YEAR 5 EXTERNAL EVALUATION:

UNH UNBIASED: LEADERSHIP DEVELOPMENT AND POLICY CHANGE TO PROMOTE INSTITUTIONAL TRANSFORMATION

NSF GRANT No. 1209189

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1. EXECUTIVE SUMMARY

The University of New Hampshire (UNH) is completing its fifth year of a five-year NSF-funded ADVANCE-IT grant, "UNH Unbiased: Leadership Development and Policy Change to Promote Institutional Transformation." The overall mission of the project is to initiate sustainable institutional transformation to increase the number, retention, and success of female STEM faculty by empowering them to succeed. The external evaluation of the grant's fifth year covers the period of October 2016 through September 2017. Drawing upon both quantitative and qualitative data, this report highlights progress toward the six goals of UNH ADVANCE and offers recommendations to facilitate long-term impacts.

I. Progress Toward Goals

Goal 1: Increase the representation of STEM faculty women at all ranks through changes in recruitment and retention policies and practice.

Work towards Goal 1 has taken place largely through search committee training and attention to faculty professional development. Faculty believe that search committees are becoming more aware of unintentional biases and are now better equipped to discuss them. Likewise, despite fluctuations, there has been an overall increase in the percentage of women in STEM and SBS applicants, finalists, offers, and hires.

GEAR UP Search Committee Training

- **GEAR UP training has continued impact.** Participants see the interactive theater workshop as useful, educational, engaging, and vital to the mission of the university. Moreover, the training provides significant visibility for UNH ADVANCE. Suggestions for improvement focused on making the scenarios more realistic and on including racial and ethnic biases in addition to gender.
- GEAR UP appears to be improving search committee processes. Data from the annual climate survey reveal a statistically significant increase in faculty agreement that "committee members were made aware of unintentional biases that can affect everyone's evaluation of applicants." Those who had participated in GEAR UP were more likely than others to agree that the department or search committee "deliberately engaged in strategies to enhance gender diversity in the applicant pool" and that "increasing gender diversity...was a priority of the committee." Findings indicate that increases in awareness of unintentional biases are likely a result of participation in GEAR UP trainings.
- Uncertainty about the sustainability of GEAR UP. Although all interviewed stakeholders acknowledged the value that GEAR UP has brought to UNH, some thought that a saturation point might have been reached. Others pointed out, however, that it is helpful to be reminded of the content, and that new faculty who need this information are constantly arriving.

Representation of Women Among STEM and SBS Faculty

• Women are increasingly represented on the UNH STEM and SBS faculty. The percentage of women in STEM faculty has increased from 21% pre-

- ADVANCE to 27% in Year 5; the percentage of women in the SBS faculty has increased from 36% to 44%.
- The pipeline of women faculty is growing. Although new hires at the senior level have been rare during the ADVANCE grant period, hires at the Assistant Professor rank are promising.
 - o **In STEM:** Women made up 43% of all new Assistant Professor hires during Years 1–4. The number of female Assistant Professors has almost doubled since the year prior to UNH ADVANCE (from 11 to 19), and they are now 41% of all STEM Assistant Professors (up from 32%). Changes at the rank of Professor were also dramatic, with the number of women increasing from 10 to 16; they now make up 18% of all Full Professors (up from 10%).
 - o **In SBS:** Half (50%) of all Assistant Professor hires were women. The increase in women at the Associate Professor level was most striking—from 14 to 21 by Year 5, representing an increase from 36% to 53%.
 - o During these same years, men and women in both STEM and SBS were equally likely to be promoted if they were reviewed.

Faculty Professional Development

- The Visiting STEM Women Scholars Program has helped UNH faculty engage in enhanced collaborations, draft new grant proposals, conduct research, and form networks. In Year 5, one proposal was funded through this program.
- Five workshops were conducted through Building Blocks for Your Career lunch series in Year 5. Most participants were women, and most were Assistant Professors. Participants agreed that the workshops helped them advance their career goals and that they would recommend the workshops to colleagues.
- The approval of promotion and tenure guidelines by the Faculty Senate supports institutionalization, but stakeholders continue to note that not all departments are reviewing their own guidelines for consistency. Incentivizing departments to do so and making necessary adjustments will be critical to ensure accountability and institutionalization.

Sustainability of Goal 1 Efforts

- Programs with institutional homes show more promise for sustainability. Although many stakeholders thought GEAR UP provided continued value for UNH, they were unable to point to an institutional home for GEAR UP in the absence of an entity charged with overseeing ADVANCE-related work. A clear sustainability plan needs to be finalized. In contrast, the Research Development Office has been collaborating with UNH ADVANCE to run Building Blocks for Your Career, and this program is likely sustainable beyond the end of the grant.
- Budget constraints inhibit the sustainability of some programs. Stakeholders see the value of the Visiting STEM Women Scholars Program, but they believe it is unlikely to be sustained past the grant period due to budgetary constraints.
- Policies must be adopted widely. Any changes to promotion and tenure guidelines to align with recommendations from the Faculty Senate are likely to have longer-term impacts if departments review and revise their guidelines accordingly.

- Make a decision regarding the sustainability of GEAR UP. Should it be targeted for sustainability, a clear plan needs to be implemented as soon as possible so that the no-cost extension year can be used to guide the transition.
- IF GEAR UP is sustained, consider expanding the content to include racial and ethnic biases and microaggressions.
- Continue to work with campus stakeholders to support accountability of departmental review or promotion and tenure guidelines.

Goal 2: Improve support and department-level climate for STEM faculty women through increased department chair professional development and assessments, and formal mentoring policies and practices.

To accomplish Goal 2, department chairs and directors receive professional development, and a formal mentoring program for pre-tenure faculty has been established. Chairs and directors indicated the training has been useful, identifying it as the most important activity to sustain. Likewise, the mentoring program was well received and increased participants' knowledge and satisfaction with key aspects of their work life.

Department Chair Professional Development: Advancing Chairs as Leaders

• Advancing Chairs as Leaders is valuable to the university overall. REAL (Reaching Excellence in Academic Leadership) workshops were designed to increase department chairs' awareness of assumptions and implicit biases as well as how their decisions may be affected by these factors. In Year 4, REAL was integrated into a series of four workshops, Advancing Chairs as Leaders. In Year 5, 22 leaders—mostly department chairs, and mostly men—took part, and 95% agreed the program was useful. Participants especially enjoyed the theater vignette, valued the opportunity to meet with other leaders and to reflect on leadership, and found it useful to be made aware of their own and others' biases.

Faculty Mentoring: Pathways to Tenure

- Pathways to Tenure informs faculty of key policies and information. Survey data from the third cohort of Assistant Professors in the mentoring program revealed statistically significant increases in participants' knowledge of promotion and tenure processes and expectations, of UNH's policies on tenure clock extension and family leave, and of how to improve one's work–family balance. There were also significant increases in participants' satisfaction with advice from UNH colleagues and their ability to establish professional goals and timelines.
- Pathways to Tenure participants are better equipped for the promotion and tenure process. All reported being better prepared for tenure review and 75% agreed that their networks of support for the promotion and tenure process had been enhanced. They particularly valued the sense of community and the chance to hear about variation in practices across units. At the same time, however, they noted that these variations sometimes made it difficult to get definitive answers to their questions.

- Financial support is critical to sustaining Advancing Chairs as Leaders.

 Stakeholders reported confidence that the program would continue past the grant period but were less sure it could be sustained in its current form once ADVANCE funding ended. No decisions have been made about a budget or plan for the structure of the program moving forward. Therefore, while the program is likely to be institutionalized in some form, it is unclear what it will look like.
- Pathways to Tenure may have an institutional home, but it needs ongoing support. Stakeholders said the program could fit well with others offered by the Office of Engagement and Academic Outreach. Without additional financial resources and support, however, this office would be unable to assume and administer the program, rendering sustainability questionable.

Recommendations Concerning Goal 2

- Finalize a plan for sustainability that outlines the structure, content, and funding needs of Advancing Chairs as Leaders. If ADVANCE content is to be retained, the Office of Engagement and Academic Research needs adequate resources and structural support.
- Consider how to update ADVANCE-related content over the long term, should it be retained moving forward.
- Make a decision regarding the sustainability of the Pathways to Tenure program. Should the program be targeted for sustainability, a clear plan needs to be finalized that outlines how and where the program will be supported, identifies the resources required to do so, and identifies ways to provide unit-specific information to participants.

Goal 3: Conduct a wage equity analysis and recommend any policy changes that might be indicated.

Two wage equity studies were conducted during the grant period—one in Year 3 and another in Year 4. Key findings are as follows:

- A gender salary gap exists. The salary equity study conducted in Year 4 found a gender difference of between \$1,113 and \$1,771, favoring male faculty, that was unexplained by the factors in the model.
- Reconciling the salary differential is important, but may be challenging. Deans were generally receptive to the idea that some salaries may need to be adjusted, but thought other factors would need to be considered and noted that adjustments would require resources and a charge from the Provost.

Goal 4: Develop more flexible workplace policies that support career advancement for STEM faculty women.

A new five-year faculty contract was put in place during Year 4 of the UNH ADVANCE grant. Recent key work—life balance changes and initiatives include:

• A revision to the tenure clock extension policy, from "opt out" to "opt-in."

- Parental leave as an employee benefit that allows both parents to take leave, rather than sharing the benefit between them.
- Allowance of modified duties upon approval by the dean or chair.
- A list of resources to help faculty find child and elder care and other important information developed by the Career–Life Balance Subcommittee.
- A parent support network to allow parents to connect and share resources.

Recommendations Concerning Goal 4

- Continue to pursue opportunities to inform campus stakeholders about work—life balance policies and resources. The Pathways to Tenure program is one successful avenue, but others should also be aggressively pursued.
- Ensure prospective candidates are provided with information about work-life policies and resources available at UNH.

Goal 5: Create and maintain campus-wide awareness of the issues addressed and policy changes made under the ADVANCE IT initiative.

In order to create and maintain awareness of UNH ADVANCE initiatives and work, the team has focused on the following outlets:

- The UNH ADVANCE website has been kept up to date with policy changes, resources, and information related to UNH ADVANCE goals.
- Research findings are being disseminated more widely. Utilizing 2015 climate survey findings, the UNH ADVANCE team released a report on bystander behavior and incidents of bias experienced by faculty. A report on the promotion and tenure process will coincide with the fall 2017 climate survey data collection.

Recommendations Concerning Goal 5

- Continue to release reports on climate survey findings to raise awareness of important issues and maintain the visibility across the university.
- **Assemble data on impacts** to demonstrate successes and communicate these to campus stakeholders to support the sustainability of UNH ADVANCE programs.

