retention and promotion issues. As already noted, empirical research shows that department and campus climate strongly influence job satisfaction and retention of women and minority faculty (14, 18). The university recognized that to enhance the professional visibility of and support the few existing women faculty of color in STEM fields at our predominantly White institution, some intervention in the form of specialized mentoring was necessary (28). Reaching out to STEM faculty mentors at other institutions who are nationally known in their disciplines as eminent scholars allowed expansion of the potential pool of mentors and role models and helped participating junior faculty develop connections beyond their own institution.

In addition to the one-on-one mentoring intervention that characterized the Scholar program, the university also provided mentoring based on cultural affinity groups. A mentoring coordinator oversaw the one-on-one mentoring that was organized by the university faculty networks; these included the Women’s Faculty Network, the Mexican American Latino Faculty Association, and the Black Faculty Alliance.

In addition, all STEM women faculty were also provided with the opportunity to participate in mentoring groups that were tailored to their common interests—whether research-based interests or personal interests such as the arts, exercise, and more. These mentoring groups encouraged informal mentoring and helped develop social ties and emotional support.

**Phase 3: Identify Academic Work Goals and Career Objectives**

To foster faculty success and to network with prominent women scholars in their field, the ADVANCE Center supplemented existing speaker series (e.g., the University Distinguished Lecture Series, College Lecture Series, and one of the Bush Foundation Endowed Lecture Series) to bring in senior women scientists and engineers, many of whom had also been active in gender and diversity issues, to speak at the university. One to two speakers per year presented an invited talk on their research and then met with smaller groups (including department heads and senior faculty) to discuss issues surrounding diversity in STEM fields. Departments nominated potential speakers, and the ADVANCE Center worked with the nominating department to arrange events with the speaker, including a social event with women faculty, advanced graduate students, and postdoctoral scholars in the speaker’s field. Talks were scheduled to occur at important times in the faculty search and tenure and promotion review process. This practice of intentionally inviting a prominent woman scientist to present at the university also served to address a bias in academia whereby women are less likely to be invited to give colloquium talks at top universities (29). Research indicates that when
people see an accomplished person from a minority group, they tend to be less biased toward other members of that group \( \left(30\right) \).

Further, a national conference was held at the university in 2012, focusing on women of color in the academy. The eminent scholars associated with the ADVANCE Scholar program were invited to present at the conference, which featured other prominent speakers in different social science disciplines who addressed issues facing women of color in the academy. Furthermore, two daylong, off-campus retreats have also taken place, in 2013 and 2016. The retreats featured speed mentoring sessions, breakout discussion sessions, a panel with senior faculty and leaders, and a question-and-answer session with the provost.

Additionally, the university’s ADVANCE Center offered annual Roadmap workshops focused on such topics as “Getting a Good Start: Strategies for Your First Year as a Faculty Member.” Patterned after an initiative of the Rice University ADVANCE project, a wide range of subjects were selected, including understanding the promotion and tenure policies of your department, how to balance work and life obligations, and common mistakes to avoid. Departments with eligible assistant professors were invited to nominate women from underrepresented minority groups. These women were then individually invited to attend the workshop and, while on the campus, would have a chance to see the campus and meet with members of their nominating department. The ADVANCE Center collaborated on this effort with the nominating departments and with the Vice President for Research.

**Phase 4: Mark Milestones, Celebrate Successes, and Make Adjustments**

The ADVANCE Center, in collaboration with the Dean of Faculties office, the Women’s Faculty Network, the Women Engineering Faculty Interest Group, the Women Administrators Network, the Vice President and Associate Provost for Diversity, and the Vice President of Research, organized family-friendly events to recognize and publicize the achievements of women faculty, including receiving tenure and promotion. Additionally, the university’s ADVANCE program, in conjunction with the office of the Dean of Faculties, expanded implicit bias training beyond search committee training to include training for award selection committees.

Notifications of major awards and accomplishments were disseminated campus-wide, and success stories were featured on the ADVANCE Center website and promoted through university communications. A reception was held each semester on campus for the ADVANCE scholars and their advocates to network, socialize, and celebrate each other’s accomplishments. Additionally, for the annual recognition ceremony, the scholars’ department heads and deans were invited.

