

ADVANCE Scholar Program: enhancing minoritized scholars' professional visibility

ADVANCE
Scholar
Program

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Abstract

Purpose – The purpose of this paper is to describe a mentoring program developed at a large predominantly white research university that was aimed at retaining and advancing women faculty of color. The ADVANCE Scholar Program pairs each scholar for two years with a senior faculty member at the university who serves as an internal advocate, and with an eminent scholar outside the university who helps the scholar gain prominence in their discipline.

Design/methodology/approach – This paper offers a case study of the ADVANCE Scholar Program. The authors describe the intersectional approach to organizational change in this conceptual framework and provide a brief overview of the institution and precursors to the development of the Scholar program. The authors describe the program itself, its rationale, structure and participants in the program.

Findings – Overall, the program generated a positive reception and outcomes, and the authors suggest that such a program has the potential to make a positive difference in making the university a more supportive place for a diverse professoriate and recommend it as a model for adoption at other predominantly white research universities.

Practical implications – By publishing the operations and the outcomes of this faculty mentoring program, we expect to contribute broadly to a more supportive campus climate for a diverse professoriate. We have developed, implemented, and continue to study this successful model to retain minoritized faculty scholars in the professoriate.

Social implications – Women faculty of color are often assigned to serve on committees to meet diversity objectives of the institution and are sought after by students of color from across the university, but this service is not considered. This program, the ADVANCE Scholar Program, pairs each scholar with a senior faculty member who serves as an internal advocate, and an external eminent scholar who guides the scholar in gaining national prominence. These efforts to retain and promote minoritized faculty scholars, altogether, have important implications on the pervasive issues affecting many members of academic communities at the individual, interpersonal and the institutional levels.

Originality/value – This case study provides an innovative strategy to tackle the lack of role models and the experiences of social isolation that occurs for women faculty of color with multiply marginalized status. Hence, women faculty of color benefit from a valuable, institutionally supported, university-wide mentoring program designed to increase diversity of minoritized faculty in the professoriate ranks.

Keywords Mentoring, Intersectionality, Faculty of colour, Higher education – women in academia, Multiple marginality, Professional visibility

Paper type Case study



Women of color comprise over a third of the US population but are under-represented in higher education. Although the number of doctorates who are women of color has been rising, these gains have not translated into tenured faculty positions. A 2013 survey of STEM faculty from over 600 four-year colleges and universities in the USA noted that women of color are predominantly concentrated in non-tenure-track positions as lecturers or instructors, i.e. positions that carry little power or authority in academia (Hurtado, 2013). Black and Latina women faculty are the least represented at the full professor rank, followed by Asian women, white women, men of color, Asian men and white men, in that order (Hurtado, 2013). This pattern shows no sign of changing. According to the National Center for Education Statistics (2017), 82 percent of full professors at research universities are white. Across all ranks (assistant, associate and full), 13 percent of tenure track faculty are Asian, 4 percent are Latinx and 3 percent are African-American.

Women of color are under-represented in funding agencies as well, both as research staff and as grant recipients. For example, among the National Science Foundation's temporary and permanent scientific and professional staff, women of color comprised 8.6 percent (30 individuals) in 2007 and 10.3 percent (50 individuals) in 2010 (Poston, 2013). Principal investigators of NSF grants in 2010 included less than 5 percent women of color researchers, as compared to 17.5 percent white women (Poston, 2013). Similarly, women of color are largely absent in governance roles in professional societies or in other gatekeeping positions, such as editors of academic journals. Fewer than 20 percent of current cognitive psychology journals based in the USA have any women as editors in chief (Vaid and Geraci, 2016) and women cognitive scientists in Canada receive smaller discovery grant amounts as principal investigators compared to their male counterparts (Titone *et al.*, 2018). A racial disparity in publications, citation counts, invitations to give keynote addresses and other forms of recognition has been noted across a range of disciplines; for example, a study of the racial composition of primary authors of communication studies journals from 1990 to 2016 found that non-white scholars were under-represented in publication rates, citation rates and editorial positions (Chakravartty *et al.*, 2018). In the field of education, most of the named awards across four major professional societies are named after white men, with only a handful named after minoritized individuals (Bazner *et al.*, 2017).

Institutional efforts to enhance faculty diversity

A lack of racial diversity in the professoriate is not new. What is new is that there is increasing pressure on universities to do something about it. College students are increasingly from racially diverse backgrounds and want to see a more representative curriculum and a professoriate that looks more like them. Partly in response to student demands, universities are beginning to institute practices aimed at developing a more diverse pool of faculty applicants. As documented in several universities' websites (e.g. Columbia University, <https://provost.columbia.edu/sites/default/files/content/BestPracticesFacultySearchHiring.pdf>), recommended practices include requiring search committee training in implicit bias, appointing equity-minded advocates to serve on search committees and asking applicants for statements of evidence of their commitment to diversity. However, the success of such policies depends on whether they are followed and, even with the best of intentions, actual hiring practices often result in the status quo being reproduced (Mertz, 2011).

Even if initiatives to diversify faculty search processes succeed in bringing in qualified scholars of color as tenure track faculty, it is important to provide an environment in which these faculty can succeed. That is, the institution in which these faculty are hired should provide a work environment and culture in which all faculty feel valued and supported in terms of access to resources and networks to help them be successful and get tenure. Thus, there is a need for institutions to provide mechanisms to retain and advance faculty of

color so that they can attain tenured positions in academia and be recognized for their professional contributions (Stewart and Valian, 2018).

Although multiple mechanisms should be explored simultaneously, one that has received a lot of research attention is the effect of formal and informal mentoring networks (e.g. Santos and Reigadas, 2002). Mentoring traditionally refers to a dyadic relationship in which an experienced faculty member supports the career development and professional socialization of a new faculty member, but it can also involve networks (De Janasz and Sullivan, 2004; Sorcinelli and Yun, 2007). Within the context of an ongoing, caring relationship, a mentor may serve as a role model, sponsor, coach, advocate and friend to their protégé, helping them navigate the written and unwritten rules for success in academia (Matthew, 2016). For women, and particularly for women from minoritized groups, mentoring (whether same-race or cross-race) may be a particularly important mechanism for enhancing their career outcomes and reducing their sense of social isolation (Jean Marie and Brooks, 2011; Stanley and Lincoln, 2005; Zambrana *et al.*, 2015).

