

2018 CoNECD - The Collaborative Network for Engineering and Computing

Diversity Conference: Crystal City, Virginia Apr 29

Using Data to Drive Institutional Change: University of Delaware ADVANCE Institute Research on Faculty Women of Color

Dr. Shawna Vican, University of Delaware

Shawna Vican is the Director of the UD ADVANCE Institute and holds a secondary appointment as an Assistant Professor of Sociology and Criminal Justice at the University of Delaware. She received her Ph.D. in Sociology from Harvard University. An organizational sociologist, Dr. Vican investigates the adoption and implementation of new employment practices and corporate social behaviors. Across her research, Dr. Vican explores how organizational policies and practices, managerial behavior, and workplace culture shape individual career outcomes as well as broader patterns of labor market inequality. Her current research includes a qualitative study of corporate diversity management strategies and a series of mixed-methods projects on diversity in the academic workforce.

Using Data to Drive Institutional Change: University of Delaware ADVANCE Institute Research on Faculty Women of Color

Shawna Vican, University of Delaware¹

One of the goals of the University of Delaware (UD) ADVANCE Institute is to improve departmental microclimates and institutional support for women STEM faculty, with a particular focus on women of color. The UD ADVANCE team takes a data driven approach to understanding the experiences of faculty women of color on campus, employing a combination of social science research, institutional data, and evaluation. Using mixed methods, we find these women face particular structural barriers and report distinct experiences both within their departments and more broadly as faculty at the university. Cohort analysis results reveal gender differences in promotion and retention rates, particularly among women of color, while climate survey analyses and interviews about faculty satisfaction reveal faculty of color perceive departmental climates as less positive than peers across multiple dimensions. Through interviews with departing faculty, as well as faculty negotiating retention packages, we clarify additional factors affecting faculty of color retention. In this paper, we (1) discuss main findings about the climate for faculty of color on our campus, (2) describe how social science research, institutional data, and evaluation inform our programmatic work, and (3) highlight how the strategic use of data allows us to better engage campus stakeholders in institutional change efforts in support of faculty diversity.

Introduction

The underrepresentation of faculty women of color in academia remains a national problem [1] - [3]. In 2015, among all full-time faculty in the US, just three percent were black women and two percent were Latina women. As with the broader representation of women in the academy, women of color become scarcer with increasing academic rank. Among full professors, just two percent were black women and one percent were Latina women. For women of color in STEM fields, numbers are even lower [4]. Despite overall gains for women in engineering, representation for faculty of color has been slow to change [4]. In 2007, women made up 11.8% of tenure-track and tenured engineering faculty and by 2016 this number increased to 16.3%. However black faculty (including men and women) comprised just 2.5% of engineering faculty

¹ Shawna Vican is the Director of the UD ADVANCE Institute with a secondary appointment as an Assistant Professor of Sociology and Criminal Justice, University of Delaware. UD ADVANCE is supported by an NSF ADVANCE Institutional Transformation award (NSF Grant No. HRD-1409472).

in 2007 and only 2.3% in 2016, while Latino(a) faculty made up 3.4% of engineering faculty in 2007 and just 3.7% in 2016 [4].

Studies find women of color do not advance through the ranks at the same pace as white males, while women of color are less likely than men or white women to get tenure [5] – [8]. A number of factors contribute to these unequal career trajectories. Women and minority faculty report a higher service load than peers, in part due to their low numbers and institutional efforts to include racial/ethnic diversity in faculty committees [9], [10]. Faculty of color also lack access to informal networks that provide mentoring, research collaboration, and other support [11], [12]. A large body of research demonstrates that women of color experience double disadvantage, or the “double bind” by virtue of gender and race [13], [14]. Tokenism, bias, and isolation are all factors that shape women of color’s experiences in the academy [15], [16].

