Mentoring Programs Supporting Junior Faculty

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Abstract

In this paper we discuss the junior faculty cohort mentoring program we developed as part of our National Science Foundation funded ADVANCE project. We first provide background on our ADVANCE project and review the mentoring literature that helped shape our mentoring program. Then, we describe our program, and discuss the benefits received by the participants: mentees and mentors.

Introduction

North Dakota State University (NDSU), a progressive, public, land grant university in the upper great plains, has been undergoing transformation since the late nineties. The institution has moved from a Carnegie-classified Research Intensive University to a Research Extensive University. This move accompanied new doctoral programs that advanced research and extramural funding. Further, NDSU’s efforts have resulted in record enrollments for eleven consecutive years, and the number of graduate students has nearly doubled in nine years. Research expenditures have increased 108% in only seven years, significantly outpacing the national average. According to the NSF data on academic research and development expenditures, NDSU is one of the fastest growing research universities in the northern Great Plains region.

The institution, with around 550 ranked faculty in seven academic colleges, serves over 14,000 undergraduate and graduate students. Engineering degrees offered include agriculture, civil, construction, electrical, industrial, manufacturing, and mechanical. While almost half of the undergraduate student population is female, less than 10% of the engineering degrees are awarded to female students. Thus, an area of great concern is the number of women faculty in traditional science and engineering disciplines. Although NDSU has had overall success in recruiting women faculty (with at least 30% of new hires women since 1999), no more than 20% of the science and engineering hires have been women. However, this modest percentage is not reflected through faculty ranks. And while the institution seems to be making progress that would lead to a pipeline of women in tenured positions, women in tenured ranks place NDSU among the lowest in the nation. Such low representation of women faculty in science and especially engineering reflect challenges in the areas of climate, recruitment, retention, advancement, and leadership.

The ADVANCE FORWARD project, funded by the National Science Foundation ADVANCE Institutional Transformation program in 2008, seeks to develop and implement a comprehensive research-driven strategy to increase participation of women in all science and engineering faculty and academic administrative positions. Specifically, ADVANCE FORWARD strives to improve the climate across campus, enhance faculty recruitment efforts, increase faculty retention and advancement, and open leadership opportunities. The ADVANCE FORWARD project features three major components consisting of a multitude of programs: 1) campus climate, 2) advancement/leadership, and 3) research. To achieve the project goals, the campus climate component provides workshops for academic administrators and faculty on
climate issues and supports male faculty as advocates and allies. The research component is designed to assess if and how the incentives and programs lead to the achievement of the goals and, ultimately, to institutional transformation. The advancement/leadership component of the project focuses on the professional development of faculty. There are three programs associated with the advancement/leadership goals: midcareer mentoring, cohort mentoring for junior faculty, and professional development grants. The focus of this paper is on the cohort mentoring program.

In this paper we review the relevant literature that helped us develop our mentoring program, provide specific details about our junior faculty cohort mentoring program, and discuss the assessment measures we have developed. We also discuss the benefits the participants have received to date.

Mentoring Literature

Since the 1990s, scholars have developed a comprehensive body of literature on the relationship between good mentoring and professional success\(^1\). In higher education, a wide range of mentoring models has been developed and tested, with some clear conclusions reported about mentoring processes\(^2\). Women overwhelmingly prefer other women as their mentors\(^3\), and same gender relationships provide women with more psychosocial than academic support\(^4\). The concept of psychosocial support is central because it is with other women that newly hired women faculty can discuss important issues of work-life balance.

Successful mentoring programs offer tangible benefits for mentors, as well as for those mentored\(^5\). Institutional commitment and institutional rewards and recognition are central to the success of any mentoring program\(^6\). Research suggests that the strongest mentoring programs offer monetary support, recognition, and other demonstrations of institutional commitment as tangible rewards.

Group mentoring can help develop even stronger networks of support within institutions by providing several layers of connection—to junior faculty peers and to established senior faculty; and to disciplinary peers and colleagues outside of one’s discipline\(^7\). At institutions with low retention rates, there may be difficulties in establishing one-on-one mentoring because there is a high turnover rate in mentoring pairs. In addition, when there are few senior women faculty, there are not enough women to undertake the single gender mentoring new women faculty want and need. Mentoring teams help provide stability when attempting to create long-term cohorts, and offer senior women more manageable mentee loads.

Although there is evidence that assigned, paired mentoring is not a successful strategy (much of that research looked at mixed gender pairs, or male only pairs), single gender or group mentoring with formal and informal components has not been studied in as much depth\(^8\). In fact, informal mentoring does not work well for women and people of color, who are less likely to informally find mentors on their own because they belong to groups traditionally underrepresented in the academy\(^9\). Further, mentoring and being mentored are not obvious or natural activities; good mentoring is enhanced through training for all parties involved\(^10\). Therefore, we determined that for our purposes, our project would be a formal, structured mentoring program.
Junior Faculty Cohort Mentoring Program

The mentoring cohorts program was originally developed as part of the ADVANCE FORWARD project targeting junior women faculty. However, in part to support our NSF ADVANCE program, the University decided to replace its one-to-one mentoring program with a cohort mentoring program for all junior faculty on campus. Therefore, the cohort mentoring component of the ADVANCE project was consolidated with the campus-wide first-year faculty program sponsored by the Provost.