Many reasons have been offered for why women faculty of color remain largely absent in positions of power and prestige in academia. It is our contention that the lack of representation of women faculty of color in senior ranks is not due to deficiencies in them. Rather, it arises from systemic inequities that are reproduced by the structure and culture of academia, where a discourse of meritocracy masks ways in which certain groups have benefited and others have been excluded from access to networks and resources that lead to professional advancement. These inequities need to be acknowledged and interventions implemented in order to develop not just a diverse but an inclusive professoriate.

In what follows we briefly highlight documented barriers to professional success experienced by women faculty of color and then describe a mentoring program implemented by a large research university that was aimed at enhancing the professional advancement of women faculty of color as scholars.

Barriers to professional success for women faculty of color

Difficulties faced by women faculty of color in research institutions that have been historically and persistently white dominated are well documented (see e.g. Gutierrez y Muhs *et al.*, 2012; Mertz, 2011; Rockquemore and Laszloffy, 2008; Settles *et al.*, 2018; Stanley, 2006; Turner *et al.*, 2008; Williams *et al.*, 2014). These difficulties fall into the following categories: the presence of an unwelcoming institutional climate; being socially excluded and subjected to overt or covert prejudice and discrimination at the individual and institutional level; having to prove their legitimacy as scholars and teachers; being treated as tokens; and experiencing severe work overload.

Unwelcoming climate

The academic climate of an institution refers to the perceptions and expectations of the institution as codified in its mission, policies and practices. Given that universities in the USA have historically served the interests of white male faculty, women faculty and faculty of color often experience the campus climate as chilly, toxic and hostile (Sandler and Hall, 1986). In climate surveys conducted at many universities, including our own, women and faculty of color consistently express less satisfaction than their male and white counterparts. Experiencing a sense of being “othered” affects job satisfaction, and productivity, and makes one more likely to want to seek employment elsewhere or opt out of academia.

Social exclusion

Women of color have been found to experience systemic, organizational ostracism – being ignored, neglected or excluded at the institutional, intergroup or interpersonal level

(Carter-Sowell and Zimmerman, 2015; Miner *et al.*, 2018). While women in general report experiencing more ostracism in the academic workplace as compared to men (Zimmerman *et al.*, 2016), the level of reported ostracism experiences is higher for women of color: 21.1 percent of white female faculty members reported high levels of ostracism, as compared to 33.3 percent of Latina women, 42.9 percent of Asian women and a striking 50 percent of black female faculty. Smith and Calasanti (2005) similarly found that black female faculty reported higher levels of social isolation than black men or than Asian or white faculty. Success in academia depends on attaining a measure of professional visibility and recognition by one's peers (Carter-Sowell *et al.*, 2016; Vaid and Geraci, 2016), so being excluded from access to resources and networks makes it harder to get this needed visibility.

Establishing legitimacy as scholars

The scholarly expertise of women faculty of color is subjected to greater scrutiny by their colleagues and their authority is often challenged by white students in the classroom (Marchesani and Adams, 1992; Boatright-Horowitz and Soeung, 2009). If their scholarship examines social justice and/or race-related topics, or is focused on marginalized populations, it is subjected to even greater scrutiny (Stanley, 2007). Questions are raised in performance reviews about the quality and visibility of their choice of publication outlets, even though it is often the case that "mainstream" journals do not tend to publish work that does not foreground majority group issues. Their work on these topics tends to be cited less since the number of citations of one's work depends on the opportunities for citation; in psychology, for example, research on race and ethnicity figures in less than 4 percent of research articles that have appeared in the flagship journals in the field (Zarate *et al.*, 2017). Thus, the true scholarly impact of their work is often not discernible from citation counts or journal impact score, as such measures typically advantage mainstream (dominant group) research topics and/or multi-author research collaborations (Zarate *et al.*, 2017).

Tokenism

Because they are often the sole person of color in their department, women faculty of color are treated as tokens, held up or put on display when the university wants to showcase its progress in diversifying its faculty, but otherwise ignored; their perspectives or contributions in faculty meetings are rarely listened to seriously (Hirshfield and Joseph, 2012). As a token, they are also hypervisible and overscrutinized, but this hypervisibility does not lead to their being recognized (Settles *et al.*, 2018). Instead, their work is not valued and they experience a form of academic hazing, or epistemic exclusion (Buchanan *et al.*, 2018). As a result, they feel invisible, silenced and unheard (Niemann, 2012), and the barrage of racial micro-aggressions they experience leads to racial battle fatigue (Arnold *et al.*, 2016).

Work overload

To compound matters, women faculty of color are often asked to serve as the "diversity representative" on search committees or other committees yet are not compensated for this service by release from other duties (Baez, 2000). Similarly, they are often assigned to teach large sections of service courses or new courses that may fulfill cultural diversity requirements in the curriculum. They are also sought after by graduate students of color (even those outside their field) for emotional or career guidance (Hirshfield and Joseph, 2012). This additional invisible labor, what Padilla (1994) referred to as cultural taxation, not only leads to burnout but takes time and energy away from time devoted to research, which can in turn reduce productivity and their prospects for tenure or promotion.

Overview of the paper

In this paper we present a description of a unique mentoring program for women faculty of color. Termed the ADVANCE Scholar Program, this program was developed at a large, predominantly white research-intensive university in the southwestern USA to support the professional advancement of early career women faculty of color at the university. We first describe the intersectional approach to organizational change that motivates our conceptual framework and then provides a brief overview of the institution and precursors to the development of the scholar program. We follow this with a description of the program itself, its rationale, structure and participants. Next we present a summary of responses by program participants (scholars and mentors alike) to questions about their perceptions of the program's impact. We then discuss the career trajectories of the scholars who went through the program, looking at how many stayed at the university and were promoted, or left. Considering these various sources of evidence and our own insights as insiders who were involved in the program in different roles (three of us were program leaders, two were internal advocates and one was a scholar), we conclude that such a program may be useful for other research universities seeking to retain and advance their minoritized faculty.