Given this large body of literature, universities are increasingly aware of the need to diversify the faculty and institutions have begun to adopt policies and practices designed to remediate the underrepresentation of faculty of color. In this paper, we provide an example of one such university in the relatively early stages of efforts to increase the recruitment and retention of faculty of color. As recipients of an NSF ADVANCE institutional transformation grant, our team has adopted a data-driven approach to promoting actions that increase campus diversity. While our efforts are informed by the growing stream of social science research on faculty diversity, we analyze campus-specific institutional data and conduct both quantitative and qualitative research on the experiences of faculty at our institution. This rich set of institution-specific data allows us to speak to the current climate for faculty of color, identify trends in faculty hiring, promotion, and retention, advocate for specific policies and practices to meet campus needs, and engage with stakeholders and change agents on campus.

In this paper, we (1) introduce the institutional data and social science research projects that inform our understanding of the climate for faculty of color on our campus (2) describe how these research findings shape our programmatic work, and (3) highlight how the strategic use of data allows us to better engage campus stakeholders in institutional change efforts in support of faculty diversity.

Institutional Context

The University of Delaware (UD) is a mid-sized, suburban campus, located roughly midway between Washington, DC and New York City. The university has approximately 20,000 students and over 1,000 full-time tenured, tenure track, and non-tenure track faculty distributed across seven colleges. UD is classified as an R1 (highest research activity) by the Carnegie Foundation and is a public institution with a private charter. Unlike flagship state universities, however, UD does not have a law or medical school.

UD's ADVANCE Institute is funded through a 5-year institutional transformation grant from the National Science Foundation. In addition to the work of ADVANCE, diversity efforts on campus have increased markedly over the last several years. In 2011, the university's regional accreditation body issued a reaccreditation report that strongly suggested the university do more to address diversity. This report recommended that campus leaders play an important role in increased attention to diversity, noting that the university "should commit itself forcefully and visibly to improving the diversity of the whole community." Specific recommendations for faculty diversity included developing a plan to increase gender diversity among STEM faculty and to increase the number of faculty of color across the university.

The university president at the time increased attention to diversity by making it one of five guiding principles in the university strategic plan and creating the President's Diversity Initiative in 2012. In 2014, the provost created the vice provost for diversity position, which is a full-time administrative position charged with overseeing diversity efforts for students, faculty, and staff. In 2016 a new university president was appointed. While it is too early to determine how diversity effort will evolve under the new administration, the president has already signaled that diversity will continue to be a university priority moving forward.

In order to understand the context for current diversity efforts at the university, it is useful to consider the faculty demographics as well as hiring and retention trends during the period before the NSF ADVANCE grant. In 2012, at the time the grant was being written, 30.4% of faculty were white women (N=274), 3.9% Asian women (N=35), 2.1% black women (N=19), and 0.9%

Latina women (N=8). The small number of black and Latina women are particularly challenging, as these women frequently find themselves as solos within their department. During the period from 2005 to 2012, the university hired black and Latino(a) faculty at relatively low rates (8% and 3%, respectively), while 70 percent of new hires were white. Over that same time period, 13 black faculty left the university. Retention is a key challenge, as the departure of these 13 black faculty represents a roughly 60 percent net loss of the gains made by hiring during this same time period. Of note, nearly three quarters of those black faculty that left the university did so pre-tenure. While data as to the university climate pre-grant is somewhat limited, surveys conducted during this time period found that faculty of color felt isolated, experienced tokenism, and felt their service load was higher than white peers.

The NSF ADVANCE institutional transformation grant was awarded in 2014. The grant's overarching goals include increasing the representation of women faculty in all STEM and social and behavioral science (SBS) departments and increasing the number of women faculty in leadership positions. In support of these long term goals, there are four main objectives: (1) improve departmental microclimates for women faculty, especially women of color; (2) educate, mentor, and support women STEM faculty, especially women post-tenure and women of color; (3) increase transparency of policies, procedures, and practices that affect faculty careers and enhance institutional data gathering, analysis, and presentations; (4) coordinate and draw attention to actions and discussions of diversity on campus. As identified in the grant proposal, an area in need of significant improvement is the representation and advancement of women faculty of color.