Goal 6: Conduct a longitudinal field experiment to assess Goal 2 by investigating the impact of department chair professional development on department-level climate at UNH.

The UNH ADVANCE social science research study investigates the impact of department chair professional development on the representation of and departmental-level climate for women faculty at UNH. A quasi-experimental design—with professional development staggered over time to create a control group—was proposed to test four hypotheses, outlined in the full report.

- The Research Committee is analyzing the impact of the trainings on climate using annual climate survey data, and will shortly have findings to disseminate.
- The Research Committee has been actively engaged in related research, resulting in numerous presentations and papers at various stages of publication.

• The work has led to further funding. The findings from the research on bystander intervention formed the basis of a successful proposal for an NSF ADVANCE Partnership grant, which is now beginning its first year.

II. Sustainability Model

- Stakeholders noted budgetary constraints, the university's decentralized structure, and the amount of oversight that would be needed in order to sustain UNH ADVANCE work. A sustainability model has not yet been decided upon, and opinions about the best approach vary. Some stakeholders felt the work should be disseminated to existing offices without additional oversight; others believed a UNH ADVANCE office should continue to coordinate efforts.
- Some grant activities have logical institutional homes but others do not. For example, Building Blocks has been co-run with the Research Development Office and requires few resources. Other signature programs, such as Advancing Chairs as Leaders, have been supported financially by ADVANCE. Stakeholders articulated a strong desire to continue these programs but noted they will need additional funds for the units involved. Other key program activities, such as GEAR UP training, have been operated exclusively by ADVANCE, and it is unclear where they would be integrated into the current institutional structure or how they would be financially supported.
- Implement methods of accountability (including continued data collection and assessment of needs) into whatever sustainability model is adopted.

III. Overall Recommendations

- Decide upon the details of a sustainability model right away so the no-cost extension year can be used to test and support it. A decision on whether UNH ADVANCE office and/or personnel will be retained will impact if and how various program components can or will be sustained. Decisions should focus not only on the next couple of years but also on longer-term institutionalization.
- Implement methods of accountability (including continued data collection and assessment of needs) in whatever sustainability model is adopted.
- Leverage the success of UNH ADVANCE to support related goals such as improving the climate and representation of faculty of color.
- Consider how programs can be extended to support non-tenure-track faculty.
- Align with the priorities of the new incoming President.
- Continue to disseminate findings as they emerge to support the grant's broader impacts and intellectual merit.

IV. Conclusion

The no-cost extension year is the optimal time to implement the sustainability structure and to make any adjustments before the financial and personnel support of the grant ends. The strong support of the Provost, key campus partners, and administrators suggests the program is in a promising position to institutionalize the progress already achieved.

2. UNH ADVANCE OVERVIEW

The University of New Hampshire (UNH) just completed its fifth year of a five-year NSF-funded ADVANCE Institutional Transformation (ADVANCE IT) grant, "UNH Unbiased: Leadership Development and Policy Change to Promote Institutional Transformation." The project has been granted a one-year, no-cost extension.

The overall mission of the UNH ADVANCE project is to initiate sustainable institutional transformation to increase the number, retention, and success of primarily STEM¹ women faculty by empowering them to succeed and establishing quick-action ability for retention. Working within the Office of the Provost, the project seeks to transform UNH by engaging faculty and institutional leadership to improve the university climate through increased fairness, transparency, and clarity of recruitment, retention, and promotion and tenure policies and practices.

The program is conceptually guided by the congruence model that views organizations as open systems, examining context, people, processes, culture, and structure to understand undesirable organizational outcomes. The grant builds on UNH's strategic plan and other university-wide initiatives focusing on inclusive excellence, promotion and tenure, curricular change, advancement of individual scholarship through external funding, and advancement of interdisciplinary research teams. UNH ADVANCE has six transformational goals:

- **Goal 1:** Increase the representation of STEM faculty women at all ranks through changes in recruitment and retention policies and practice.
 - *Initiative 1.1.* Search committee training.
 - *Initiative 1.2.* Increase the number of female faculty at the senior level through both promotion of existing mid-level faculty and targeting of new hires at the senior level, as possible.
- **Goal 2:** Improve support and department-level climate for STEM faculty women through increased department chair professional development and assessments, and formal mentoring policies and practices.
 - *Initiative 2.1.* Department chair professional development.
 - *Initiative 2.2.* Establish formal mentoring policy.
- **Goal 3:** Conduct a wage equity analysis and recommend any policy changes that might be indicated.
- **Goal 4:** Develop more flexible workplace policies that support career advancement for STEM faculty women.
- **Goal 5:** Create and maintain campus-wide awareness of the issues addressed and policy changes made under the ADVANCE IT initiative.

¹ In the project goals, the term "STEM" is meant to include Social and Behavioral Sciences (SBS).

Goal 6: Conduct a longitudinal field experiment to assess Goal 2 by investigating the impact of department chair professional development on department-level climate at UNH.

A quasi-experimental design will test the following hypotheses:

Hypothesis 1: There will be a significant gender difference in baseline measures of perceived departmental climate and degree of influence such that female STEM faculty will perceive a more negative climate and less ability to influence departmental decisions than male STEM faculty.

Hypothesis 2: Baseline institutional data will reveal significantly higher male-to-female ratios in every college (except Health and Human Services) at senior ranks and compared to national averages.

Hypothesis 3: There will be no significant gender difference in faculty's perceived departmental-level climate and degree of influence subsequent to the implementation of department chair professional development programs.

Hypothesis 4: There will be a significant reduction in male-to-female ratios in the STEM disciplines at senior ranks subsequent to the implementation of department chair professional development programs.

3. EVALUATION OBJECTIVES AND METHODS

3.1. Evaluation Period and Objectives

This evaluation report covers the period between October 2016 (completion of Year 4 external evaluation report) and September 2017, corresponding to the grant's fifth year of funding. While a final summative evaluation will occur at the end of the grant, this report provides both formative feedback and an assessment of the key impacts to date that are more summative in nature.

Evaluation objectives for this annual report are to:

- describe implementation activities, successes, and challenges;
- provide feedback to facilitate project refinements;
- evaluate the extent to which the project is meeting its stated objectives; and
- document impacts of the program activities to date.

3.2. Evaluation Methods and Data

The Year 5 evaluation incorporates both quantitative and qualitative data derived from the following sources:

Interviews and Focus Groups: Dr. Chang visited UNH on October 2 and October 3, 2017, to conduct interviews with stakeholders. Additional interviews were conducted by phone for those unable to be scheduled during the site visit. A total of 19 people were interviewed, including the Provost, Co-PIs, AVP for Community, Equity and Diversity,

members of the Internal Steering Committee, Deans, Department Chairs, and participants in UNH ADVANCE programming.

Observation: During Year 5, Dr. Chang observed an Internal Steering Committee meeting (January 2016) and an External Advisory Board meeting (April 2017). She also participated in a virtual External Advisory Board meeting (November 2016).

Data on Applicant Pool, Finalists, Offers Made, and Hires: Data on the gender composition of applicant pools, finalists, offers made, and hires for faculty searches from 2006 to 2017 were provided by the UNH Affirmative Action and Equity Office.

Climate Survey Data: Selected findings from the UNH fall 2016 climate survey were provided to the external evaluator by the research team.

Institutional Data: Department-level data on STEM and SBS faculty composition—including the number of faculty by rank and gender—and other ADVANCE Indicators Toolkit data were provided by the UNH-ADVANCE team.

Program Documentation: Records of participation (attendance at events, etc.) were kept by the UNH ADVANCE team and provided to the external evaluator.

4. FINDINGS

4.1. *Goal 1*: Increase the representation of STEM faculty women at all ranks through changes in recruitment and retention policies and practices.

Goal 1 contains two initiatives:

Initiative 1.1. Search committee training.

Initiative 1.2. Increase the number of female faculty at the senior level through both promotion of existing mid-level faculty and targeting of new hires at the senior level, as possible.

4.1.1. Initiative 1.1: GEAR UP search committee training

During Year 5, in October 2016, one GEAR UP (Gender Equity and Recruitment of Underrepresented People) training was held. This was the fourth year that the training has taken place. As in previous years, the UNH Power Play Troupe used interactive theater to depict a faculty search process to assist workshop participants in recognizing unconscious biases and understanding that microaggressions result from putting these biases into action. Resources for search committees were provided at the trainings and on the UNH ADVANCE website. The desired learning outcomes for GEAR UP participants include:

- increasing participants' ability to recognize biases in themselves and others and to understand how biases operate and what their negative impacts are;
- assisting participants in developing strategies to eliminate such biases and improving search committee processes;

- increasing the number of women and underrepresented faculty in STEM and more widely; and
- reporting successes from which others can learn.

As shown in Table 1, during the grant term to date, 269 people have attended GEAR UP. Women made up 54% of total participants and most faculty participants were Associate Professors or Professors. Participants were drawn from all STEM and SBS colleges, with the largest proportion coming from the College of Engineering and Physical Sciences and the College of Liberal Arts.

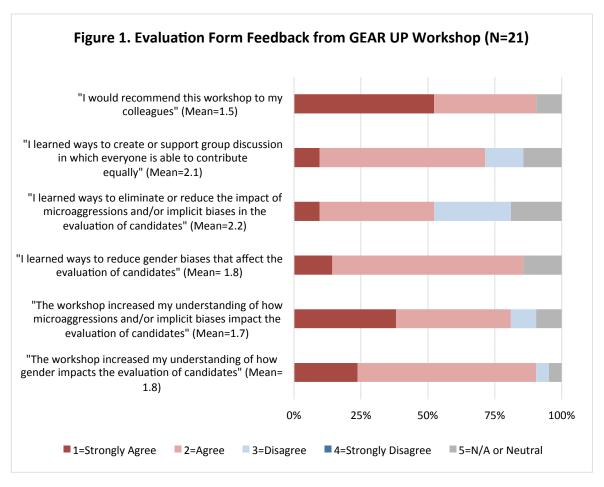
Table 1. Characteristics of GEAR UP Workshop Participants

Table 1. Characteristics of GEAR Of Workshop Fair	петринез	
	Fall	TOTAL to Date
	2016	(Years 2–5)*
College		
College of Engineering and Physical Sciences	12	62
College of Health and Human Services	0	17
College of Liberal Arts (including Carsey Institute)	0	56
College of Life Sciences and Agriculture	3	28
Institute for the Study of Earth, Oceans, and Space	1	6
Peter T. Paul College of Business and Economics	0	19
Other (Library, UNH at Manchester, Office of the		
Provost, etc.)	1	81
Faculty Rank		
Assistant Professor	6	34
Associate Professor	5	79
Professor	5	64
Non-Tenure Track (Lecturer, Research Faculty, etc.)	1	20
Non-Faculty (Administrators, etc.)	0	72
Gender		
Female	4	145
Male	13	124
TOTAL Number:	17	269

^{*}Data for Years 2–4 are drawn from previous external evaluation reports.