Conceptual framework

The conceptual framework that guides our analysis is that of a critical race feminist (Collins, 1986, 2008) intersectionality approach (Crenshaw, 1989). As applied to the domain of higher education, an intersectionality framework challenges a prevailing additive, single target logic in which “the disadvantaging effects of differing aspects of identity are summed together” (Armstrong and Jovanovic, 2015, p. 145). Such an additive logic, whereby the situation of women of color is noted, in passing if at all, as “bleaker” has characterized much previous research and theorizing on women in STEM (see Brown and Liu, 2018, for further discussion). By contrast, the approach we adopt posits that identities are mutually constituted along different dimensions, and that individuals with multiple subordinated group identities, such as women from under-represented minorities in science, experience multiple marginalities that are not discernible by considering their status as women and their status as minorities, but requires a critical race feminist approach.

This framework of critical race feminism centers and validates the experiences and perspectives of marginalized groups such as black women (Croom and Patton, 2011–2012). It offers counter-narratives to the dominant, color-blind, meritocracy-rooted discourse of how one advances in academia. In this framework, the marginalization of women of color in the academy is viewed not as arising from failings of the women, but as emblematic of broader systemic problems in the academy. According to a critical race feminist perspective, the notion of a neutral, color-blind and gender-indifferent meritocracy as the sole factor responsible for reaching the highest ranks in academia serves to perpetuate the existing gender and racial hierarchy in academia. It fails to take into account the history of higher education in the USA, and ignores the continued presence of discrimination and bias that shapes constructions of merit.

As already noted, women faculty of color in science, technology, engineering and mathematics are a unique and vulnerable population. Tenure and promotion at nationally competitive research universities require faculty to be visible as a contributing member of the academy as well as a successful researcher (Carter-Sowell *et al.*, 2016; Vaid and Geraci, 2016) yet women faculty of color are rendered invisible on multiple fronts. The mentoring program developed at the University we observed may be seen as an institutional effort to enhance both the professional success and the psychological well-being of women faculty of color at the university (McCormick and Zhao, 2005). By foregrounding the experiences and perspectives of junior women faculty of color as those receiving mentorship as well as the

perspectives of senior faculty (including senior women faculty of color) as those providing mentorship, our intervention seeks to reduce inequities of access to crucial resources and networks that have kept women faculty of color from advancing. Our approach locates the source of obstacles to the professional advancement of women faculty of color in the systemic biases enshrined in the culture of academe, which has historically served the interests of white men.

Demographic profile of the university

The ADVANCE Scholar Program was implemented at one of two flagship public research universities in the southwestern region of the USA. The University in question has a student enrollment of over 66,000 and a full-time faculty across different campuses numbering nearly 3,500. As a land grant university, its mission is to serve all members of the state. Yet, as was the case for many institutions of higher education in the USA, it excluded women and African-Americans until fairly recently (mid-1960s). 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 USA, with a faculty that is predominantly white (currently 65 percent at the assistant and associate professor ranks and 77 percent at the rank of full professor) and predominantly male (56.2 percent at the assistant professor level, 62.6 percent at the associate professor level and 81.2 percent at the full professor level). The majority of women faculty at the University are white at all ranks (72.6 percent). Women faculty of color (women who self-identify as black or African-American, Hispanic/Latina, Asian, American Indian or native Alaskan, or as mixed race) collectively comprise 12.4 percent of all assistant professors, 12.8 percent of associate professors and a mere 3.5 percent of full professors.

Looking at changes over time, we note that from 2011 through 2017, which corresponds to the implementation of the Scholar Program, the percent of faculty who are white men and full professors at the university has declined slightly, to 28.75 percent in 2017, whereas the percent of white women who are full professors has increased slightly, to 8.03 percent. The relative percent increase of white women full professors (3.18 percent) 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 percent). In 2017, of all faculty across ranks, faculty who were Asian women full professors comprised 0.78 percent, Hispanic women full professors comprised 0.66 percent and black women who were full professors comprised 0.43 percent. These numbers provide a backdrop to the University's demographic composition and underscore the need for the scholar program.

Institutional precursors

Following an ambitious hiring initiative in 2009, which led to the hiring of over 140 faculty, the University adopted a comprehensive Diversity Plan in 2010 with an explicit goal of enhancing climate, equity and accountability. This Plan made reference to the strategic plan of the university, Vision 2020, which laid out 12 imperatives. One of these was to diversify and globalize the university community in order to create a culture of excellence throughout the campus community.

In tandem with these university-wide efforts, a group of senior women faculty in STEM put together and received an ADVANCE Center grant from the National Science Foundation in 2010. Using the framework of a psychologically healthy workplace, the Center initiated a range of targeted activities and programs. One of these was the ADVANCE Scholar Program (Yennello *et al.*, 2018). This was a formal mentoring program that paired women faculty of color at the university (scholars) with external mentors (eminent scholars) in their discipline outside the university. The program was modeled after a similar initiative

launched by an ADVANCE Center at another university, but unlike that initiative, the program we describe added internal mentors (senior faculty at the university but outside the scholar's discipline). To our knowledge, no other program of its kind exists.

The ADVANCE Scholar Program

Rationale

The purpose of the ADVANCE Scholar Program was to promote the career development and professional socialization of women faculty of color in STEM disciplines at the university as they advance through the ranks. The Scholar Program sought to tackle the barriers that women faculty of color encounter by facilitating their access to successful senior faculty inside and outside the university who were willing to enter into a mentoring relationship with them.

Overview

The program was jointly administered by the ADVANCE Center in collaboration with the Vice President and Associate Provost for Diversity. It was open to all tenure track or tenured women faculty of color at the university in STEM disciplines and in later cohorts non-STEM disciplines were added. The duration of the commitment for each cohort was two years.

Scholars admitted to the program are each assigned a prominent senior faculty member (typically, also a woman faculty of color) in a different discipline but in the same university, who serves as their internal advocate. In addition, each scholar is formally paired with an eminent scholar outside the university but in their discipline who serves as their external mentor. In addition to the one-on-one mentoring provided by the internal advocate and the eminent scholar, a number of opportunities were created by the program to allow the scholars to interact with other scholars in their cohort across different disciplines, and for the internal advocates to interact with other internal advocates and with the scholars in informal group settings. Funding was provided to scholars to visit their external mentors at their institution or at a conference.