**Phase 5: Link Broader Climate Initiatives to Minoritized Scholars Being a “Good Fit” for the Institution and Profession**

The mission of a land grant university is to serve all members of the state. Yet, as was the case for many institutions of higher education in the United States, this mission often did not extend to women or African Americans until fairly recently (the mid-1960s in the case of our own university). The White male history of the campus permeates its traditions and culture. The university’s faculty profile is not unlike that of many other research-intensive institutions of its kind in the United States, with a faculty that is predominantly White (currently 65% at the assistant and associate professor ranks and 77% at the rank of full professor) and predominantly male (56.2% at the assistant professor level, 62.6% at the associate professor level, and 81.2% at the full professor level). At all ranks, the majority of women faculty at the university are White (72.6%).
Also reflective of what is happening at other universities, our university has in recent years stepped up to the task of holding itself accountable with respect to enhancing diversity and inclusion efforts at every level. A university-wide Diversity Plan was launched in 2010 (see diversity.tamu.edu), which required each unit of the university to report on its success in promoting diversity in hiring and recognition, relative to its aspirant institutions. The institution’s diversity commitments are also becoming visible outside the university. The university’s Diversity Plan and related endeavors have received positive feedback from audiences at Southeastern Conference meetings, the National Conference on Race and Ethnicity in Higher Education, and in other meetings of scholars’ disciplines. A Climate Matters conference held at the university in two successive years is another example of sharing good ideas and encouraging further progress.

Moreover, as previously noted, the university’s faculty reinvestment initiative implemented from 2003 to 2008, while increasing the representation of White women faculty in STEM departments, did not do so well in recruiting women faculty of color. The latter group collectively comprise 12.4% of all assistant professors, 12.8% of associate professors, and a mere 3.5% of full professors at our university. Looking at changes over time, we note that from 2011 through 2017, which corresponds to the implementation of the ADVANCE Scholar program, the percent of faculty who are White men and full professors at the university has declined slightly, to 28.75% in 2017, whereas the percent of White women who are full professors has increased slightly, to 8.03%. The relative percent increase of White women full professors (3.18%) is actually larger than the percent increase in all faculty of color (men and women) at the university who were full professors in 2017 (under 2%). In 2017, of all faculty across ranks, faculty who were Asian women full professors comprised 0.78%, Hispanic women who were full professors comprised 0.66%, and Black women who were full professors comprised 0.43%.

These numbers provide a context to the university’s demographic composition and underscore the scholars’ perceptions of “good fit” with the university and profession more broadly. Presently, campus conversations about diversity and inclusion have changed for the better. People with institutional longevity report confidence in the institution’s real and lasting commitment to equity, though they recognize that further progress is needed to achieve the desired goals (31).

**Phase 6: Retain Minoritized Scholars To Increase Pool of Established Scholars**

This phase of the model is best illustrated by the workings of the Scholar program. In particular, a key role in retaining minoritized scholars at the university was played by senior women faculty of color who served as internal advocates for junior scholars of color. The internal advocates met as a group twice a semester to discuss their scholars’ professional progress and to compare notes on obstacles encountered and strategize on how to address them.

As the pool of established minoritized scholars increases (see Appendix), new opportunities for these midcareer scholars arise for them to adopt broader leadership roles. For example, the university implemented collaborative research projects aimed at advancing historically underrepresented minorities in the STEM professoriate (32). This program created a cohort of graduate students at the dissertation stage, postdoctoral scholars, and early career faculty into Scholarly Learning Communities with a leadership team comprised of tenured faculty scholars.

An examination of STEM faculty hired between 2002 and 2017 showed that the institution was progressing faster on gender equity than on equity by race, ethnicity, and other identity characteristics. Most faculty who left the university before tenure did not submit a tenure package for consideration. Moreover, a study of faculty from all disciplines at the university found that 48% of those who left without submitting a tenure package did so even though there were no indications
of problems with their progress, and in exit interviews, women more often indicated problems with colleagues than men.

**Impact of ADVANCE Scholar Program**

The impact of the program was assessed through a web-based survey of scholars, external mentors, and internal advocates. The survey contained open-ended questions, which enabled us to capture rich, descriptive feedback. Almost all of the scholars who responded to the survey reported that the program benefitted them professionally and personally. Specifically, they reported an increase in the following:

- Professional visibility;
- Manuscripts in preparation;
- Number of proposals submitted and accepted;
- Recognition;
- Networking opportunities;
- Invitations to present their research;
- Work–life balance; and
- Sense of community.

Many of the scholars expressed positive sentiments about the program, as illustrated in some of the following responses, in the scholars’ own words.

“I’ve been given opportunities through my external mentor that I don’t believe I would have had otherwise, including invitations to join exclusive working groups of professors who are at the cutting edge of experimental research in [my discipline].”

“I finally felt connected and felt as though I belonged to the academic community. The program helped me establish a solid and reliable mentoring network.”

“I probably would not have reached out to a senior person in my field had it not been for the ADVANCE Scholar program, which gave me mechanism for asking for mentoring.”