Institutional Climate for Faculty of Color

One of the strengths of our ADVANCE program is access to institutional data. We strategically added the Associate Provost for Institutional Research and Effectiveness as a co-PI on the grant. This allows us to collaborate closely with the institutional research office and thus access faculty data in a timely manner. This relationship with institutional research is also strengthened by the addition of a senior research analyst whose splits her time between the ADVANCE Institute and institutional research, with a focus on diversity indicators on campus. With an institutional research analyst as part of our core team, we are able to gather and publish HR data including

annual faculty demographics as well as collaborate on the development of shared diversity metrics and indicators. ADVANCE team members also include social scientists whose research backgrounds aids in the development of new data sources such as faculty surveys and qualitative research projects.

In order to assess the current climate for faculty of color, we use a number of institutional data sources as well as ongoing research projects. Here we provide an overview of each, highlighting main findings that contribute to our understanding of the particular institutional context and lived experiences of women faculty of color.

Faculty Climate Survey

In collaboration with institutional research, the ADVANCE Institute conducts a faculty climate survey every two years. The survey was piloted in 2014, before the grant was awarded, in order to collect baseline data. The original survey was modeled off of faculty climate surveys from other ADVANCE grantees including the University of Wisconsin and the University of Michigan. The last version of the survey, set to be fielded in February 2018, was revised substantially to better reflect current climate concerns and areas of programmatic interest for ADVANCE. That being said, we have chosen to leave core questions unchanged in order to analyze longitudinal data over the life of the grant.

The faculty climate survey is a primary source of data to understand the experiences of faculty of color on campus. Given the small number of these faculty, we report overall findings by race, noting significant differences between white, black, Latino(a), and Asian faculty, but to not disaggregate by gender. When asked to rate the overall climate for diversity within their department, black faculty perceive a less positive climate than do white, Latino(a), and Asian peers. When asked specifically about the climate for faculty of color within their department, black faculty on average reported the climate was “poor.” In order to better understand the types of experiences that lead to this negative view of departmental climate, we also ask a series of specific questions about aspects of departmental life including access to informal networks, workload and resources, experiences of discrimination and bias, and promotion.

We find significant differences between black and white faculty with regard to workload and resource equity. Black faculty are more likely to agree that URM faculty are asked to serve on more committees than peers and that white colleagues are more likely to be sought out for collaborative research. Black faculty are less likely than white faculty to agree that there is equal access to research space and resources for both white and non-white faculty. With regard to informal networks, faculty of color, and especially black faculty, reported they are less likely to receive helpful career advice from colleagues and frequently felt excluded from informal networks. Taken as a whole, these findings suggest that in addition to academic supports, faculty of color need community and social support, echoing findings from the broader literature [17].

While experiences of racial discrimination within departments were relatively rare, white faculty more strongly disagreed that racial and ethnic discrimination was a problem in their department, while black faculty held more neutral views. Black faculty also perceived that URM faculty had to work harder than white peers to be perceived as valued colleagues. When considering the inclusive department scale ($\alpha=0.84$), which is comprised on questions about perceptions of sexism, racism, homogeneity, homophobia, and ableist behaviors within departments, black faculty reported lower levels of inclusion than Asian or white peers. For the collegial department scale ($\alpha=0.94$) which is comprised of questions about how contentious, isolating, hostile, competitive, individualistic, unsupportive, unfair, and stressful departments are, black faculty reported lower levels of collegiality than Latino(a), Asian and white peers.

Faculty were asked a series of questions to assess their perceptions of whether faculty search committees within their departments adequately address diversity. Unlike white peers, black faculty agree that search committees do not take adequate steps to recruit diverse candidates and that search committees in their department believe that it is difficult to recruit diverse candidates to the university. Similarly, black faculty agree that search committees believe it is difficult to find qualified ethnic/racial minorities in their field, while white and Asian faculty disagree.