Application and review process

Prospective candidates for this program from tenure track and tenured faculty at the university were identified and recruited from faculty lists maintained by the dean of faculties. Eligibility was determined by faculty members' self-identification as African-American, Hispanic/Latina, Asian, American Indian or native Alaskan or mixed race. For the first three cohorts, only STEM faculty were eligible, but in the most recent cohort, the pool was expanded to include faculty in certain non-STEM fields as well. While funding of travel costs for initial cohorts was absorbed by the ADVANCE Center, in the recent cohort, participating colleges were encouraged to cost share. Colleges that decided to engage in the program were invited to screen the pool of eligible faculty and identify a subset that they would be willing to support, based on considerations such as whether the faculty member would be coming up for tenure or promotion shortly, and/or whether the program could be particularly beneficial to the faculty in other ways. As a result, individuals entered the program at different stages in their career.

Prospective scholars were individually invited by the ADVANCE Center and the Vice President for Diversity (VPD) to attend an informational session. At the session, there was an opportunity to engage with university leaders and senior women faculty of color in STEM at the university who served on the advisory committee (and later, as internal advocates for the scholars). Faculty interested in joining the program were asked to submit their resume and a brief explanation of why they were interested in participating in the

program and what specific goals they hoped to accomplish through their participation. The applications were reviewed by members of the advisory committee. Once a cohort of scholars was accepted into a given two-year period, the chair of the scholar advisory committee, who served in the role of the VPD, started to build a learning community for each participant that consisted of eminent scholars, peers in the scholars program, internal advocates and University stakeholders.

This strategic process started with assigning each scholar an internal advocate. As noted earlier, the internal advocate is a senior faculty member at the university who is not in the scholar's area of expertise but whose experience and skills in navigating the university are deemed to be helpful in providing access to networks for the scholar. In consultation with this internal advocate, the scholar chooses a prospective external mentor who is an eminent scholar in the scholar's discipline, and is not at the university. The VPD together with the Provost sent formal invitations to the eminent scholars, along with a copy of the scholar's resume, describing the goals of the scholar program and asking if the eminent scholar would be willing to commit to mentoring the designated scholar for a period of two years. In almost all cases, the eminent scholar accepted the invitation. The eminent scholars were then encouraged to initiate contact with their protégé by phone or e-mail, and discuss plans to meet at a conference or at their university. Based on feedback from the evaluation of the first cohort, eminent scholars were also provided with a one page set of suggested guidelines developed in consultation with the scholar advisory committee. The guidelines outlined ways in which the eminent scholars can help the scholars' professional advancement, such as providing feedback on their resume, nominating the scholar for an award or inviting them for a talk[1].

The advisory committee of internal advocates met twice a semester to discuss the scholars' progress, and compare notes on obstacles encountered and strategies to address them. In addition, a reception was held each semester on campus, organized by the university's Office for Diversity, which allowed scholars and internal advocates to socialize with each other. At an annual recognition ceremony, the scholars' deans and department heads were also invited.

In addition to these social activities, a national conference was held at the university in 2012, focusing on women of color in the academy. The eminent scholars 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.

Taken together, these activities contribute to an ADVANCE Program Model to retain minoritized faculty scholars (see Figure 1). This model conceptualizes the process as a series of stages: scholars at different ranks are recruited from a pool of eligible faculty of color at the university. They each participate in a mentoring network that consists of an external, eminent scholar, an internal advocate who is a senior faculty member, their fellow scholars in the program and the internal advocates of these scholars. Through formal and informal interactions with this mentoring network, scholars concretize their academic career goals and strategies for achieving them within a certain timeline, and get support from their peers in the program and from their formal mentors as they seek to achieve their goals. The goals include getting tenure and promotion. Interactions within the mentoring network provide important social and emotional support, which helps the scholars as they go through the tenure and promotion process. The validation they receive helps them to feel a sense of belonging in the university, and makes them more likely to stay. This in turn achieves the university's goal of diversifying their professoriate.



Figure 1.
The ADVANCE
program model to
retain minoritized
faculty scholars

ADVANCE Scholar Program – overview of participants

Scholars

A total of 41 women faculty of color (see Table I) have participated in the program, across four cohorts ranging in size from 3 to 19. They were from 25 different academic departments. Grouped by discipline, just under a third (27 percent) were from traditional STEM disciplines, and less than two-thirds were from social and behavioral sciences (61 percent), with the remainder being from education, humanities and library science (12 percent). In terms of self-identification by race/ethnicity, 36.5 percent were black/African-American, 41.5 percent were Hispanic/Latina and 22 percent were Asian. Specifically, there were 15 black or African-American women, 16 Hispanic/Latina (including 6 Mexican-American, 1 born in Spain and 7 born in countries in Latin America) and 10 Asian (including 4 Asian-American, and 6 foreign-born, from India, Japan, Korea and Central Asia). In terms of rank, a majority were assistant professors at the time of their participation in the scholar program ($n = 29$), followed by recently tenured associate professors ($n = 11$), and one recently promoted full professor.

Internal advocates

The ADVANCE internal advocates consisted of 18 tenured, senior faculty from 16 different academic departments at the university, almost all in biological, physical and social

No. of NSF ADVANCE scholars recruited (2011–2017)	ADVANCE Scholar college affiliation at the university	Race/ethnicity of NSF ADVANCE scholars recruited (2011–2017)
7	Agriculture and Life Sciences (AGLS)	Asian = 0 Black = 2 Hispanic/Latina = 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
1	Veterinary Medicine & Biomedical Sciences (CLVM)	Asian = 0 Black = 1 Hispanic/Latina (H/L) = 0 White = 0 Other = 0

Table I.
NSF ADVANCE
Scholar Program
participants by
college affiliation

Note: All participants recruited (2011–2017) to participate in the NSF ADVANCE Scholar Program self-identified as female and self-reported race/ethnicity categories

sciences, except for two faculty from education, and three from liberal arts. A total of 61 percent were women of color (five black/African-Americans, three Hispanic/Latina women, two Asians and one mixed race). The remaining seven white advocates included three women and four men. The majority of the internal advocates (78 percent) held administrative appointments (associate dean, associate provost, associate department head)

and thus were highly visible as leaders. Advocates were individually paired with one scholar or in some cases they had two scholars. In the majority of cases the advocate and scholar were in different departments. This was done intentionally to allow the scholars to feel free to discuss dynamics in their department with a senior faculty member who was not in the same department.