“The ADVANCE Scholar program was one of the best experiences I had during my [time] at TAMU. I felt great support from the activity leaders, and my internal advocate [White male] was amazing. I always felt comfortable sharing with him the struggles I was having. He provided a balanced view and multiple options to pursue . . . My external mentor was also really great. I think because of the formalization of the relationship through ADVANCE, he felt even more strongly tied to my success. He introduced me to senior scholars (including a Nobel Laureate). He read my work. He gave me feedback and advice on where to get it published. I could not have asked for nor found a more engaged and supportive mentor.”

“I received a personalized education on constructing a productive research program, and I received guidance in building my academic portfolio for a successful review by the [tenure and promotion] committee. I also enjoyed the camaraderie with other early career scholars.”
“The ADVANCE Scholar program has accelerated my visibility with the peers of my research field.”

“With the encouragement of the program’s stakeholders, I initiated research collaborations with the postdoctoral and doctoral students in my external mentor’s thriving and eminent research lab.”

“Encouraged me to find and project my voice as a scientist and a faculty member.”

Another type of impact of the Scholar program is in its social and psychological benefits in terms of providing encouragement, community, and social support. Some sample responses illustrating this theme are provided below.

“The feeling that I am no longer alone and that help is available if things get serious makes me feel emotionally secure… the existence of this support system gives a sense of security in my daily life at A&M.”

“Before I participated in this program, I did not know where and with whom I should consult regarding my problems and issues associated with my minority status . . . Now I’ve found a place and a group of people with whom I can talk about my issues at least, which is a great relief. Before participating in this program, I thought many times of quitting my job or leaving. The ADVANCE program gave me energy to survive in an environment very difficult for a female, non-White, scholar at A&M . . . The program itself is really encouraging and saves my life. The feeling that I am no longer alone is so important for me.”

Responses from the internal advocates illustrate that the program benefitted not just the scholars but also the senior faculty who served as their mentors. For example, one advocated noted: “I have been able to make positive ties with more women faculty of color and with women outside my department and college.”

Another advocate noted that the program made them more intentional about inclusive practices in selecting individuals in leadership positions: “When thinking of people for leadership posts or review board memberships, I will now first seek to identify women who are leaders in their field. Many times, people will just default to their close colleagues or people with whom they are most familiar, resulting in a reproduction of similar others in various posts. However, as I learned through the different ADVANCE workshops, we can combat this by being very intentional in our inclusive practices.”

“The fact that there was a personalized forum for us to meet and discuss the challenges for professional recognition and advancement of women of color in STEM disciplines and offer possible solutions or simply exchange notes was—to my mind—a huge strength of the program.”

“As internal advocate, it was empowering for me to hear the stories of other internal advocates, especially to hear the pros and cons of various approaches since cultures are so radically different between departments and colleges.”

“The meeting of internal advocates should also continue. These meetings are a great opportunity to exchange ideas and experiences with scholars, discuss any challenges any scholar is facing, and other general issues.”
The impact beyond Texas A&M is evident in the words of the external mentors.

“The conversations provided support for the circumstances women of color face in academia. I am currently planning to work on an edited volume with my mentee in the near future and another one with her and another faculty [member] at Texas A&M.”

“It made me more aware of the needs of a diverse work force, the need to more actively recruit women from underrepresented groups in the science fields, and to provide more mentorship to our own junior faculty. I am happy to maintain a professional relationship with [ADVANCE scholar]. I have already written a strong letter in support of her tenure and will be happy to follow her career as she progresses in her academic career.”

“The program resensitized me to the particular challenges of being a junior scholar and the variety of demands on young scholars. It also helped me understand the particular challenges faced by women of color in the professoriate. The program gave me personal insights to complement my academic background in this area.”

Throughout the survey responses, it was clear that intentionality around the issues of race and intersectionality was important.

“I am much more sensitized to—and have a ‘language’ for naming—obstacles and barriers facing women scholars of color in STEM fields. Hearing the individual stories of advocates and scholars makes it easier to recognize that there are patterns and that many challenges are systemic and need to be addressed structurally.”

“I think it was especially important to have White males demonstrate that they can be incredible allies.”

“Being a White, male professor, our scholar/mentor interactions involved some situations that I had never experienced in my career, and the basis of my advice was devoid of similar life experience, in that regard. Still, my breadth of experience in academic teaching, research, and administration (particularly familiarity with TAMU [promotion and tenure] protocol and cases) allowed for, as the scholars have told me, beneficial direction prior to critical decisions on their paths and also comforting insights into a very stressful process. I have a sense that not having a woman of color as their mentor was not to any significant degree an impairment of the mentoring advocacy process.”

**General Discussion**

In this chapter, we described a Model to Retain Minoritized Faculty Scholars featuring six phases of engagement, development, and advocacy that was developed as part of the Texas A&M ADVANCE program (33, 34). While we at Texas A&M feel the program was very successful, it is noteworthy that our external evaluator Sandra Laursen also found that to be the case. Here we present a selection of her comments about the program from the final ADVANCE Center evaluation report (31).