Faculty Satisfaction Interviews

Another research project used to inform our understanding of the climate for faculty of color is an interview project on faculty satisfaction. These semi-structured interviews ask participants to

discuss their access to formal and informal mentoring; the effectiveness of any mentoring they receive; ways mentoring could be improved; and the extent to which chairs can and do facilitate mentoring efforts. The interviews also delve deeper into the importance of transparency in career success by asking more detailed questions about which policies and procedures need clarification and why; the extent to which faculty have received support in interpreting policies and procedures from chairs, mentors and/or peers; and whether transparency has made a difference in their perceptions regarding distributions of academic resources. Finally, the interviews include questions about how race factors into faculty members' personal experience at UD; whether they have witnessed the impact of race in the experiences of colleagues of color at UD; and how they characterize the climate of inclusion at the university and in their specific department.

When analyzing the responses of women of color, a number of themes emerged. For women of color, mentoring relationships are most helpful when they include a personal connection and a good fit between mentor and mentee. Respondents suggested that this kind of a mentoring relationship was less likely to come from a formally assigned mentor and rather emerged from informal mentoring relationships, or those initiated between two faculty without input or oversight from departmental chairs. As a woman of color Associate Professor explained, she and several other women of color had created an informal research cluster that emerged somewhat organically in response to feelings of isolation within their respective departments. Faculty members in this group varied in rank and even the type of research they conducted, but group members found success in sharing goals, brainstorming about current problems, and providing feedback on works in progress. For this faculty member, this kind of mentoring was far more helpful than the formal mentor she was assigned within her department which was not a good fit and “never materialized into anything.”

Faculty of color also expressed concern about whether the university administration had a sincere commitment to diversity, or was just paying “lip service” to the issue because it is “part of the conversation in terms of being a good university.” These faculty also pointed out that service work promoting diversity was consistently undervalued and counted little toward annual appraisals or promotion and tenure decisions. In the words of a woman of color Assistant

Professor: “there is this really interesting dichotomy between institutionalized discourses and what happens on the ground and what gets valued [as part of faculty work].”

Similarly, we find evidence of an overall service burden for faculty of color. Several faculty of color respondents mentioned that they were asked to serve on multiple departmental committees, such as nearly all faculty search committees, as well as college and university-level committees. This service burden seemed higher than non-URM peers and was frequently attributed to tokenism, as the faculty perceived their participation was largely to add racial/ethnic diversity to the committee. Respondents also pointed to the need to protect faculty of color, and in particular junior faculty, from too many service activities. As a woman of color Associate Professor said “I think this environment where there are few racial/ethnic minority faculty, there should be less of a focus on service for those faculty, and more of a focus on supporting their scholarship, supporting their teaching responsibilities. And so it’s kind of like the very people who shouldn’t have to serve in this capacity on a regular basis are kind of being pulled away from the things that are important and the things that lead to promotion to do this.”

Finally, we find evidence that some faculty are so disenchanted with the university, and in particular their departmental climate, that they had chosen to withdraw from fully participating in faculty life. This experience appeared to be more common for faculty who were solos in their department. As one woman of color Professor shared: “But so I think it’s just you get tired navigating that environment. So much that I’ve sort of stopped going to faculty meetings. I just get tired of being the only one in the room. And it’s not the only place and I am the only one in the university context.”

Cohort Analysis

Another key source of data about the experiences of faculty of color comes from HR data accessed through institutional research. Preliminary analysis of institutional data showed us that overall, the university has made progress recruiting faculty of color, particularly at the assistant professor level. However, rates of turnover appeared to be higher for this population than for white male faculty. In order to better understand this, we conducted a cohort analysis. We first looked at the cohort of assistant professors hired during 2005-2007 (N=96) and assessed their