Evidence of Impact—Evaluation Forms

The workshop was especially timely for most participants, as 20 of the 21 mentioned on their evaluation forms that they were currently on search committees. The majority agreed or strongly agreed that their understanding of how gender, microaggressions, and/or implicit biases impact candidate evaluation increased, and that they learned ways to create a more equitable search process (Figure 1). Consistent with prior years, the workshops were a bit more effective in increasing understanding of the issues overall than in providing participants with tools or strategies to achieve a more equitable search process. Yet outcomes for participant learning of how to reduce biases and support equitable discussion were still quite strong.



Note. Percentages in the bar graph are based on total participants; means are calculated only for those who selected 1–4 on the scale.

Overall Satisfaction, Suggestions for Improvement, and Workshop Takeaways

More than 90% of participants affirmed that they would recommend the GEAR UP workshop to colleagues. Feedback was very positive, as reflected in the open-ended responses. For example:

"The discussions were useful. The workshop on a whole makes me think about the issues."

"The facilitation of the workshop was outstanding because a question or comment from personal experience was relayed into a universal example applicable to much of the audience."

"[I will] think more carefully about my own implicit biases and work to articulate what I value in my potential colleagues."

"[I will] talk (and listen) more within a search committee about strategies to reduce bias in the search process."

"Honestly, I loved it and truly leave, I think, enriched."

Suggestions for improvement that emerged from open-ended questions primarily focused on making the scenarios more realistic and applicable to the challenges faced by participants as well as to include racial and ethnic biases in the material:

"Repeat a scene with fewer obvious bias situations—act out one concrete example of dealing with the bias."

"Consider more focus on the cumulative effect of small biases, rather than large ones."

"...People of color or other ethnic hiring could be added (bias). At UNH retention is key."

"I would like to see the play be less obvious and more realistic which means it might need to be a little longer."

"I think it was really well done. I also think that our department (in CEPS) has moved beyond most of the issues portrayed."

"Ask you to do <u>less</u> with gender & <u>more</u> with race when giving this workshop to COLA, which has 50% women in many departments."

Other suggestions for improvement included:

"Length—could be done in 1h30."

"Try to get better balance in audience participation. Point out to talkative men that they're drowning out women."

"I'm not sure what scene III (the gripe) had to do with the major points—it never came up in the discussion. Could it be cut? Otherwise, I thought the format and pacing was great."

"Provide more discussion & suggestions on how to resolve disagreements."

When prompted to explain how they would use the information from the workshop, participants voiced themes that included incorporating what they learned into their search committee work and committing to ongoing self-reflection to understand their own biases

Evidence of Impact—Interviews

Comments from the interviews support the finding that GEAR UP is one of the grant's most visible programs and has been extremely well-received:

"GEAR UP was one of the first programs to roll out under ADVANCE and it's what comes to mind when most people think about ADVANCE. It is a very popular program on campus. The interactive theater is so effective and GEAR UP has a good reputation on campus."

"Many people, including myself, were like, 'Oh no, they are going to make me go to this training and it's going to have skits and stuff. Anything but that.' And then

you go and think, 'This is awesome!' And I consistently hear from others that it's been very effective."

"It's a very effective training tool. It's really important, especially since they're working on the subconscious things that we scientists oftentimes don't pay enough attention to because we think we've figured it out."

"The first time I became aware of the ADVANCE program was when I was invited to take part in the search committee training. That workshop was so popular. It was very well received by faculty."

"I can see the impact of ADVANCE in my department. There's way more discussions about things such as implicit bias. These discussions were non-existent before; now they're definitely prevalent....Even if it's uncomfortable to talk about, people are willing to combat these things and discuss them. People are empowered and speak up now."

While all stakeholders interviewed attested to the value GEAR UP has brought to the UNH campus, there was some difference of opinion about whether it needed to be sustained. Some wondered if the majority of faculty had already undergone training and if a saturation point might have already been reached; others reported that new faculty are continually arriving and need to be versed in the content, especially given the extremely important role that search committees play in hiring the next generation of faculty. Some also commented that it is helpful for people to be reminded more than once about these issues and that the interactive theater could be adapted to present new scenarios, thus expanding awareness even for those who had already attended. Some representative stakeholder comments to illustrate these opinions are provided below:

"With GEAR UP, I think maybe we are getting to the point where most people have been through it. Can we afford to maintain if there are not a substantial number of people at UNH to go through the training every year?"

"I am about to go through GEAR UP for the second time. Even though I have been through it before, it's valuable to do it more than once. It's the type of thing that you can continue to benefit from and get something out of, even the second time around, because of the subtleties of the topic and because of the audience discussion"

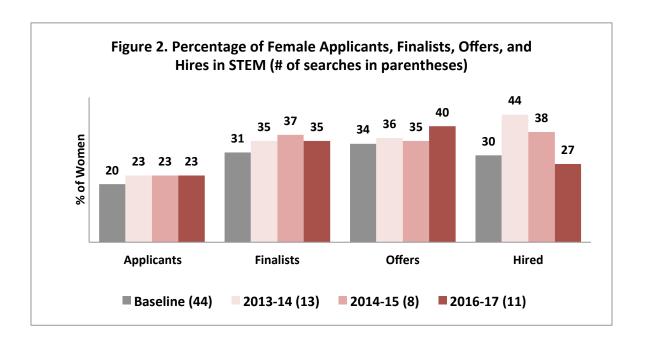
"Even in departments where women are the majority, GEAR UP is really important. We want to hire the best person and we need to keep the issue of microaggressions front and center, not just for search processes but across the board. Even in departments that are majority female, microaggressions are still a problem. But because of the increased awareness that programs such as GEAR UP provided, when microaggressions do occur, people are willing to call it out. Not just in hiring, but in other areas as well, people are saying, 'That's not right.' It's an outgrowth of the GEAR UP training."

Evidence of Impact—Applicant Pool and Hiring Data

Data on the percentage of women in the applicant pool, finalists, offers made, and hires for tenure-track faculty positions were provided by the UNH Office of Affirmative Action and Equity. The data provide information about changes over the grant period, with a baseline of data for the 2006–2013 time period.² The GEAR UP search committee training began during the 2013–2014 academic year. As shown in Figures 2 and 3, the percentage of women in STEM and SBS faculty search applicant pools has increased over the baseline period.

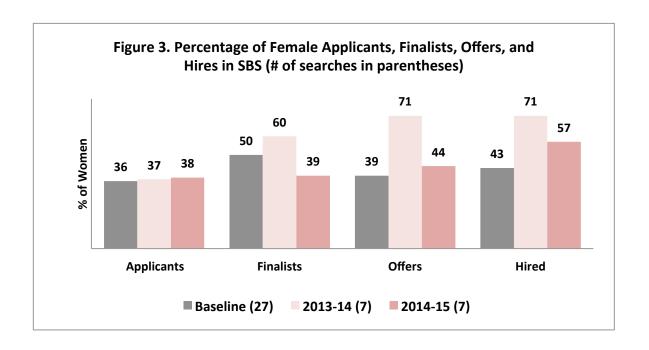
In STEM, in addition to more women in the applicant pools, there has been an increase in the percentage of female finalists, offers—and except for the most recent year—hires (Figure 2). The dip in hires is likely due to normal fluctuation in search and hiring processes. While these data should continue to be monitored, the overall figures indicate women have gone from 21% to 27% of the total STEM faculty during the grant period (discussed in more detail Section 4.1.2.3).

In SBS, there has been more fluctuation, but the percentage of women who received offers and were hired has increased over the baseline period (Figure 3). Moreover, as discussed in Section 4.1.2.3, the percentage of SBS faculty who were women increased from 36% (pre-ADVANCE) to 44% in Year 5.



² Data reported here exclude searches for which no applicant pool and/or finalist data were available. In some cases, a small percentage of applicants did not provide their gender. As such, the percentage of women is calculated here only for applicants whose gender is known (i.e., those with unknown gender are excluded from the count of total applicants). Some searches included more than one position. Data for the 2015–2016 academic year were not available at the time of this report, but will be added at a later date. No data are reported for the 2016–2017 academic year in SBS—searches were conducted but none met the criteria outlined here.

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Evidence of Impact—Climate Survey Data

Several questions on the annual climate survey pertaining to perceptions of recruitment and search committee processes have been asked annually since fall 2013. For most items, there has been an increase in faculty perceptions of equity in the search process (Table 2). Analyses conducted by the UNH ADVANCE social science research team (and provided to the external evaluator) indicate a statistically significant increase between 2013 and 2016 in faculty perceptions that "committee members were made aware of unintentional biases that can affect everyone's evaluation of applicants" (p<.01).

Table 2. Means and Standard Deviations for Climate Survey Questions about Search Committee Processes by Year

	Year	N	Mean	St. Dev.
1. The department and/or search committee	2013	202	3.09	.81
deliberately engaged in strategies to enhance	2014	167	3.19	.75
gender diversity in the applicant pool.	2015	189	3.21	.76
	2016	221	3.16	.78
2. Evaluation criteria were applied consistently	2013	203	3.36	.71
across applicants.	2014	167	3.30	.76
	2015	189	3.35	.71
	2016	222	3.35	.73
3. Committee members were made aware of	2013	198	2.68	.90
unintentional biases that can affect everyone's	2014	166	2.74	.86
evaluation of applicants. (p<.01)	2015	186	2.86	.89
	2016	219	2.96	.83
4. Increasing gender diversity in my department	2013	200	2.65	.85
was a priority of the committee.	2014	165	2.60	.81
	2015	185	2.71	.83
	2016	218	2.67	.84
5. Discussions were dominated by one or two	2013	199	3.03	.72
committee members (reverse coded).	2014	166	3.00	.82
	2015	189	3.06	.76
	2016	220	3.05	.76
Overall mean of five items	2013	201	2.97	.58
	2014	166	2.97	.56
	2015	188	3.04	.58
	2016	221	3.04	.60

Faculty who participated in GEAR UP also had more positive perceptions of the equity of the search process than those who did not (results not shown). Specifically, those who attended were more likely to agree that "the department and/or search committee deliberately engaged in strategies to enhance gender diversity in the applicant pool" and that "increasing gender diversity in my department was a priority of the committee."

Moreover, because the survey allowed participants to be tracked over time, it was possible to examine whether perceptions changed following participation in GEAR UP. Pre—post paired data indicate that, after attending GEAR UP, faculty were more likely to agree that "committee members were made aware of unintentional biases that can affect everyone's evaluation of applicants" (p<.01). Paired t-tests for faculty who did not attend GEAR UP showed their perceptions did not change over time. Collectively, these

findings suggest that increases in awareness of unintentional biases are likely a result of participation in GEAR UP trainings.