Eminent scholars

Each ADVANCE scholar was also paired with an eminent scholar, who was a prominent researcher in the scholar's discipline but outside the university. Eminent scholars were identified by the scholars in consultation with internal advocates, with the main consideration being eminence in their field. The eminent scholars were not selected with regard to gender or ethnicity. In the initial cohort, for example, they included seven white women, eight white men, one Asian woman, one Latina woman and one black woman.

Impact of the ADVANCE Scholar Program

Responses on assessment instrument

From the outset, it was recognized that since the ADVANCE scholars were a vulnerable population, it would be important not to have the participants feel that they are being monitored for research purposes. This concern was applauded by the panel members of the National Science Foundation campus site visit team. Thus, both the method of gathering feedback (via a confidential online instrument) and the methodology adopted (qualitative/naturalistic) emphasize data gathering through processes that support and protect the research and the researched (Lincoln and Guba, 1985). Evaluators were mindful that this intact group of easily identifiable participants may view our data-gathering efforts as a threatening activity (Crenshaw *et al.*, 1995; Niemann, 2012; Patton and Winkle-Wagner, 2012). Thus, the participants' needs and concerns informed the process and therefore enabled them to participate on their own terms (Scheurich and Young, 2002).

While the scholars' interests were foremost in the research design, the evaluation was comprehensive – all program participants – scholars, internal advocates and external mentors – were asked to provide feedback about their experiences and the program's impact. Data were analyzed by individual responses, by groups of respondents, by question and holistically. To aid in data management, researchers utilized ATLAS.ti. This is a qualitative analysis software package, which facilitated content analysis, undertaken through an iterative process of unitizing, categorizing and comparison, as detailed in Lincoln and Guba (1985).

The initial assessment was conducted at the end of the second year of the first cohort of scholars, in the summer of 2013. The findings were used to inform subsequent recruitment and retention program[2]. A final assessment was conducted at the end of the second year of the final cohort, in summer 2017, and was sent to all previous scholars and internal advocates. Both assessments were conducted in a web-based format, in the form of open-ended questions. The open-ended questions enabled us to capture rich, descriptive, detailed feedback in the participants' own words and create space for the inclusion of topics and areas that might not otherwise have been considered.

In the initial assessment respondents were asked: describe your experiences with the ADVANCE Scholar Program (consider experiences with scholars, internal advocates and external mentors); offer both strengths and constructive suggestions for improvement; explain what impact the program has had on your work-life and/or professional career; identify suggestions for the ADVANCE Center in general, or for future institutionalization of the University's ADVANCE efforts. In the follow-up assessment, respondents were asked: please share specific examples of how the ADVANCE Scholar Program had affected your research, teaching, service, collaborations, professional visibility or any

other dimension of your life that you would like to comment on, and what advice would you like to offer the dean of your college about this program so that it can benefit future scholars?

Response rate

The first assessment was administered to all scholars, internal advocates and eminent scholars who participated in the first cohort of the program, which comprised 16 scholars (out of a pool of 33 eligible women of color STEM faculty members at the university), 11 advocates and 16 eminent scholars. The response rate was 64 percent of scholars; 69 percent of external mentors/eminent scholars, and 80 percent of internal advocates. The final assessment was administered to all cohorts of scholars, and all internal advocates; the response rate was 48.72 percent for scholars and 62.5 percent for internal advocates.

Responses to the different questions within and across the assessment instruments were considered as a whole, and were categorized in terms of recurrent themes about how participants perceived the program's impact, and feedback to program leaders and administrations about the program. For each category, we provide representative quotations from respondents, focusing on the final assessment. We arrived at these themes by consensus.

Perceived impact

Overall, a majority of respondents found the Scholar Program to be a positive experience. They expressed satisfaction with the program, its goals and the opportunities it created. They reported that networking opportunities increased their visibility, that they received useful and timely advice and that their affiliation with the program helped to increase their productivity. The responses from scholars can be grouped into three themes: career development guidance, guidance in navigating the tenure process at the university and establishment of a supportive community. Additional themes emerged from responses of the mentors.

Career development guidance

Almost all scholars made mention of the endorsement/sponsorship by their eminent scholar/mentors as being of particular importance. As one scholar from the most recent cohort noted:

I really appreciated the Scholar Program. It was helpful for me to have access to the funds so that I could go and visit [my eminent scholar] – and not have to justify beyond that connection why I needed to go – or why I needed them to come here!! For instance, I went to meet with my senior scholar and over the course of two days we had many relaxed conversations about the balance of children, administrative posts, and the demands of things I might want to do in my career. It was so refreshing to have honest conversations about career aspirations and to have someone say, “Here’s the tradeoff to doing that NOW versus later.”

A scholar from an earlier cohort reported the following tangible outcomes of her interaction with her eminent scholar:

Being a participant has allowed me the opportunity to be introduced to a formal mentor from another institution. After meeting with my eminent scholar, I attended a forum which she put together. I began working with a group of scholars [with whom] I am still working for the past three years. We have published two book chapters [...] and presented at least five presentations at national and international conferences. We have worked on two journal articles and hopefully will get them completed soon. She has come to visit the university and conducted a seminar in [my department]. I enjoyed the opportunity to work with her and would not have had the opportunity if it was not for this program.

The scholars supplied an array of examples of how the Scholar Program affected their research, teaching, service, collaborations and professional visibility in meaningful and positive ways. For example, one scholar noted:

Through the program, I have been able to connect with one of the lead researchers in my field. We met at a training institute over the summer, and have kept in touch [...] I have also been able to pass on what I've learned to my doctoral students I've been mentoring in conducting single-case meta-analyses. 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, and 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.