career outcomes in 2015. By looking at this longer window of time, we allowed sufficient time for all of these faculty to go through the tenure process, even for those who had stopped the tenure clock for one or more years. Comparing the career outcomes of this population of faculty, we find a gender gap. A larger proportion of women (28%) had left the university as compared to male peers (13%). When comparing URM and non-URM faculty, URM men are promoted to associate professor and retained at roughly the same rate as non-URM men. URM women are less likely to be promoted to associate professor and retained (29%) than non-URM women (78%), while rates of attrition are high (57%). We also conducted a similar analysis for the cohort of faculty whose first year as Associate Professor occurred in 2003-2007. Comparing 2015 career outcomes, women are less likely than men to be promoted to Full Professor after 8-12 years in rank as Associate Professors. This gender gap held for both STEM and social and behavioral science (SBS) faculty. When considering the same cohort of faculty, URM faculty are less likely to be promoted to Full Professor. In fact, none of the women of color faculty had been promoted, as compared to nearly 50% of white and Asian women.

Exit Interviews

Given the relatively high turnover rates for faculty of color, we are conducting an ongoing research project examining the factors that contribute to faculty attrition at the university. The project methodology includes interviews with (1) faculty who have left the institution over the last five years, (2) faculty who successfully negotiated retention packages over the last five years, and (3) a sample of faculty “stayers” including a subset of faculty identified by their chairs as high performers and thus at risk of leaving. These semi-structured interviews are conducted both in-person, for those faculty currently on campus, as well as over the phone. Topics covered include an overview of each respondent’s career history at the university; positive and negative experiences within their department; satisfaction with particular elements of faculty life; what prompted their decision to leave; and when applicable, questions about negotiating a retention package.

While this project is in the early stages, we have identified several emergent themes. First, some respondents indicate that diversity is not viewed as a priority for the institution, or more specifically, the university does not adequately support diversity. In the words of one faculty

members, “diversity is valued through words at [UD]. But where is it other than words—where is it codified? You really don’t see much here.” Another respondent shared being on a search committee and pushing for diversity to be one of the factors in the decision-making process. Unfortunately, this was vigorously opposed by other members of the search committee. While these experiences do not necessarily point to concrete reasons for faculty turnover, the overall climate for diversity likely figures as important in the retention of faculty of color.

Another theme that emerged from multiple interviews is that the university administration doesn’t appear to be devoting adequate financial resources to support diversity. One respondent recounted losing a prominent black colleague recently and suggested more be done with regard to proactive retention packages, as they may help keep top diverse talent at the university. Another respondent, a woman of color leaving the university, explained that she was continually denied adequate lab space and other resources to support her research. While these resources had been promised on multiple occasions, they were continually delayed, which hampered her research program and physically isolated her from the rest of the department. This faculty members reported that she decided to leave the university for a more supportive climate and increased access to resources to support her research.

Using Research to Inform Programmatic Work

The ADVANCE team uses social science research, institutional data, and evaluation inform our programmatic work. While many of the activities we undertake are broadly outlined in the institutional transformation grant, we continually refine strategies. Rather than provide an exhaustive list, we instead highlight an in-depth example of how data informs programmatic efforts to promote to faculty diversity.

Faculty Recruitment Workshops

We use data both as content in our faculty recruitment workshops and also to evaluate the efficacy of the workshops. In order to offer these recruitment workshops each year the ADVANCE team works with ADVANCE Faculty Fellows in each college. These fellows are appointed by their dean and participate in regular meetings where they learn about implicit bias, best practices in faculty searches, and other topics of interest for promoting faculty diversity.

Working off a template developed by the ADVANCE team, the fellows create customized two-hour workshops that are tailored to the context of their college. Data is an important part of the workshop content, as fellows have chosen to use data to motivate the importance of faculty diversity as well as highlight progress and challenges in faculty recruitment to-date. In this vein, faculty fellows have presented on national and regional population demographics, trends in the gender and racial composition of college (and department) faculty over time, changes in the composition of the Ph.D. pipeline, and how the university compares to peer institutions with regard to faculty diversity.