4.1.1.1. Initiative 1.1 Summary

GEAR UP is one of the most visible programs operated by UNH ADVANCE and is very popular on campus. Data from interviews and evaluation forms indicate that the interactive theater format is extremely engaging and effective in increasing awareness of microaggressions and implicit biases. Data from the climate survey also reveal that between 2013 and 2016 there was a statistically significant increase in faculty perceptions that committee members were made aware of unintentional biases that can affect the applicant evaluation process. Additional data analysis indicates that this increase is likely a result of GEAR UP participation. Moreover, providing evidence of impact, the percentage of women in STEM and SBS applicant pools has increased over the baseline period and, although there have been fluctuations, there has been an increase in the percentage of women finalists, offers, and hires for most of the grant years.

While faculty might still benefit from additional resources for reducing the impact of microaggressions and implicit biases in the candidate evaluation process, findings reported in the Year 4 external evaluation report indicate that one of the most meaningful impacts of GEAR UP is that it provides faculty with a vocabulary to address biases and permission to speak up when they feel that committee processes or evaluations of candidates are not being carried out equitably. Discussions of bias have become more acceptable and more commonplace and, as documented in prior external evaluation reports, faculty can point to instances when they or others have spoken up to address potential biases and support a more equitable process.

Progress Toward Sustainability

With funding from the Office of the Senior Vice Provost for Research, the UNH Power Play Troupe has been established as a formal entity at UNH, supporting the institutionalization of GEAR UP past the grant period. Power Play has offered training at other institutions, contributing to the broader dissemination of UNH ADVANCE efforts. Yet, the sustainability of GEAR UP past the no-cost extension year is still uncertain and a clear sustainability plan needs to be finalized.

There is some difference of opinion among stakeholders as to whether the need for GEAR UP remains salient, although the majority of stakeholders interviewed thought there would be continued demand for training new faculty and providing refreshers to existing faculty. Stakeholders were unable to point to an institutional home for GEAR UP after the end of the grant in the absence of an entity charged with overseeing ADVANCE-related work in the future.

Recommendations

• Make a decision regarding the sustainability of GEAR UP past the grant period. Should GEAR UP be targeted for sustainability, a clear sustainability plan needs to be implemented as soon as possible so that the no-cost extension year can be used to provide support and guide the transition.

• Consider expanding the content of GEAR UP to include racial and ethnic biases and microaggressions.

4.1.2. Initiative 1.2: Increase the number of female faculty at the senior level through both promotion of existing mid-level faculty and targeting of new hires at the senior level, as possible.

During Year 5, the following program activities addressed Initiative 1.2:

- Visiting STEM Women Scholars Program
- Development for female faculty members
- Promotion and tenure policy alignment

4.1.2.1. Visiting STEM Women Scholars Program

The Visiting STEM Women Scholars Program, launched in Spring 2014, seeks to provide UNH faculty with exposure to and networking opportunities with senior female faculty in STEM disciplines at other institutions in order to build reesarch collaborations. UNH departments, programs, and individual faculty can apply. In Year 5, one proposal was funded, bringing the total number of funded proposals over the grant term to six.

Previous external evaluation reports have drawn from interview data to document the positive impacts of the Visiting STEM Women Scholars Program. The impacts include:

- opportunities for female graduate students and postdocs to work with and be mentored by established STEM women scholars outside of UNH;
- increased networks for female STEM faculty, postdocs, and graduate students;
- expanded research opportunities for female STEM faculty, postdocs, and graduate students;
- new collaborations resulting in new grant proposals and publications;
- an invitation for a female STEM faculty member to serve on an advisory committee for a different grant, thus increasing her visibility outside of UNH; and
- opportunities for UNH STEM women faculty to give symposia at other universities.

While stakeholders see the value of the program, they believe it is unlikely to be sustained past the grant period due to budgetary constraints.

4.1.2.2. Women Faculty Development

To meet the professional development needs of women faculty, the Building Blocks for Your Career lunch workshop series was launched in Year 4 in collaboration with the UNH Research Development Office. During Year 5, five workshops were offered:³

18

³ "Collaborating at UNH" was introduced in Year 5; the remaining workshops were also offered in Year 4.

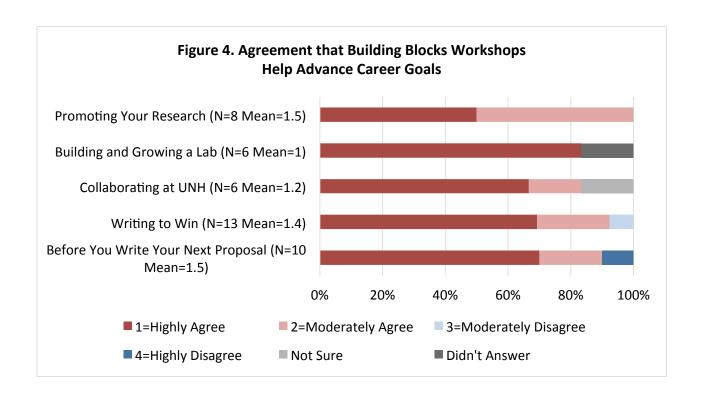
- Before You Write Your Next Proposal
- Writing to Win
- Collaborating at UNH
- Building and Growing a Lab
- Promoting Your Research

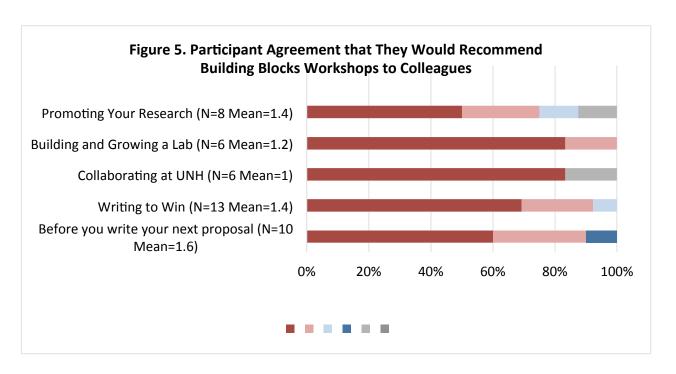
The majority of Buildings Blocks participants were women and Assistant Professors, and many were female faculty members in STEM and SBS (Table 3). In comparison to the first year of Building Blocks (per data presented in the Year 4 external evaluation report), STEM and SBS women participated more in the sessions—in terms of overall numbers and percentages—during this second year of the series.

Table 3. Characteristics of Year 5 Building Blocks for Your Career Participants

		Session 2	Session 3	Session 4	Session 5
Rank					
Assistant Professor	8	7	3	3	2
Associate Professor/Professor	2	1	1	0	1
Other	3	6	2	4	5
Gender and STEM/SBS					
Female	10	10	5	3	5
STEM	3	6	3	2	5
SBS	1	1	1	0	0
Non-STEM/SBS	6	2	1	1	0
Male	3	4	1	4	3
STEM	2	4	0	4	1
SBS	0	0	0	0	1
Non-STEM/SBS	1	0	1	0	1
TOTAL Number	13	14	6	7	8

Across all five workshops, almost all participants agreed that Building Blocks supported their ability to advance their career goals (Figure 4) and that they would recommend the program to a colleague (Figure 5).





4.1.2.3. Promotion and Tenure Policy Alignment

The promotion and tenure guidelines developed by the Career Progression Subcommittee (in collaboration with the Ad Hoc Faculty Senate Promotion & Tenure Committee) were

approved by the Faculty Senate in March 2015. Since that time, stakeholders have been unsure of the extent to which departments have acted to review their own guidelines and ensure they are aligned with those approved by the Faculty Senate.

A Faculty Senate subcommittee has been charged with addressing the implementation of the guidelines and examining how this plays out across colleges and departments. It will be essential to devise mechanisms of accountability in order to ensure that departments review their guidelines and make any necessary adjustments, as stakeholders explained:

"I am not sure to what extent departments are looking at their guidelines. In theory it's on people's minds, but there has been no analysis of whether departments are indeed looking at them to ensure they are consistent."

"The senate recommends, but it's up to departments to implement. I suspect that progress is sporadic, not systematic. We need to collect data and find out what's happening in departments because we don't know what has been done."

"There is the typical inertia. The Provost needs to make a push, now that the Faculty Senate has approved of the guidelines. Making sure they are effective has to come from the Provost's office."

Evidence of Impact—Institutional Data on Hires, Tenure, and Promotion⁴

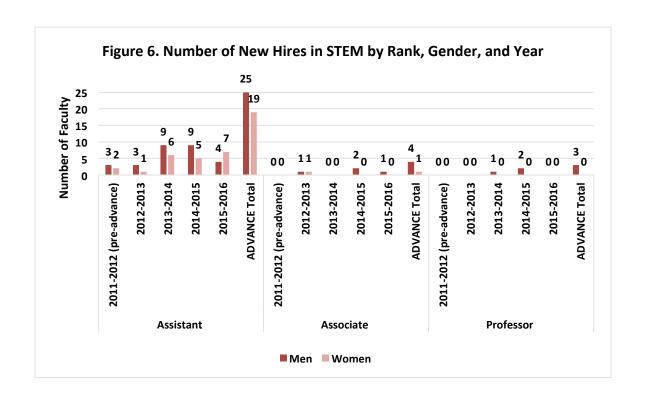
A goal of UNH ADVANCE is to align tenure and promotion procedures for all ranks, with a focus on increasing the number of female faculty at the senior level through new hires and promotion of existing faculty.

New hires at the senior level have been rare during the grant's tenure. In STEM, only three faculty have been hired at the rank of Professor during this time period, all of whom were men (Figure 6). One out of five hires at the Associate Professor rank was a woman. At the rank of Assistant Professor, however, women have made up nearly half (43%) of new hires during Years 1–4.

In SBS, only one senior hire (a man) was made during Years 1–4, and no hires were made at the Associate Professor rank (Figure 7). At the Assistant Professor rank, half of all hires made were women.

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⁴ Data for the 2016–2017 academic year (Year 5) will be included in the next report.