Internal advocates also recognized the value of having eminent scholars: As one advocate noted, "The power of facilitating a connection between early-career tenure-track faculty and stars in their field cannot be overstated. The public recognition by a leader in the field creates visibility that has enabled our faculty to be viewed by their scholarly community as serious scholars and increased their professional network, which will lead to more professional opportunities and success of all kinds: grants, publications, presentations, national visibility."

Guidance in navigating the tenure and promotion process

Many of the responses highlighted the value of the Program for the scholars' professional development, as the following quotes illustrate: "This program has provided me with tools, information, support, and mentoring to be able to strategize my tenure process and focus on what is important; [It] encouraged me to find and project my voice as a scientist and a faculty member." Another noted: "I was selected for this program in my first year as an assistant professor and it has been of tremendous help. I was exposed early on to information and guidance [...] which definitely has assisted in my professional trajectory. This program provided me the tools to reach out for mentors and mentoring opportunities, which I believe I would not have done otherwise." Still another wrote, "The ADVANCE Scholar Program was one of the best experiences I had during my [time] at [this university] [...] [M]y internal advocate [...] was amazing. I always felt comfortable sharing with him the struggles I was having. He provided a balanced view and multiple options to pursue."

Although a majority of responses were positive, one respondent noted that her eminent scholar did not reach out to her ("perhaps he was too busy") and that the scholar met with her internal advocate only twice, and thus the program did not impact her much. This lone negative response points to the need for internal advocates to be more proactive about following up with their scholars to encourage them to reach out to their eminent scholars, no matter how busy they were, as they had, in all cases, willingly agreed to serve as external mentors.

Peer support and safe space

Aside from the career guidance aspect of the mentoring relationships developed through the program, another important outcome of the program, expressed by many scholars, was emotional support and affirmation. One former scholar, reflecting on her time in the program, noted:

The program gave me a safe place to consult other faculty members regarding racism and sexism on campus. While they could not help me in specific ways to eliminate them in my life, I was saved by the program emotionally. (Racism and sexism was so bad at [the university] when I came here, I even thought of suicide at one point.) Before joining this program, no one took my experience of harassments/assaults seriously and I was the one to be blamed when I talked about what happened to me, I tremendously thank the program and the people who participated in the program for emotional support.

Summing up the value of the Program, another scholar noted, “This program is critical for supporting [the university’s] junior faculty researchers. It provides professional networking opportunities with some of [the university’s] most respected and experienced researchers and faculty members. It also supports emotional bonding with professional colleagues that I believe is important to retaining high quality faculty members.”

As evident from these quotations, for scholars, participation in the Scholar Program gave them professional and personal validation and a safe space in which to bring up issues of racism and sexism and challenges to their legitimacy as scholars.

Increased awareness and sensitization of experiences of women faculty of color

For external and internal mentors, participation in the program made them aware (if they were not already) of the experiences of women faculty of color in STEM and related fields and the need to support them and work towards diversifying these fields. As one of the external mentors/eminent scholars noted: “The program sensitized 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 profession.” Another eminent scholar noted: “I had the opportunity to get to know younger scholars, which helps me when asked to make recommendations for publishing and research opportunities, serving on national committees and learning new areas in [our discipline].”

Another external mentor noted:

I met with my mentee two years in a row at our annual national conference and will meet with her again at the upcoming annual conference. We spoke on the telephone a couple of times and emailed several times. I gave her advice about her research plans, about a competing outside offer she received and her negotiations (she decided to stay at her university), and about work/family issues. I nominated her [original research] for professional awards and she won one of them (a credit to her [work] not to my nomination—it did make me feel like I could help, though.

Internal advocates indicated that the program heightened their awareness of issues faced by women of color in STEM. One advocate noted that “The ADVANCE Scholar Program has helped me to learn the need for this program across the University.” The program also appeared to have made some advocates more motivated to be more intentional in their own practices. For example, one advocate noted, “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 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.”

Another internal advocate credited the program for changing the course of their teaching and research in their discipline, noting that “The Program inspired me to develop a new graduate course focusing on research interests in gender, race and science.” Similarly, another ADVOCATE noted, “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.”

Making a difference: paying it forward

Aside from raising awareness in a general sense, the advocates also felt that they could make a real impact in a positive way for their scholar through their advocacy role. For example, one internal advocated noted:

As an advocate, it was service that I enjoyed and feel made a difference. There were multiple occasions this past year where I was able to provide some guidance on maneuvering departmental

politics that was useful for my scholar. I think these programs show that there is institutional support and a commitment to their success and I'm glad I had a chance to participate.

Another advocate similarly noted: "I have used the best practices I have learned to be an external mentor for a junior faculty at another university. I advocate for her with her department head."

Some advocates brought up the mutually beneficial aspects of their mentoring relationships, e.g. "I do appreciate the opportunity to connect with younger faculty and share my career experiences with them. It is really a two-way process because these wonderful Scholars are driven and want to succeed. Thanks for the opportunity." Another advocate noted:

As an internal advocate, I find that the program has enabled the mentoring of minority women faculty in formal and informal ways. I am very intrusive with the scholars I have mentored, and very transparent about my particular mentoring style, and why. They have appreciated my honest feedback and I also listen to their needs and concerns. I benefit as much from the Scholars and also from the conversations during the gathering of the Internal Advocates. This has been a very useful program for [the university].

Community building among advocates

The preceding quote brings up another aspect noted by several advocates: a sense of camaraderie that developed among the advocates. As noted earlier, a majority of the advocates were themselves women faculty of color, and all were senior faculty and highly accomplished in their fields. Many had been the solo or token minority in their department for a good part of their career. The opportunity to connect with colleagues in other fields that they would otherwise not have met but for the Scholar Program, through group meetings with other internal advocates, allowed them to share their own past experiences of isolation or micro-aggressions from colleagues, as well as discussing issues facing their scholars. As one advocate noted, "[The program helped me] build strong community within internal advocates (some I knew already but others I did not know well before." And another noted, "Meetings held for advocates and for advocates and scholars introduced me to senior scholars and others outside of my department, an opportunity that enhanced my professional visibility. They also gave me useful comparative insights on how to deal with faculty/personnel issues in my own program." Yet another advocate wrote, "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." And another wrote, "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."