UD ADVANCE provides support materials for the workshops, including a brochure with the gender composition of tenured and tenure-track faculty, non-tenure track faculty, graduate students, and undergraduates by college and department. This handout also includes data on the faculty ethnical/racial composition by college, highlighting the small numbers of faculty of color across the institution. We find this handout encourages discussion among workshop participants, as they can easily see how their department and college compare to others with regard to faculty and student diversity.

As part of our faculty recruitment workshops, we encourage search committees to engage in proactive recruitment activities to broaden the pool of applicants. However, based on faculty climate survey results, we know that some faculty report search committees in their departments perceive difficulties in finding diverse candidates for faculty positions. We have recently undertaken a project to provide easily consumable data on the number of doctoral degrees awarded to women and URM students by field and institution. By breaking this down at the discipline level, we will produce simplified data and charts to suggest where search committees begin work on proactive recruitment. This project is in the early stages and we are currently working to include data on women and URM post-doctorates by discipline and institution, as well as data on departmental rankings. This data will allow us to benchmark the current diversity of departments at our institution, while also providing faculty search committees with suggestions for other institutions to focus on for proactive recruitment efforts.

We also use research and evaluation data to assess how well the recruitment workshops are received and whether we need to make changes to content. The faculty climate survey asks a series of questions about departmental search committees, while the ADVANCE internal evaluator distributes and analyzes a short survey of workshop participants. We present these aggregate results to the faculty fellows annually when we discuss possible changes and revisions to workshops and also make the raw data available to each fellow for their particular workshops. Our internal evaluator also has designed a survey for faculty search committee chairs. This short online survey asks about whether certain best practices for faculty searches were followed during the search process, whether all members of the search committee attended the workshop, and other questions related to the functioning of the search committee and the outcome of the search. We use the results of these surveys to revise our workshop content, as well as to inform the deans and other administrators as to the efficacy of the workshops. Sharing survey results with the provost, in particular, has proven useful. The provost was so pleased with the evaluation of the workshops that he has taken steps to make it mandatory for all search committee members to attend at least once every three years. Support from the Provost and deans allows us to institutionalize the program and ensure it continues past the life of the NSF ADVANCE grant.

Engaging with Campus Stakeholders

One of the most important uses of institutional data, social science research, and evaluation data has been to engage with the campus stakeholders whose partnerships are essential for institutional change. As our external evaluator recently noted, we have compelling data that can help us identify areas the institution needs to address to promote diversity and an inclusive climate. By using this data to frame issues such as faculty diversity, we can communicate the importance of these issues on campus and make a case for how the ADVANCE team can support efforts to change the campus climate.

Faculty Climate Survey Forum

One recent example of this strategy is a faculty climate survey forum we hosted. The forum was open to all members of the campus community and included a short presentation on main findings from the 2016 faculty climate survey. After the presentation, we opened up the floor for a panel discussion and questions from the audience. Panelists included the president of the

faculty union (the local chapter of the AAUP), the president of the faculty senate, the vice provost for diversity, the deputy provost for academic affairs, and one of the ADVANCE co-PIs. This lively panel discussion allowed us to listen to current concerns from the faculty, including perceptions of a lack of community at UD, the need for better mentoring, and the need to clarify and improve family-friendly policies for faculty (including family leave). One immediate outcome of the forum was increased dialogue with members of the faculty senate and union with regard to areas in which ADVANCE can collaborate to promote campus change. Given the success of the forum and increased interest in the faculty climate survey from campus stakeholders, we have added a small number of questions to the next wave of the survey in order to capture data of interest to various constituencies on campus.