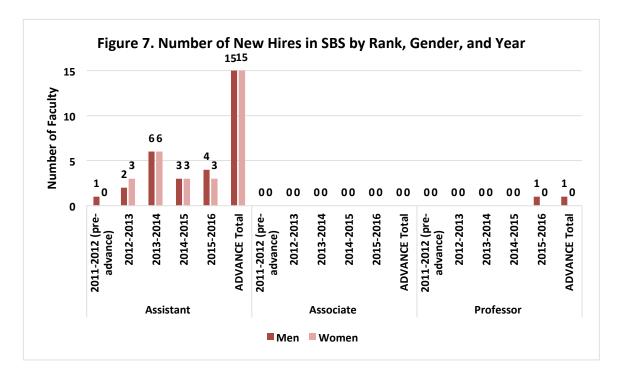


Figure 8 illustrates promotion decisions from Assistant to Associate Professor and from Associate Professor to Professor in STEM and SBS for the pre-ADVANCE (baseline) years and ADVANCE Years 1–4 combined. Collectively, the promotion decision data suggest that during the first four years of the ADVANCE grant, men and women in both STEM and SBS were equally likely to be promoted if they were reviewed.

In STEM during Years 1–4, 19 out of 21 male faculty (90%) and seven out of eight female faculty (88%) who were reviewed for promotion to Associate Professor were approved. Among those who were reviewed for promotion to Full Professor during this time, 11 out of 12 men (92%) and 10 out of 11 women (91%) were promoted.

In SBS during Years 1–4, three out of four male faculty (75%) and all five female faculty members (100%) who were reviewed for promotion to Associate Professor were successful. Two men and zero women were reviewed for and promoted to Full Professor during this same time frame.

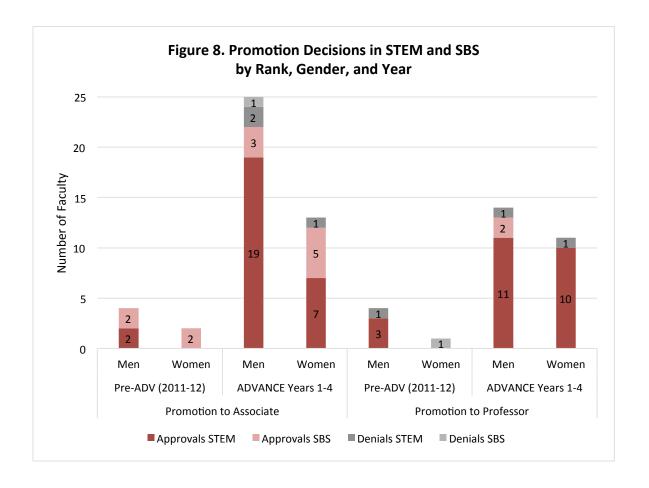


Table 4 presents the number of women in tenure track positions and the percentage of women among all those in tenure track positions. Overall, the percentage of women increased from a baseline of 21% to 27% in STEM and 36% to 44% in SBS.

In STEM, both the number and percentage of female Assistant and Full Professors generally increased in Years 1–5, but decreased slightly for Associate Professors. The number of female Assistant Professors almost doubled (from 11 to 19), increasing from 32% to 41% of Assistant Professors. Changes at the rank of Professor were also dramatic, with the number of women increasing from 10 to 16 (an increase from 10% to 18% of all Full Professors in STEM).

In SBS, there were increases at both the Assistant and Associate Professor ranks, but they were most striking at the Associate Professor level, where the number of women rose from 14 to 21 (from 36% to 53%). The number of women at the rank of Professor has hovered between nine and 10, and in Year 5 was slightly lower than in the year prior to ADVANCE. With the increases in women's representation at the rank of Associate Professor, however, the pipeline is being filled for the advancement of women into the Full Professor rank.

Table 4. Number and Percentage of Female Tenure-Track Faculty in STEM and

SBS by Year and Rank

SDS by Tear and Kank	Number of Women				Pe	rcentage	of Won	nen
	Asst.	Assoc.	Full	Total	Asst.	Assoc.	Full	Total
STEM								
Pre-ADVANCE (2011–2012)	11	21	10	42	32%	32%	10%	21%
Year 1 (2012–2013)	10	20	12	42	28%	33%	12%	21%
Year 2 (2013–2014)	14	17	13	44	35%	30%	14%	23%
Year 3 (2014–2015)	17	19	16	52	37%	30%	15%	24%
Year 4 (2015–2016)	16	18	15	49	36%	31%	15%	24%
Year 5 (2016–2017)	19	17	16	52	41%	29%	18%	27%
SBS								
Pre-ADVANCE (2011–2012)	8	14	10	32	47%	36%	30%	36%
Year 1 (2012–2013)	7	16	9	32	58%	40%	28%	38%
Year 2 (2013–2014)	9	20	10	39	60%	48%	31%	44%
Year 3 (2014–2015)	9	21	9	39	53%	51%	27%	43%
Year 4 (2015–2016)	9	21	9	39	53%	51%	27%	43%
Year 5 (2016–2017)	11	21	9	41	50%	53%	28%	44%

4.1.2.4. Initiative 1.2 Summary

Initiative 1.2 seeks to increase the number of female STEM and SBS faculty, especially at the senior levels. The number and percentage of tenured and tenure-track female faculty in these fields has increased in Years 1–5 at almost all ranks.

In STEM, the increases in female Assistant Professors and Professors were especially pronounced. At the Assistant Professor level, the increase was due to hiring, as women made up 43% of new hires at this rank during Years 1–4. The increase at the rank of Professor was not due to hiring, as none of the three hires at this rank during Years 1–4 were women, and only one of the five STEM hires at the Associate Professor level was a woman. The increase at the Full Professor level is therefore due to promotion.

In SBS, the number and percentage of women increased at the ranks of Assistant and Associate Professor. These increase were likely due to hiring (and promotion of Assistant Professors), as half of all SBS hires at the Assistant Professor rank were women. (No women were hired in SBS at the Associate and Professor ranks during this period.)

UNH ADVANCE efforts such as the Visiting STEM Women Scholars Program, Building Blocks for Your Career, and promotion and tenure policy alignment support the grant's objectives, but they are likely not directly responsible for these changes. Building Blocks and promotion and tenure policy alignment are fairly recently implemented; in the case of the Visiting STEM Women Scholars Program (which has been operational for a longer period of time), the impacts are meaningful but are more limited in scope given the small number of grants made. That said, these important increases may be due in part to broader cultural support for women faculty, which may be tied to UNH ADVANCE.

Progress Toward Sustainability

Building Blocks for Your Career is likely sustainable within the Research Development Office, which has been collaborating with UNH ADVANCE to run the lunch series. Budgetary constraints are likely to prevent the continuation of the Visiting STEM Women Scholars Program past the grant period. Finally, any changes to promotion and tenure guidelines to align with recommendations from the Faculty Senate are likely to have longer-term impact if departments review and revise their guidelines accordingly.

Recommendation

 Continue to work with campus stakeholders to support accountability of departmental review of promotion and tenure guidelines

4.2. Goal 2: Improve support and department-level climate for STEM faculty women through increased department chair professional development and assessments, and formal mentoring policies and practices.

Goal 2 has two initiatives:

Initiative 2.1. Develop and implement a leadership professional development program for chairs. Implement a policy that requires this training of all chairs and emerging future leaders at UNH.

Initiative 2.2. UNH ADVANCE will work with the Office of the Vice Provost for Faculty Development and Inclusive Excellence and with deans and directors to establish a formalized mentoring program and policy.

4.2.1. Initiative 2.1: Chair Professional Development

The Chair Professional Development Committee launched REAL (Reaching Excellence in Academic Leadership) in spring 2014. This training was designed to:

- increase department chairs' awareness of implicit assumptions and unconscious biases and their effect on decision making and behavior;
- guide them in an exploration of their own implicit assumptions to see how they may be impacting departmental climate and hiring and promotion decisions; and
- help them develop skills and tools to overcome their own biases or assumptions.

As originally formulated, the training consisted of three components:

- Seminar 1: An interactive theater-based training workshop in the spring
- **Booster Sessions:** Readings, video clips and an implicit association test during the summer months
- Seminar 2: A workshop for discussing case studies in the fall semester

In the 2015–2016 academic year (Year 4), the REAL training was integrated into a new four-day workshop series for department chairs and program directors offered by the Office of Engagement and Academic Outreach. The new training, Advancing Chairs as Leaders, is comprised of four workshops:

- Workshop 1: Exploration of Management and Leadership
- Workshop 2: Creating an Inclusive Climate
- Workshop 3: Faculty and Staff—The Core of the Department
- Workshop 4: Strategic Leadership

Workshop 2 incorporates interactive theater training and Workshop 4 includes discussion of case studies developed as part of REAL. Participants also received the booster session material, consistent with what was offered during the two prior implementations of REAL.

To supplement the Advancing Chairs as Leaders program, the team is also holding a lunch series for leaders on "hot topics" to help them navigate issues that have become especially salient given the current political and social climate. These topics include social justice, race, and freedom of speech.

During Year 5, the majority of participants in Advancing Chairs as Leaders were from the College of Engineering and Physical Sciences, were department chairs, and were male (Table 5).

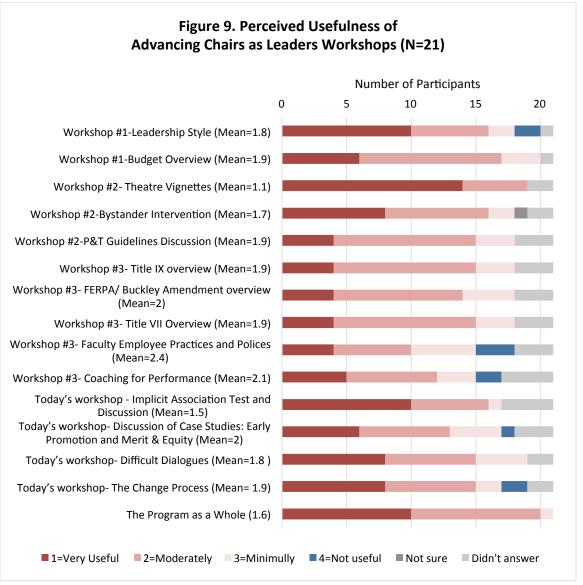
Table 5. Characteristics of Advancing Chairs as Leaders Participants in Year 5

·	Number
College	
College of Engineering and Physical Sciences	9
College of Health and Human Services	1
College of Liberal Arts (including Carsey Institute)	4
College of Life Sciences and Agriculture	2
Other (Library, UNH at Manchester, Peter T. Paul College of	
Business and Economics, Office of the Provost, etc.)	6
Position	
Chair (including associate, interim, and soon-to-be chairs)	17
Program Director	5
Gender	
Female	9
Male	13
TOTAL Number	22

Evidence of Impact—Evaluation Forms

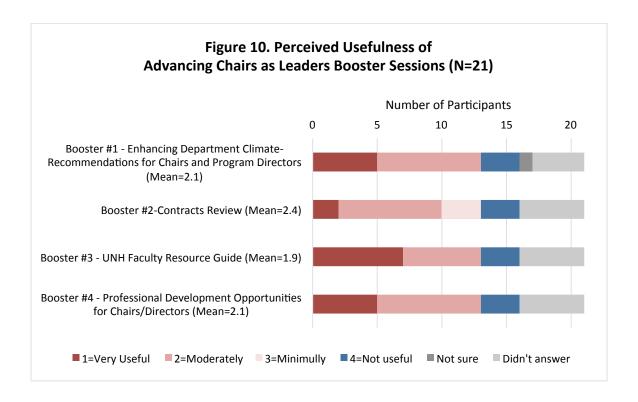
The UNH ADVANCE team collected formative feedback at the end of each workshop session to obtain suggestions for improvement and understand how participants intended to use the information provided. At the end of the final workshop, participants were asked to complete a more comprehensive evaluation and rate the usefulness of each program component in helping them facilitate a positive climate for faculty—particularly female faculty—in their department or unit. Figure 9 shows responses for the various workshop components and Figure 10 for the booster material.