In response to the questions about what they would want to convey to administrators about the Scholar program, moving forward, there was uniform agreement that the program should continue to be supported and offered to all faculty of color at the university. Scholars particularly highlighted the "personal touch" of the program and the opportunity it afforded for honest discussion and for empathy, noting that these "should remain the heart of the program." A past scholar summarized the importance of the program in this way:

Please keep this good practice. Things are getting MUCH better, but please know that minorities and international scholars still encounter micro-aggressions on a daily basis, which significantly affects our academic productivity. We need a space where we can feel safe, gain strength to keep working at the university, and make contributions to our communities. The ADVANCE Scholar Program made me feel that I am a human being, not trash or a slave. I strongly wish that the program will continue to prosper under appropriate leadership who can understand emotional pains and struggles at the deepest level.

Scholars' professional advancement: retention and promotion

In addition to participants' perceptions of the impact of the Scholar Program, another potential source of evidence of the program's impact is how the scholars fared in their career. Specifically, we considered how many of the scholars were retained and promoted at the university. Over 70 percent of the scholars ($n = 29$) were assistant professors when they started in the program, and all but three of the others were associate professors. Four assistant professors left the university before or by their third year on the tenure clock, for various reasons. Of the remaining 25 assistant professors, 18 have come for mandatory review to date. Of these, the majority (83.3 percent) were successful in getting tenure and being promoted to associate professor. Of the 18, 3 did not get tenure. An additional four left the university after getting tenure as they were recruited by other universities.

Of those who were already associate professors during their participation in the Scholar Program ($n = 11$), one left the university to take up an administrative position at another university. Three others came up for review for promotion to full professor and two were successful. Thus, only 20 percent of the associate professor level scholars who are still at the university have advanced to full professor. However, most of them have not accrued enough time to build up their record but a majority will likely be coming up for consideration to promotion to full professor within the next three to five years.

In summary, a total of 11 of the scholars (26.8 percent) left the university for various reasons. Only three (27 percent) of these did so because they did not get tenure at the university. Of the four who left before coming up for tenure one felt that she was a better fit for a liberal arts college, and another left because of partner placement issues, opting to give up her tenure track position for a post-doc offer elsewhere. The others who left before tenure are currently in tenure track positions at other universities. And, as noted above, four other faculty who left as associate professors were recruited to strong academic positions elsewhere. All are in tenured positions at other universities. Thus, the University has retained 73.2 percent of the scholars. At the same time, the majority of those who left (64 percent) are in tenure track or tenured positions at other universities. As such, the vast majority of scholars (nearly 90 percent) have stayed in tenure track or tenured faculty positions and are advancing in rank. Considering that retention of minoritized faculty is a challenge at many predominantly white research universities, the fact that the University was able to retain over 70 percent women of color faculty speaks to the value of the Scholar Program.

We compared these indices with institutional data on tenure and promotion rates of tenure track faculty at the University as a whole over the years of the program, that is, from 2009 to 2018. The rates of tenure and promotion of faculty at large at the University during this period have been fairly high, ranging from 70 percent to well over 90 percent. Thus, the 83 percent tenure and promotion rate of the scholars falls well within the range of the institutional data. What is important to keep in mind is that the institutional data do not factor in individuals who left the university prior to coming up for tenure; they only reflect the outcome of those who stayed through their probationary period. Thus, the institutional data are likely to be lower than the above-noted values if data on those who left before coming up for tenure were included. As such, the Scholar Program appears to be relatively successful in retaining and promote women faculty of color at the University, at rates comparable to the retention and promotion of faculty at large at the University.

Discussion

Women faculty of color in tenure track positions at predominantly white research universities experience resistance from colleagues and students who perceive them as outsiders and expect them to prove their legitimacy as scholars (Gutierrez y Muhs *et al.*, 2012). They are often left out of important networks and do not get to benefit from resources

that would enhance their productivity and visibility. To take responsibility for providing more equitable access to resources and networks, the university we studied implemented a mentoring program with the goal of retaining and advancing junior women faculty of color. We believe the program supports what the literature suggests – that mentoring, if done effectively, can be enormously beneficial for faculty of color protégés and it also has positive effects on mentors (Stanley, 2006; Stanley and Lincoln, 2005; Turner *et al.*, 2008).

We recognize some limitations of our study. A major limitation is that since the program was intended as an intervention, and not as a research study, we could not randomly assign participants to be in the program or not. Instead, the program was open to all women faculty of color in STEM who expressed an interest in the program and could be funded by their college or by the ADVANCE Center. We were in fact able to accommodate all of the women who applied to be in the program. The reasons those who opted to be in the program, and those who chose not to, may well have influenced the outcome of the program in the form of a selection bias. In addition, a social desirability bias may have influenced some of the responses to the assessment questions. We think that both of these potential factors were not at play. For one thing, even scholars who have left the university – regardless of whether they did not get tenure or because they accepted positions elsewhere before or after getting tenured – had positive things to say about the impact of the program on their career and well-being, and about the need for such a program. We were hard pressed to get negative responses to the program.

Two additional limitations that restrict our conclusions relate to how participants' experiences were influenced by their particular disciplinary background (e.g. sciences, vs social sciences vs humanities), and whether participants were the sole faculty of color in their department or not. There are likely to be important differences in relation to both factors. Our study cannot speak to those, given the small numbers. As the program continues, the added number of participants, including participants at non-US institutions, will make it possible to do more fine-grained comparisons.

These limitations notwithstanding, we believe that the ADVANCE Scholar Program was beneficial for early career women faculty of color at the university, providing invaluable support professionally and personally that contributed to a strong record that led to promotion and greater professional visibility. In reflecting on the impact of this program we interpret the evidence from our perspective as scholars of diversity in higher education and as participants in the Scholar Program in different capacities – as program coordinators, internal advocates and ADVANCE scholars.