Each cohort group includes three junior faculty and two senior faculty serving as mentors. Cohorts are same sex, as studies have shown that women strongly prefer other women as their mentors, and same gender relationships provide women with more psychosocial support. Groups were created that are solely STEM or non-STEM so as to provide the potential for common topics of interest. Several training opportunities are provided for faculty mentors and those mentored concerning issues, roles, opportunities, and goal setting. Research suggests that good mentoring is enhanced when the parties involved have training and contracts outlining roles and responsibilities.

One unique element of this mentoring program is that all incoming faculty are invited to participate in a single mentoring cohort through their third year review. Having access to a formal support network through this critical stage is important for junior faculty success and retention. Our goal is to help increase retention of faculty, especially in science and engineering, during the three years of mentoring as well as increase success of junior faculty, measured as a positive tenure decision. The junior faculty cohort mentoring program is designed to facilitate network development, on campus, in the community, and in the larger profession, in ways that help balance faculty lives. The mentoring program involves senior mentors in ways that provide greater leadership opportunities and training for the mentors. Further, we seek to develop communication and leadership strategies in new faculty that will help them bring change and success to their departments.

Formal as well as informal meeting opportunities are offered for mentoring teams. Two yearly workshops bring all cohort members together with more senior faculty (in addition to their mentors), campus administrators, members of the community, and outside trainers at least once each year. Outside speakers include experts on training mentoring teams; strategies for developing a non-gendered organization; developing organizational leadership skills and envisioning leadership in departments, colleges, and the university. The less expensive in-house training (for large groups, once each year) focus on more practical issues: grants and research funding, strategies for new teachers, and being effective members of committees. In addition, the less formal mentoring team meetings (once each month in which there is no large group gathering) include meals and networking opportunities with both campus administrators and community leaders. In all cases, the goal is to help faculty with work and life balance; teaching, research and service; connections with community, and becoming a visible presence on campus. Through all levels, the mentoring program creates opportunities for mentoring networks to meet with administrators, deans, heads, and chairs. In this way, there are opportunities for reverse
mentoring to aid administrators in learning about the specific and sometimes different needs of junior faculty.

The cohort mentoring program was initiated in the fall of 2009. Currently, there are 16 cohort mentoring groups separated by gender (six women’s groups; 10 men’s groups); each group includes two mentors and three (new faculty) mentees. Although the first year cohorts consisted of new incoming faculty, in the second, and now third year of the program, we received several requests to form cohort mentoring groups for yet not-tenured junior faculty who have been at our institution for some time. Not all of the first year cohorts remain intact, for reasons discussed below; however, our program is in its third year and is progressing well.

Mentoring Program Assessment

We designed an on-line assessment to evaluate the impact of the cohort mentoring program on the retention, success, and experience of the climate by the junior faculty members involved in this program. Our evaluation data allows us to study how our program compares to others as well as the overall impact of this mentoring program on new faculty retention and success. After about a year of participation in the mentoring programs, all mentors and mentees were asked to complete separate surveys. Below we share some of the highlights of the evaluation data from years one and two of the mentoring program. Of the 58 new faculty who participated in the program in year one, 31 completed the mentee survey (response rate of 53.4%). Analysis of data from the mentee surveys points to following conclusions (reported Means are based on a six-point Likert scale):

- A majority of the mentees (52%) reported meeting once a month with their mentoring group. Mentees were satisfied with the frequency of their meetings (74%).
- While new women faculty liked the single gender composition of their mentoring group, new male faculty stated that they would have preferred their mentoring groups to be mixed gender.
- Promotion and/or tenure, starting a research program, and issues related to work/family life were the most commonly discussed topics, with mentees rating discussion on these topics being helpful (mean = 4.6). Further, 74% of the mentees indicated that being in the mentoring program increased their comfort level with the promotion and/or tenure process.
- Most of the mentees (74%) reported some level of satisfaction with the quality of their cohort mentoring program experience. Most mentees (61%) considered being part of the mentoring program to be a good use of their time. Further, most mentees (58 %) indicated that they wished to continue participating in the mentoring program.
- Most of the mentees felt connected to the members of their mentoring group (mean = 4.15 with other mentees; 4.35 with their mentors).
- All mentees reported that being in the mentoring program increased their sense of connection to other faculty members. Further, participating in the mentoring program decreased most mentees’ sense of isolation on the campus (71%), as well as within the community (52%).
- Most mentees also reported that they had a support system in their mentoring group (61%) and that they developed relationships that they expect to continue throughout their career.
Additionally, 17 (55%) mentees identified that participating in the mentoring program had an impact on their experience of the campus climate. Eight (26%) mentees felt that participating in the cohort mentoring program had an impact on their decision to remain at NDSU. Moreover, three (10%) mentees felt that participating in the mentoring program gave them greater access to academic administrators and four (13%) mentees felt it increased their comfort with academic administrators. Some of the key findings from the surveys completed by mentees at the end of year two (summer of 2012) of the mentoring program include:

- 63.2% of the mentees reported that their participation in the FORWARD cohort mentoring program had a positive impact on their decision to remain at NDSU.
- 47.3% of the mentees reported that their participation in the FORWARD cohort mentoring program had increased their comfort with the promotion and/or tenure process.
- 63.2% of the mentees reported that their participation in the FORWARD cohort mentoring program had a positive impact on their experience of the climate at NDSU.