Talking Points

One way in which we consistently engage with campus administrators is through the use of data to frame and support discussion items. Our strategy revolves around the ongoing development of customized facts, figures, and best practices – known as “talking points” – that we research and communicate regularly to the provost, deans, and department chairs. Talking points are delivered through a variety of means, such as regular briefings with the provost, meetings with deans, and workshops with department chairs. The key to talking points is the use of charts, tables, and graphics to easily convey data. One such talking point focused on the hiring and retention of faculty of color. The messaging in this talking point emphasized trends in the US population and doctoral degree recipients, pointing to projected growth in the Latino(a) and Asian population as well as the growing share of doctoral degrees awarded to faculty of color. Using current university faculty demographics, we projected that 1 in 5 of all new faculty hires would need to be faculty of color in order to reach potential distribution (based on doctoral degree pool). In the last five years, hiring trends showed that only 12 percent of tenure-track and tenured hires were faculty of color (4% black and 8% Latino(a)). Given this finding, we would potentially need to double the hiring rate of faculty of color. In discussion with the Provost, we also emphasized the importance of reducing bias in the faculty search process and the implementation of tools such as rubrics and a formalized faculty search protocol.

While not focused exclusively on faculty of color, we have used dual career talking points and mentoring talking points to seed conversation and later action with regard to revised policies and practices. These “talking points” have been adapted and presented not only to the Provost but also deans, chairs, and the faculty senate. Looking specifically at dual career policies, we have had success in convincing the university to join a higher education recruitment consortium, create a formal dual career assistance policy brochure and associated protocol for handle inquiries, and appoint a person in HR to serve as coordinator for ducal career assistance requests. Progress for mentoring has been somewhat slower, be we have made progress in coordinating existing faculty mentoring activities with the Vice Provost for Faculty Affairs, and promoting new mentoring policies to be added to the faculty handbook (an effort currently underway in the faculty senate).

Challenges

While we have had success in our data-driven approach to engaging campus stakeholders in institutional change efforts, we have also faced a number of challenges. Given the small population of faculty of color at our university, and the few women faculty of color among tenure-track and tenured faculty, we are aware that continually tapping these women for participation in research may be problematic. As the literature has shown, these women already perceive a service burden relative to peers. We remain sensitive to the time commitment required to participate in research and use primary data sources such as the faculty climate survey and faculty satisfaction interviews to inform multiple talking points and research questions. Additionally, we are committed to sharing research findings with the broader UD community through reports, articles in the campus newspaper, events including the faculty climate survey forum, and print material such as brochures and bookmarks. By remaining transparent in our research findings and analysis of institutional data, we hope faculty will understand the importance of their continued participation.

Another challenge we face has to do with the history of race relations on campus as well as the current campus climate for diversity. We have found a lack of trust among some women faculty of color, particularly for those senior faculty who have been at the institution for many years. While the new campus administration may be making inroads in this area, it remains a challenge

to fully engaging with faculty of color and encourage honest dialogue about lived experiences. We continually work to foster trust with this group and remain committed to confidentiality when sharing research findings. In addition to participation in research projects such as exit interviews and the faculty climate survey, we also ask women of color to speak with our internal and external evaluators, as well as select members of our external advisory board. We encourage these more informal discussions with individuals outside the university as a means of open dialogue. We ask that our advisory board and evaluators share general impressions and themes from these discussions with the ADVANCE team, so that they add to our understanding of the current challenges women of color face.

A final challenge relevant not only to our work with women of color, but to broader efforts at institutional transformation, is how to translate research findings into changes in policy or the implementation of new practices on campus. The ADVANCE team has relatively little power on campus and relies on the support of administrators and the faculty senate in order to enact change. While we have found that administrators are receptive to our talking points and respond well to presentations relying on institutional data and on-campus research, the ADVANCE team has at times been frustrated that even after multiple productive discussions, any change to policies and practices remain slow and uneven. A new strategy that we have begun to implement is to present not only data on current diversity challenges or opportunities for improvement, but also a range of possible solutions including policy revisions, new employment practices, and potential short-term goals and metrics to measure interim progress towards a more diversity faculty and more inclusive campus climate.

Conclusion

In this paper, we discuss findings about the climate for faculty of color on our campus, presenting results from our faculty climate survey, faculty satisfaction interviews, cohort analysis, and exit interviews. We then describe how social science research, institutional data, and evaluation inform our programmatic work, focusing on one example of a successful activity, our annual faculty recruitment workshops. We also highlight how the strategic use of data allows us to better engage campus stakeholders in institutional change efforts in support of faculty diversity.