The ADVANCE Scholar program, on which this model was based, was viewed by participants as highly successful, a modest investment for a good return, and a locus of strong support for pretenure women of color. Of importance here is not the impact of a particular program, but the consistency
with which women noticed and remarked upon the value of giving and receiving support from other women, through connections that the ADVANCE Center, in concert with the university’s Office for Diversity, had helped to initiate and nurture. “The small pieces add up,” as one speaker put it.

Overall, gains in women’s visibility have been significant at the university. While workplace climates were still a work in progress for most, many participants in ADVANCE described feeling more supported as women faculty. This presence is “reaffirming,” said one; it is helpful to see we have some common problems and “not to internalize and stew over things,” said another. Women’s numbers are up at all faculty ranks, but women are still only 13% of full professors. “We do less hiring of our own graduates,” noted several speakers, but there is room for improvement in hiring, especially in senior hires, where accountability procedures for equity in the hiring process have not been routinized.

It is also important to recognize that while underrepresentation is clearly a signal of a problem, its absence does not mean the absence of a problem. That is, while low numbers of women in an institution may signal that hiring or advancement processes are inequitable, numbers that reflect women’s presence in a field do not mean that they are treated well and their contributions are valued.

No single program is responsible for a sense of being supported; rather, feeling supported results from a suite of formal programs and informal interactions. For pretenure women, ADVANCE offered support through the ADVANCE Scholar program and the Roadmap workshop. The Roadmap workshop was valued for the chance to “hear different narratives” and for making career planning and success explicit and visible, “a counter to what you don’t hear.” Participants valued the contacts they made both among peers and senior colleagues: “The provost knows who I am now.” Senior women of color also described a strengthened sense of support. Implicit bias awareness training and building connections through their work with the ADVANCE scholars had been important and encouraging. Working with ADVANCE has been “a constant renewal of my courage,” said one. “I am free to champion the causes I choose.” ADVANCE is a focus for us, said another—“they can find us” here.

**Acknowledgments**

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### Appendix

**Table A1. National Science Foundation ADVANCE Scholar Program Participants by College Affiliation**

<table>
<thead>
<tr>
<th>Number of National Science Foundation ADVANCE Scholars Recruited 2011–2017</th>
<th>ADVANCE Scholar College Affiliation at the University</th>
<th>Race/Ethnicity of National Science Foundation ADVANCE Scholars Recruited 2011–2017</th>
</tr>
</thead>
</table>
| 7                                              | Agriculture and Life Sciences (AGLS)                | Asian = 0  
Black = 2  
Hispanic/Latina (H/L) = 5  
White = 0  
Other = 0 |
| 2                                              | Architecture (ARCH)                                | Asian = 1  
Black = 0  
Hispanic/Latina (H/L) = 1  
White = 0  
Other = 0 |
| 7                                              | Education and Human Development (CHED)             | Asian = 0  
Black = 5  
Hispanic/Latina (H/L) = 2  
White = 0  
Other = 0 |
| 2                                              | Engineering (CLEN)                                 | Asian = 0  
Black = 1  
Hispanic/Latina (H/L) = 1  
White = 0  
Other = 0 |
| 16                                             | Liberal Arts (CLLA)                                | Asian = 6  
Black = 5  
Hispanic/Latina (H/L) = 5  
White = 0  
Other = 0 |
| 3                                              | School of Public Health (CLPH)                     | Asian = 2  
Black = 0  
Hispanic/Latina (H/L) = 0  
White = 0  
Other = 1 – Bi-racial |
| 2                                              | Science (CLSC)                                     | Asian = 1  
Black = 0  
Hispanic/Latina (H/L) = 1  
White = 0  
Other = 0 |
| 1                                              | University Libraries (LIBR)                        | Asian = 0  
Black = 0  
Hispanic/Latina (H/L) = 1  
White = 0  
Other = 0 |
Table A1. (Continued). National Science Foundation ADVANCE Scholar Program Participants by College Affiliation*  

<table>
<thead>
<tr>
<th>Number of National Science Foundation ADVANCE Scholars Recruited 2011–2017</th>
<th>ADVANCE Scholar College Affiliation at the University</th>
<th>Race/Ethnicity of National Science Foundation ADVANCE Scholars Recruited 2011–2017</th>
</tr>
</thead>
</table>
| 1 | Veterinary Medicine and Biomedical Sciences (CLVM) | Asian = 0  
Black = 1  
Hispanic/Latina (H/L) = 0  
White = 0  
Other = 0 |

*All participants recruited (2011–2017) to participate in the National Science Foundation ADVANCE Scholar Program self-identified as female and self-reported race/ethnicity categories.

References