Almost all participants (95%) agreed that the program as a whole was moderately or very useful (Figure 9). The most highly rated session was the theater vignette, which was part of the original REAL training.



Note. One participant rated the program as a whole as "1 and 2." To calculate the mean, this participant's response was averaged to 1.5. In the figure above, the response was coded as a "1" (very useful).

In Year 5, a new booster, Contracts Review, was added to the three pre-existing boosters. As shown in Figure 10, the majority of participants found each of the booster sessions moderately or very useful. Consistent with prior years, however, they found the workshop components more useful than the boosters.



Themes that stood out in the open-ended comments include that participants valued the opportunity to meet and discuss with other chairs and directors, to reflect on leadership, and to experience the interactive theater component, which was perceived as very effective. They also found it useful to be made aware of their own and others' biases. Representative statements concerning what was most useful include:

"I thought the interactive theatre was great—and [a] really meaningful way to identify bias."

"Legal aspects of being chair, implicit bias, ability to meet and move conversations with other chairs, especially from other colleges."

"Think more about bias and correcting it. Think about long term strategies for change. Consider my own leadership style and effectiveness."

"Discussion of how change can occur and resistance to change were very useful. Management versus leadership is an interesting perspective. Interactive theatre was very good—more of these scenarios in the future. Difficult dialogue discussion—very useful."

As in previous years, some suggested that the material may be less applicable to directors than to department chairs.

Evidence of Impact—Interviews

Stakeholders emphasized the important role filled by Advancing Chairs as Leaders in supporting not only the long-term goals of UNH ADVANCE but also the development and training of UNH's leaders. Most identified this component as the top priority for sustainment. Representative comments include:

"The chair training should never sunset. In fact, you could probably build on it because chairs are important and they have a lot to learn, and most chairs know very little going in to it. In fact, the training should be developed even further. It is certainly one of the more vital pieces that we should figure out a way to continue."

"Simply being a chair is one thing and having the right information about policies and procedures and the things that are necessary to just do the job. But the chair also shapes the department subcultures. If there are groups that don't feel that it's a welcoming environment in their department, then this has to be front and center in terms of how we work with our leadership. It's very important to make sure that chairs have tools to improve the environment of their department."

"In many colleges, chairs don't have a lot of formal authority. So, they have to operate through consensus and informal example as opposed to being able to dictate to their colleagues. That's all the more reason why the training is important so that chairs can figure out how to make the most of the limited resources of authority that they have, especially when dealing with some of the important issues that ADVANCE has been dealing with."

"The chair leadership training has been really powerful. It's been a welcome addition. Before ADVANCE, there was no training for chairs. We weren't developing our current leaders or our next generation of leaders. Now we have chair leadership training and it's because of ADVANCE that it's in place. It's essential that we maintain that program moving forward."

"When the grant started, there was a great need for training chairs as we hadn't been doing that. A well-run department is beneficial to everybody, but particularly to women because policies are in place, communication lines are open. All those things that ADVANCE talks about are really just good leadership in a lot of ways. The ADVANCE parts of the chair training are the backbone of the current training program."

"What stands out to me is the interactive theater part about subtle biases, particularly around conversations with workload assignments. The other part that was particularly helpful for me is being mindful about the network that you have on campus. The chair is, in some ways I think, a lonely position because you can't really talk to your colleagues in your department about issues and things that are going on. But the training highlighted resources across campus where you did have the ability to have some of those confidential conversations as well as the

network of chairs in the room, that you could reach out to, that have likely experienced some of the same things. The program fills an important need."

Additional Impact Data

The department chair professional training is the focus of the grant's social science research component (see Section 4.6). A quasi-experimental design was utilized to empirically test the impact of the training on the representation of and departmental-level climate for female faculty at UNH. The research team is analyzing data and expects to have findings available during the grant's no-cost extension year.

4.2.1.1. Initiative 2.1 Summary

Data from post-workshop evaluation forms and interviews indicate chairs and directors have found the training to be essential for creating a positive departmental climate, especially for female faculty. They have especially valued the opportunity to meet and discuss issues with other chairs and directors, to reflect on leadership, and to experience the interactive theater component. Stakeholders identified the chair and director training as the most important activity to sustain past the grant period. Prior to UNH ADVANCE, there was no such training and constituencies report that it is essential for supporting the grant goals long term.

The chair training is the focus of the grant's social science research component, and findings on the impact of the training on departmental culture are likely to be complete during the no-cost extension year.

Progress Toward Sustainability

The Advancing Chairs as Leaders program completed its second year of operation from the Office of the Senior Vice Provost for Engagement and Academic Outreach. The transition from REAL to Advancing Chairs as Leaders appears seamless in terms of content, structure, delivery, and impact. Stakeholders reported confidence that the program would be sustained past the grant period. They were less certain, however, whether it could maintain its current form once financial support from the ADVANCE IT grant ended. Some aspects may need to be dropped or reconfigured due to budgetary constraints. No decisions have been made about a proposed budget or corresponding plan for the structure of the program moving forward, including whether key ADVANCE-related components such as the interactive theater performance will be sustainable. Therefore, while the program is likely to be institutionalized in some form, it is unclear what it will look like and how many existing components will remain.

Recommendations

• Finalize an overall plan for sustainability that outlines the structure, content, and funding needs of the Advancing Chairs as Leaders program. If ADVANCE-related content is to be retained, it is essential that the Office of Engagement and Academic Research have adequate resources and structural support.

• Consider how to meet the need to update ADVANCE-related content over the long term, should it be retained moving forward.

4.2.2. Initiative 2.2: Establish Formal Mentoring Program

A third cohort of Assistant Professors participated in the Pathways to Tenure program during Year 5.⁵ Consistent with prior cohorts, three workshops were offered:

- Workshop 1: Navigating Your Department and Finding Advice Inside and Outside of Your Department
- Workshop 2: Navigating the College and University and Creating a Visible Presence in Your Field
- Workshop 3: Finding Work–Life Balance and Mentoring Best Practices

In Year 5, 17 Assistant Professors attended Pathways to Tenure; five of these were STEM and SBS women (Table 6). In the three years that the program has been offered, a total of 15 STEM and SBS women have attended, making up 23% of total participants. Across all disciplines and cohorts, 61% of participants have been women.

Table 6. Characteristics of Pathways to Tenure Workshop Participants in Year 5

Table 6. Characteristics of Lathways to Tenure Works	nop i ai ticipani	om rear 5
	Year 5	Total to Date
		(Years 3–5)
College		
College of Engineering and Physical Sciences	1	16
College of Health and Human Services	4	9
College of Liberal Arts	5	20
College of Life Sciences and Agriculture	3	8
Peter T. Paul College of Business and Economics	0	2
UNH at Manchester	0	4
Other	4	7
Gender and STEM/SBS		
Female	16	40
STEM	3	11
SBS	2	4
Non-STEM/SBS	11	25
Male	1	26
STEM	1	11
SBS	0	3
Non-STEM/SBS	0	12
TOTAL Number	17	66

⁵ The team had originally planned to provide mentoring targeted at Associate Professors to help them achieve promotion to Professor. However, in fall 2014, the Office of Engagement and Academic Outreach initiated the Pathways to Professorship program to address the needs of Associate Professors. With this need met, the ADVANCE Program pivoted to target the mentoring needs of Assistant Professors.

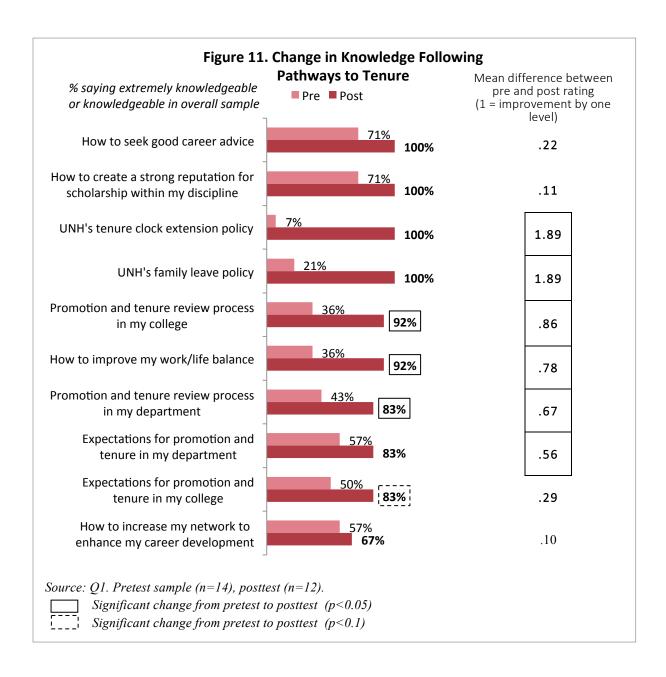
Evidence of Impact—Pre- and Post-Surveys

Pathways participants were asked to complete pre- and post-surveys to provide formative feedback and allow for the measurement of any changes in knowledge and satisfaction over the course of the program. A total of 14 people completed the pre-survey and 12 completed the post-survey. Nine pre- and post-surveys could be matched either by identification code or a combination of other demographic information and/or partial codes. Two methods were used to examine pre- and post-survey changes. The first looked at changes in the proportion for the entire sample of pre- and post-surveys and the second examined the mean difference for participants whose pre- and post-surveys could be matched.