For our particular institution, providing data and research to demonstrate the need for diversity focused interventions was a key component in securing the buy-in of campus administrators and other stakeholders. We have learned that conversations about diversity on campus can at times be difficult. By harnessing data and research findings we are able to seed important discussions and productively engage with stakeholders such as department chairs, deans, and university administrators.

References

- [1] R. Menges and W. Exum, "Barriers to the Progress of Women and Minority Faculty," *Journal of Higher Education*, vol. 54, pp. 123–43, 1983.
- [2] "Women, Minorities, and Persons with Disabilities in Science and Engineering: 2017," National Science Foundation, National Center for Science and Engineering Statistics (Special Report NSF 17-310), Arlington, VA, 2017. [Online]. Available: <http://www.nsf.gov/statistics/wmpd/pdf/nsf11309.pdf>. [Accessed November 10, 2017].
- [3] D. Nelson and D. Rogers, "A National Analysis of Diversity in Science and Engineering Faculties at Research Universities," 2017. [Online]. Available: http://users.nber.org/~sewp/events/2005.01.14/Bios+Links/Krieger-rec4-Nelson+Rogers_Report.pdf?q=add. [Accessed November 10, 2017].
- [4] B. Yoder, Brian, "Engineering by the Numbers." Washington, DC: American Society for Engineering Education (ASEE), 2016. [Online]. Available: <https://www.asee.org/documents/papers-and-publications/publications/college-profiles/16Profile-Front-Section.pdf>. [Accessed November 30, 2017].
- [5] V. Valian, *Why so slow?: The advancement of women*. Cambridge, MA: MIT Press, 1998.
- [6] C. Trower and R. Chait, "Faculty Diversity," *Harvard Magazine*, March-April, pp. 33-37, 2002.
- [7] C. Leggon, Cheryl, "African American and Hispanic Women in Science and Engineering," *Making Strides (American Association for the Advancement of Science)*, vol. 3, pp. 6-8, 2001.
- [8] C. Turner, J. González and J. Wood, "Faculty of color in academe: What 20 years of literature tells us," *Journal of Diversity in Higher Education*, vol. 1, pp. 139-168, 2008.
- [9] L. Hirschfield and T. Joseph, "We need a woman, we need a black woman: gender, race and identity taxation in the academy," *Gender and Education*, vol. 24, pp. 213-227, 2011.
- [10] A. M. Padilla, "Ethnic Minority scholars, research, and mentoring: Current and future issues," *Educational Researcher*, vol. 23, no. 4, pp. 24-7, 1994.
- [11] E. Victor. 2003. "Visible and invisible barriers to the incorporation of faculty of color in predominantly White law schools," *Journal of Black Studies*, vol. 34, pp. 63–71, 2003.
- [12] J. Moody, *Faculty Diversity*. New York, NY: Taylor & Francis Books, 2004.
- [13] S. Malcom, P. Hall, and J. Brown, *The Double Bind: The Price of Being a Minority Woman in Science*. Washington, DC: American Association for the Advancement of Science, 1976.
- [14] C. Turner, "Women of Color in Academe: Living with Multiple Marginality," *Journal of Higher Education*, vol. 73, pp. 74-93, 2016
- [15] A. Aguirre, "Women and Minority Faculty in the Academic Workplace: Recruitment, Retention, and Academic Culture," *ASHE-ERIC Higher Education Report*, vol. 27, no. 6, pp. 1-141, 2000
- [16] K. Takara, "A view from the academic edge: One black women who is dancing as fast as she can." *Du Bois Review*, vol. 3, pp. 463-470, 2006.

[17] K. Rockquemore and T. Laszloffy, *The Black Academic's Guide to Winning Tenure Without Losing your Soul*. Boulder, CO: Lynne Rienner Publishers, 2008