Retaining minoritized faculty scholars using this ADVANCE mentoring model

The assessment of the program revealed that all groups perceived the program to be valuable. Scholars reported that the program promoted their well-being, reduced isolation, opened doors and provided vital encouragement. Many credited the program for increasing their professional presence in the form of invited conference presentations, professional society awards and recognition and increased productivity in terms of number of manuscripts in preparation, grant proposals submitted and invitations to collaborate. External mentors for their part indicated that the program enhanced their mentoring skills, encouraged them to think about mentoring needs of junior scientists at their home institutions and re-sensitized them to the challenges faced by junior scholars and those faced by women of color, in particular. Internal advocates noted that the program inspired them, increased their awareness of the need to be intentional regarding broadening participation in STEM and other disciplines and helped them to identify multiple approaches to addressing issues they encountered with their individual protégés and with women faculty of color as a group.

Thus, scholars, eminent scholar/external mentors and internal advocates alike reported that they benefitted from participation in the program. This is consistent with research

(Cole, 2015; Thompson, 2008) which indicates that successful mentoring relationships are mutually beneficial. It is also noteworthy that a majority of participants from each group recommended continuing and institutionalizing the program.

The retention and promotion data likewise suggest that, although there was some attrition, which is to be expected at any university, only 3 of the 41 scholars left the university because they had to – i.e. they did not receive tenure. Indeed, 10 of the 11 scholars who left the university over the course of the past seven years have been hired in tenure track or tenured positions at other institutions. In addition, two senior women faculty of color who served as internal advocates left the university to take up leadership roles elsewhere. Importantly, of the scholars who have gone through mandatory tenure review, the vast majority were successful. It would thus appear that the ADVANCE Scholar Program has been a worthwhile and meaningful intervention that is fulfilling its purpose of promoting and advancing the success of women faculty of color in predominantly white research institutions. It will be crucial to see how many of these newly tenured faculty, and those who were already associate professors at the start of their participation in the program, go on to become promoted.

What particular aspects of the Scholar Program contributed to its success? We believe that instead of a single feature, it was the unique configuration of formal, informal, dyadic and facilitated peer mentoring that was critical to the program's success. The external mentor served to help the scholar develop a national, professional identity – to identify a research focus, venues and outlets for presenting and publishing their work, and access to important figures in their field, which provided collaborative opportunities and conferred legitimacy. The internal advocate, in turn, served as an experienced local guide who was familiar with the culture of the university and could help strategize with the scholar about how to navigate the tenure process and manage interactions with students, colleagues, department heads and deans. The opportunity that internal advocates had to regularly exchange notes with each other about their scholars also facilitated the effectiveness of their role as internal advocates, while also providing peer support. Finally, the fact that scholars had regular opportunities to interact with other women of faculty who were in their cohort of scholars (but in other disciplines) gave them a community and a safe space for comparing notes about how to deal with the racism, sexism, isolation, and hyperscrutiny that many of them reported experiencing in the classroom and in interactions in their department (Buchanan *et al.*, 2018). This layering of different types of mentoring relationships and experiences was, we believe, an important contributor of the success of the program, and is consistent with the literature on mentoring that shows that having a network of mentors is particularly valuable (Jean Marie and Brooks, 2011).

We believe the mentoring structure of the ADVANCE Scholar Program can serve as a useful working model for mentoring all faculty at the university, with particular attention to faculty who may be under-represented and/or marginalized by discipline, as well as across social and cultural identities. In implementing such a program, we offer the following recommendations:

- (1) As part of the application process, have scholars fill out a mentoring needs assessment, and provide internal mentors with a guide to mentoring skills. Once accepted into the program, have scholars prepare a professional development plan in consultation with their mentors, and have them revisit it periodically.
- (2) Continue to facilitate opportunities for informal and formal group interactions on and off campus between scholars and internal advocates, scholars by themselves and internal advocates by themselves.
- (3) Ensure that the mentor–protégé relationship is established at the time of faculty hire to enable deeper and more meaningful impact over the course of the faculty member's career. This could lead to more successful third-year and promotion and tenure reviews.

- (4) Publicize the program more widely throughout the university, particularly at the department and college level.
- (5) Develop leadership opportunities for former scholars to enable them to continue to advance professionally and gain administrative experience should they be interested.
- (6) Use the findings of the program evaluation to inform graduate mentoring programs for women of color in STEM at the university (see Footnote 2).

As Medina and Luna (2000) noted, mentoring networks are important support structures for emerging and mid-career scholars, who seek to navigate the complex racial and gender dynamics of academic institutions. Institutions should find ways to develop and sustain mentoring networks to retain and advance all faculty, but especially those whose multiple subordinate identities have made them overscrutinized yet invisible. The factors that influence the success of women faculty of color in STEM and other disciplines, particularly at predominantly white colleges and universities, are complex, intersecting, nuanced and varied. ADVANCE scholar participants welcomed the opportunity to be recognized, supported and treated foremost as scholars. In addition, they were well aware that their identities place them in local and national spaces where they are often made to feel silenced, ostracized, alienated, vulnerable and depleted.

Conclusion

In conclusion, we believe that the ADVANCE scholar mentoring program has promise and may serve as a model that could be implemented at other research universities that are currently predominantly white in their faculty composition. We are particularly hopeful that there may be long-term domino effects of participation in this program, not only on the part of the scholar but also on the part of the eminent scholars and internal advocates. Ultimately, the personal investment in a scholar's career development that is the goal of this program may serve to make each member of the triad more aware not only of the obstacles but also of the opportunities for visibility that are present for women faculty of color.

Notes

1. In response to feedback from eminent scholars from the first assessment, the committee of internal advocates drafted a set of guidelines that were given to subsequent cohorts of eminent scholars. The guidelines identified five ways in which eminent external mentors could support their ADVANCE scholar. Within each category three or more potential activities were outlined. A copy of the guidelines is available upon request.
2. For example, one of the authors, while serving as vice president and associate provost for Diversity also sat on the Executive Steering Committee for a five-campus NSF-funded Alliance for Graduate Education and the Professoriate (AGEP) Transformation Project at the University. This program develops, implements and studies a new model for advancing underrepresented minority doctoral candidates in science, technology, engineering and mathematics (STEM) fields to pursue professoriate careers (Butler-Purry *et al.*, 2017). During the AGEP campus meetings, this person, using her expertise gained from the ADVANCE Scholar Program, offered guidance and critique of the mentoring plan for graduate students.

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