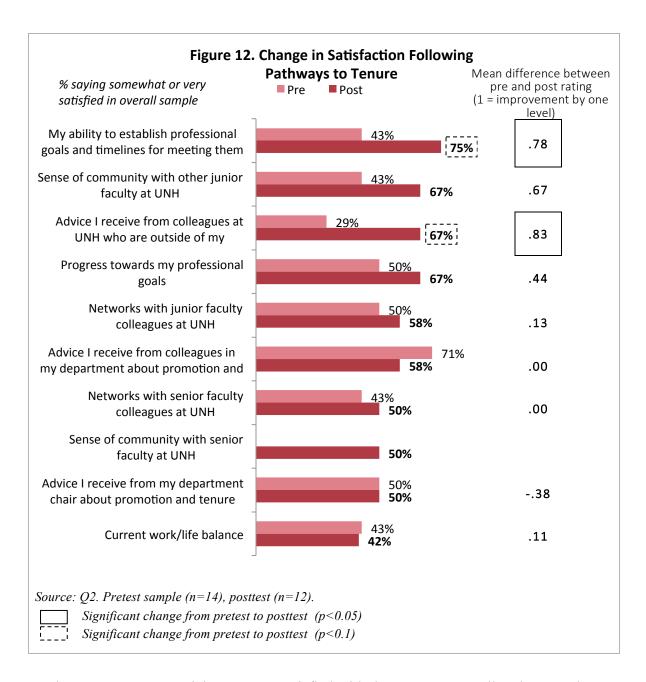
Figure 11 presents changes in participants' self-reported knowledge after attending Pathways to Tenure. Participant knowledge increased in many areas and statistically significant improvements were found in the following areas: promotion and tenure processes (both in one's department and in one's college) and promotion and tenure expectations in one's department, UNH's policies regarding tenure clock extension and family leave, and improvement of one's work–family balance. These findings are generally similar to findings from Years 3 and 4.

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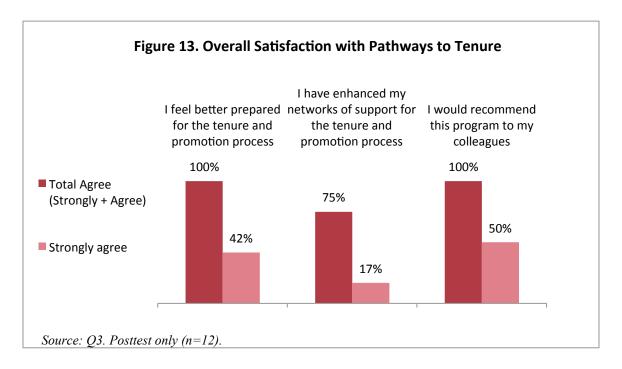
⁶ In the pre-survey, participants created a code based on the day and month of their mothers' birthdays and the first three letters of the location where they were born. Participants were asked for this same code in the post-survey so that responses could be matched. The codes matched perfectly for eight participants; one was matched by partial ID and demographic characteristics.



Satisfaction in most areas also increased over the course of the program (Figure 12), with statistically significant increases in participants' satisfaction with advice from UNH colleagues outside of their own departments, and participants' ability to establish professional goals and timelines. By the end of the program, faculty were least satisfied with their current work—life balance.



Pathways to Tenure participants were satisfied with the program overall and reported positive outcomes (Figure 13). They all agreed they were better prepared for the tenure and promotion process and that they would recommend the program to their colleagues; three quarters (75%) agreed their networks of support for the tenure and promotion process had been enhanced.



In open-ended comments, participants were most likely to note the usefulness of the panels of department chairs and promotion and tenure committee members, followed by the practical material and discussion of work—life balance improvement and the clarification of UNH family leave policy. They also noted the value of being able to network with other faculty and the sense of community and social support provided by the program.

Eight of the 12 participants offered suggestions for improvement. These included increased opportunities for discussing the reading materials, more interactive and/or focused break-out sessions (especially by college), and shortening of some of the longer workshops.

Evidence of Impact—Interviews

In their interviews, participants reiterated the positive impacts they had mentioned on their evaluation forms. In particular, they valued the sense of community with other participants, the ability to hear about variation in practices across units, and the improved transparency about policies and procedures. For example:

"I think my department especially does a very good job of helping prepare us for the tenure process, but it was really helpful to know what the expectations are for the university when it's out of the hands of the department and out of the hands of the college what happens at the university level. I think that was the most helpful part for me personally."

"It was valuable to see how it varies from department to department and college to college. Then also to hear what some of the other attendees were asking questions about, were concerned about. To realize there's a whole group of other people who are thinking the same things as me or asking the same questions."

"As far as setting up progress and identifying what the next milestones are, that was pretty helpful. I think it was really helpful to get tips from people on the panels about what a successful tenure package or portfolio looks like, to get ideas about how to pull things together. I also appreciated information on family leave policies."

"Some parts were incredibly enlightening and I learned a lot about the union context. Certain departments will say that you need to publish in certain journals, but that actually clashes with some of the union language as far as intellectual freedom and where you decide you want to publish. I felt that meeting was spectacular and incredibly important."

"This program should continue; it's a super valuable thing to have—especially for people who are in departments that don't provide a lot of information or who aren't so good at mentoring. Some people don't have mentors to help them figure out the process."

"I liked being able to network and meet new people from other departments as junior faculty. It feels like I never get out of my building and, if I do, it's to come to the library, or to go to the other two buildings affiliated with my college. It was nice to get to know some other people and network, so that you can build a network of people for that mentoring relationship or even collaborating with other people."

At the same time, however, participants also noted that because there was so much variation across departments and colleges, it was sometimes difficult to get definitive answers to questions:

"Sometimes it was frustrating because I went there wanting specifics. Basically most of the answers to my questions were, 'Well, it depends.' I sometimes couldn't get an answer because it depends on what college you're in. It depends on what department you're in."

"I walked in that first day wanting the nuts and bolts of the tenure process. I felt like I walked away with the message, 'It depends on where you are.' Maybe we could break out into groups according to what college we are in at least? With someone representing those different units who could provide some more specifics. Because it was very, very high level, I felt like I didn't get all the nuts and bolts."

The participants suggested the need for strategies to combat some of the challenges presented. For example:

"There was an online tool where you could put in different descriptor words and it showed you how frequently those are used in teaching evaluations for male professors verses female professors. That was really interesting, kind of disheartening though....I walked away kind of feeling like it was depressing and I didn't feel very motivated. You're now aware that it exists but you don't know what to do about it."

"Some of the readings from the book did offer practical tips, but it wasn't addressing the core issues—but rather how you can fit and conform to these

problems. We need strategies to figure out what to do about these problems and not just strategies to conform while leaving the core issues in tact."

"I didn't connect with the book. It seemed the message was to let things go, let things roll off your back. It was perpetuating the response of 'He said something terrible to me. I'm just going to chill, because I need to get tenure.' It was about making others happy and not rocking the boat. I think it might be nice to have a book written by a woman who has gone through it rather than by a man."

"I did enjoy the activity that we did when we were looking at our work—life balance and how we kind of segmented our time. But I don't know that I came out of it with any knowledge of how to apply what I found out. I left with a great chart, but then I was like, 'I don't know how to change this. I know that I am totally out of balance but how do I fix it?""

Other suggestions were to get feedback on the five-year plan and to address some of the issues faced by minorities.

4.2.2.1. Initiative 2.2 Summary

In its third year of operation, the Pathways to Tenure Program has consistently increased participants' knowledge of and satisfaction with key aspects of the promotion, tenure, and review process as well as important work—life policies, achievement of professional goals, and social networks. Pre—post tests indicate that many of the increases are statistically significant. Interview data confirm the positive impacts found in survey data, as participants pointed to the value of improved sense of community, the ability to learn about variation in practices across units, and improved transparency about policies and procedures. Across cohorts, participants noted a desire to learn more about the particular processes in their own departments and colleges.

Progress Toward Sustainability

Stakeholders reported that Pathways to Tenure would potentially fit well with the suite of other programs (such as Pathways to Professorship) currently being offered by the Office of Engagement and Academic Outreach. Without additional financial resources and support, however, this office is unable to assume and administer the program, rendering longer-term sustainability in question at this time.

Recommendations

- Make a decision regarding the sustainability of the Pathways to Tenure Program past the grant period. Should the program be targeted for sustainability, a clear sustainability plan needs to be finalized. The plan should outline how and where the program will be supported and identify the resources required to do so.
- If the program is sustained, consider additional ways of providing unit-specific information to participants (or ways for them to access unit-specific information outside of the program).

4.3. Goal 3: Conduct a wage equity analysis and recommend any policy changes that might be indicated.

Two wage equity studies were conducted during the grant period—one in Year 3 and another in Year 4. Gender differences in salary were found in both years (although differences were smaller in Year 4), with differences remaining after controlling for years of service, rank, college, past administrative appointments, and other factors that can account for salary differentials. The 2015 analyses revealed a gender difference favoring male faculty of between \$1,113 and \$1,771 that was left unexplained by the model.

The UNH ADVANCE team has raised this issue with deans and provided a list of faculty by college, department, and gender with estimated residuals. Some deans were concerned that the models did not include other factors related to salary and had questions about the data. While they were generally receptive to the idea that some salaries may need to be adjusted, they thought factors in addition to the analyses needed to be considered before any adjustments could be made and emphasized that doing so would require resources and a charge from the Provost.

4.4. Goal 4: Develop more flexible workplace policies that support career advancement for STEM faculty women.

By Year 5, several key workplace policies had been put in place, implemented in the new five-year faculty contract during Year 4 of the grant. The key work–life balance policies include:

- a revision to the tenure clock extension policy, from "opt-in" to "opt-out";
- a change to parental leave, making it an employee benefit rather than a family benefit (both parents can now take leave rather than sharing the leave between them); and
- the allowance of modified duties (to be approved by the dean and the chair).

The UNH ADVANCE Career–Life Balance Subcommittee also developed a list of resources available on the Human Resources website to help faculty find child care and elder care as well as other important information, and convened a parent support network to provide parents the opportunity to network and share resources.

As in prior years, stakeholders mentioned in their interviews that awareness of work–life policies and resources is uneven.

Recommendations

- Continue to pursue opportunities to inform faculty, chairs, and other campus stakeholders about work—life balance policies and resources. The Pathways to Tenure program appears to be one successful avenue for this information, but others should also be aggressively pursued.
- Ensure prospective candidates are provided with information about work—life policies and resources available at UNH.

4.5. Goal 5: Create and maintain campus-wide awareness of the issues addressed and policy changes made under the ADVANCE IT initiative.

4.5.1. UNH Unbiased Website

Throughout the grant period, the UNH ADVANCE website has been kept up to date with current information and populated with new content. It contains information on policy changes (including work–life policies related to the tenure clock, parental leave, and modified duties), resources to support work–life integration (such as Wildcat Working Parents Network and other resources developed by the Career–Life Balance Subcommittee), and information related to the goals of UNH ADVANCE.

4.5.2. Distribution of Climate Study Findings

The UNH ADVANCE team has been very strategic in its use and distribution of climate survey findings to the UNH community, including timing the release of topical reports based on previous climate survey findings to coincide with the launching of the annual fall surveys. During Year 5, the topic of the report was "Bystander Interventions in Bias Incidents in the Academic Workplace." The team will be releasing a new report on the promotion and tenure process to coincide with the fall 2017 climate survey data collection.

Recommendations

- Continue to release reports on climate survey findings to raise awareness of important climate issues and maintain the visibility of UNH ADVANCE across the university.
- Assemble data on impacts to demonstrate the program's successes and communicate these to campus stakeholders to support the sustainability of programs.

4.6. Goal 6: Conduct a longitudinal field experiment to assess Goal 2 by investigating the impact of department chair professional development on department-level climate at UNH.

The UNH ADVANCE social science research study investigates the impact of the department chair professional development program on the representation of and departmental-level climate for female faculty at UNH. A quasi-experimental design was proposed to test the following hypotheses:

Hypothesis 1: There will be a significant gender difference in baseline measures of perceived departmental climate and degree of influence, such that female STEM faculty will perceive a more negative climate and less ability to influence departmental decisions than male STEM faculty.

- Hypothesis 2: Baseline institutional data will reveal significantly higher male-to-female ratios in every college (except Health and Human Services) at senior ranks and compared to national averages.
- Hypothesis 3: There will be no significant gender difference in faculty's perceived departmental-level climate and degree of influence subsequent to the implementation of department chair professional development programs.
- *Hypothesis 4*: There will be a significant reduction in male-to-female ratios in the STEM disciplines at senior ranks subsequent to the implementation of department chair professional development programs.

The quasi-experimental design was to stagger the "treatment" (the department chair professional development program) over time by college to create a control group of departments that had not yet received the treatment. Grouped by college, chairs completed the training over a three-year period, and the final cohort was part of the new Advancing Chairs as Leaders training during Year 4.

The Research Committee is analyzing the impact of the chair training on climate using annual climate survey data and will shortly have findings to report and disseminate. In addition, the Research Committee has been actively engaged in related research, which has resulted in numerous presentations and several papers that are at various stages of publication. To date, completed and pending publications include:

- Jha, Y., & Shea, C. (2014). The effects of demographic composition and faculty departures on the hiring of STEM women faculty. In K. N. Miner (Chair), *ADVANCE(ing) women: From fixing women to transforming organizations*. Symposium conducted at the meeting of the Society for Industrial and Organizational Psychology, Honolulu, HI.
- Shea, C., Young, J., Malone, M., Graham, K., & Banyard, V. (2017). Retaining women faculty: How colleague intervention can ameliorate a chilly climate in higher education. Manuscript submitted for publication to *Journal of Diversity in Higher Education*.
- Shea, C. M., Young, J., Banyard, V., Malone, M., & Graham, K. (2017). Bias incidents in the academic workplace: Who recognizes bias, and who intervenes? Manuscript in preparation for submission to *Gender, Work & Organization*.
- Shea, C., Malone, M., Young, J., & Graham, K. (2017). Using interactive theatre to significantly increase the representation of STEM women faculty. Manuscript submitted for publication to *Equality, Diversity, and Inclusion: An International Journal* [Special Issue].

The findings from the research on bystander intervention formed the basis of a proposal for an NSF ADVANCE Partnership grant, which received funding and is just beginning its first year.

4.7. Other Findings

1. Transition in UNH Leadership

UNH is experiencing a transition in top leadership, with a search for a new president currently underway. Stakeholders noted that the decisions of an incoming president could shape how UNH ADVANCE is aligned with university-wide decisions. They did not feel, however, that a new incoming president would be likely to derail existing efforts.

2. Sustainability Model

Stakeholders expressed very thoughtful opinions regarding the model for sustaining UNH ADVANCE initiatives. The main factors guiding their considerations were the very tight budgetary constraints facing UNH, the decentralized structure of the university, and the amount of oversight necessary to continue the progress initiated by the grant. A model for sustainability has not yet been decided upon, and opinions about the most appropriate model vary.

Some felt that sustainability priorities should be disseminated to existing offices without additional oversight:

"Given the institution's lack of resources generally, it makes sense to carry things on through existing channels or offices. A lot of people are already in the right places who are very supportive and will continue their commitment. Things don't necessarily need to continue as separate entities under an ADVANCE office."

"If a dedicated office is sustained for ADVANCE, it may be more difficult to sunset programs if they are no longer needed since the infrastructure tends to create institutional inertia."

Others believed a UNH ADVANCE office should continue to coordinate efforts and ensure the ADVANCE mission was being carried out in programs disseminated to existing offices:

"If programs are located all over the place, then it's going to be difficult to coordinate and to make sure the ADVANCE content remains."

"I think we need some kind of sustained ADVANCE presence. As long as there's some sort of office or organization or person whose charge it is to make sure that the ADVANCE goals are continued, then we can continue to make progress and sustain the efforts."

"I think there needs to be somebody who wakes up every day with ADVANCE on their mind. Someone who shepherds it, makes sure things are getting done, makes sure that the essential content is not getting watered down. I think when you just solely put it into all these different units, it loses its specificity and loses the rationale behind what you're doing and why you're doing it. I think by having somebody in ADVANCE either co-branding or making sure that somebody's there, keeps the initiative at the forefront of people's minds. Some things, like the

chair leadership training, could potentially be taken over by other entities, but others can't. And even for things like the chair leadership training which have a logical home in a particular office, it still would benefit by being co-branded by ADVANCE and having someone ensure that issues of gender equity remain a main focus."

The biggest challenge to sustainability is not the desire but rather the financial means to do so, as this interviewee explained:

"I can't think of anyone on campus that doesn't want to see ADVANCE continue. The question is how do we financially support it? The biggest sustainability challenge is financial. We have a tremendous Provost who is 100% behind this and wants to push this forward. But it'll come down to dollars. I think the Provost should have the right of first refusal and needs to make a call as to how she wants this to go forward."

5. CONCLUSIONS AND KEY RECOMMENDATIONS

At the end of Year 5, UNH ADVANCE has made meaningful progress toward the goals described in the proposal. Goal 1, which focuses on increased representation of female STEM faculty at all ranks, was supported by GEAR UP search committee trainings, the Visiting STEM Women Scholars Program, Building Blocks sessions, and promotion and tenure policy alignment. Data from evaluation forms, interviews, the search and hiring process, and climate surveys suggest each activity is aligned with the desired outcomes. GEAR UP, however, has provided the greatest visibility, and the data suggest its impacts are indeed being realized in changes in search committee practices and hiring of female faculty, especially at the rank of Assistant Professor.

During the first four years of the grant, women made up 43% of STEM hires and 50% of SBS hires at the Assistant Professor rank. As a result, the number of female Assistant Professors in STEM has almost doubled, from 11 in the year prior to ADVANCE to 19 in Year 5—increasing from 32% to 41% of all STEM Assistant Professors. In SBS, the number of female Assistant Professors grew from eight to 11—increasing from 47% to 50%—over this same time period. Across all ranks, STEM women faculty increased from 42 to 52—growing from 21% to 27% of all STEM faculty—and the number of SBS women faculty increased from 32 to 41 (from 36% to 44%).

Goal 2, to improve support and departmental climate for STEM faculty women through departmental chair professional development and formal mentoring policies and practices, was addressed by chair training (initiated as REAL and evolving into Advancing Chairs as Leaders) and the Pathways to Tenure program. The impact of the department chair training program is currently being assessed, but data from evaluation forms and interviews suggest it is having the desired impacts of helping chairs create a positive climate for female faculty. Stakeholders view it as a top priority for sustainability. The Pathways to Tenure program is also helping faculty increase

knowledge about and confidence in their ability to be prepared for the tenure and promotion process.

Goals 3–5—to conduct a wage equity analysis, develop more flexible workplace policies, and create and maintain campus wide awareness of the ADVANCE initiative—are also being realized. Of these, the inclusion of several key policies within the current five-year faculty contract is especially important for long-term institutional transformation. Changes to an opt-out tenure clock extension, making parental leave an employee benefit rather than a family benefit, and allowing modified duties are essential for supporting a climate where all faculty can flourish.

And finally, in terms of Goal 6, the team has been actively disseminating research findings through presentations, posters, and peer-reviewed publications. The findings on bystander intervention have been leveraged into a funded NSF ADVANCE Partnership grant, which is beginning its first year of funding.

Progress Toward Sustainability

Sustainability has been discussed regularly by the project team, the Internal Advisory Committee, and the External Advisory Committee, although key decisions regarding sustainability have not yet been finalized. In particular, decisions are yet to be made regarding which programs will be sustained (almost all have been identified as a "top priority") and the structure for sustainability (for example, continuation of an ADVANCE office and personnel, dissemination of programs to existing offices, or some combination). Budgetary constraints are the main challenge.

Some grant activities have a logical institutional home and have been operating from those departments. Building Blocks is most easily sustainable given that it has been corun with the Research Development Office and requires few resources. Other signature programs, such as Advancing Chairs as Leaders, have been supported financially by ADVANCE. Stakeholders articulate a strong desire to continue these programs but are unsure if they can be sustained in their current form without additional funds provided to the units involved. Likewise, other key program activities, such as GEAR UP training, have been operated exclusively by ADVANCE, and it is unclear where they will be integrated within the current institutional structure and how they would be financially supported.

The policy changes are likely sustainable. And, if measures of accountability are established to hold departments accountable for reviewing their promotion and tenure guidelines and ensuring they are in alignment with those approved by the Faculty Senate, greater transparency of the process is likely to result.

Key Recommendations

• Finalize the details of a sustainability model right away so the no-cost extension year can be used to test and support it. A final decision on whether UNH ADVANCE office and/or personnel will be retained must be made soon because it will impact if and how various program components are sustained. In making

- decisions regarding sustainability, the eye must be not only on the next couple of years but also on longer-term institutionalization.
- Implement methods of accountability (including continued data collection and assessment of needs) into whatever sustainability model is adopted.
- Leverage the success of UNH ADVANCE to support related goals such as improving the climate and representation of faculty of color.
- Consider how programs can be extended to better support non-tenure-track faculty.
- Align the institutionalization of ADVANCE initiatives with the priorities and strategic direction established by the new university president.
- Continue to disseminate findings as they emerge to support the grant's broader impacts and intellectual merit.

To conclude, UNH ADVANCE has made meaningful progress toward the goals set forth in the proposal. The no-cost extension year is the optimal time to implement the sustainability structure and to make any adjustments before the financial and personnel support of the grant ends. The strong support of the Provost, key campus partners, and administrators suggests the program is in a promising position to institutionalize the progress already achieved under the grant.