Of the 23 mentors who participated in the first year of the program, sixteen mentors completed the mentor survey (response rate of 70%). Preliminary analysis of data from the mentor surveys point to following conclusions:

- Most the mentors (44%) reported meeting once a month with their mentoring group. Most of the mentors were satisfied with the frequency of their meetings (69%).
- While women faculty mentors liked the single gender composition of their mentoring group, male faculty mentors stated that they would have preferred their mentoring groups to be mixed gender.
- In addition to common discussions on promotion and/or tenure, starting a research program, and issues related to work and family/life, some of the mentors identified that their mentoring group discussed adjustment to community, family issues, and time management and prioritizing.
- A majority of the mentors (81%) indicated that they were satisfied with the overall quality of their mentoring experience. Mentors also agreed that being part of the mentoring program was a good use of their time, and 81% indicated they would like to continue participating in the mentoring program next year.
- Most mentors felt connected to the members of their mentoring group (mean = 4.56).
- Mentors reported that being in the mentoring program provided them networking opportunities with other faculty (94%) and decreased their sense of isolation on the campus (69%). 50% of the mentors reported that the mentoring program decreased their sense of isolation within the community.
- 78.9% of the mentors completing our survey in the summer of 2011 agreed to some extent that being in the cohort mentoring program allowed them to form significant relationships with other faculty.
- 47.4% of the mentors who responded in the summer of 2011 identified that participating in the cohort mentoring program had a positive impact on their own experience of the NDSU climate.

Additionally, nine (56%) mentors identified that participating in the first year cohort mentoring program had an impact on their own experience of the climate here at NDSU. One mentor felt that participating in the cohort mentoring program had an impact on her or his decision to remain at NDSU. Moreover, one mentor felt that participating in the cohort mentoring program gave her or him greater access to academic administers and increased her or his comfort with
academic administrators. Eight (50%) mentors felt that they were [reverse] mentored during the cohort mentoring process. Some of the key findings from the surveys completed by mentors in at the end of year two (summer of 2012) of the mentoring program include:

- 23.1% of the mentors reported that their participation in the FORWARD cohort mentoring program had a positive impact on their experience of the climate at NDSU.
- 53.8% of the mentors reported that they were mentored during the cohort mentoring process.

We also evaluate all the workshops and training opportunities offered through the mentoring program. This information is used for developing and structuring future programs as well as identifying potential topics. In fall of 2012, we hosted an outside speaker to work with our mentors and mentee who also offered a series of workshops for our academic administrators:

- workshop for faculty was entitled Mutual Mentoring: Moving Beyond One-Size-Fits-All Mentoring; 21 individuals attended (14 completed evaluations). A total of 92.8% of the evaluation respondents reported that they will be able to implement new strategies to identify possible mentors as a result of their participation in this workshop (57.1% strongly agreed; 35.7% agreed).
- workshop for department heads was entitled Helping Faculty Build Effective Mentoring Networks: The Role of Chairs; 15 individuals attended (12 completed evaluations). All of the evaluation respondents (100%) for this session reported that their understanding of both traditional and emerging models of mentoring had increased as a result of attending this workshop (75.0% strongly agreed; 25.0% agreed). In addition, 83.3% of the respondents reported they will be able to implement new mentoring strategies in their unit as a result of their participation in this workshop (50.0% strongly agreed; 33.3% agreed).
- a third session for deans and vice presidents; 6 individuals attended, and all evaluation respondents (5) indicated they would be able to implement new strategies in their units to encourage effective mentoring as a result of their participation (40% strongly agreed; 60% agreed).

We plan to conduct additional mentor and mentee surveys so that we can evaluate and track changes in faculty attitudes and perceptions. We are seeing the following results of our junior faculty cohort mentoring program:

- higher retention of faculty.
- better understanding of the factors that lead to the retention of faculty, by gender.
- lower levels of stress and isolation reported by faculty, especially women and faculty of color, in our campus climate surveys.
- positive experiences reported for both mentors and mentees (lower stress, less isolation, greater networking and community building, greater productivity).
- (positive) differences in self-reported attitudes of chairs and heads toward hiring and working with women faculty.
Challenges

After the first year of our junior cohort mentoring program, we noted two major challenges that we have attempted to address. First, both female mentors and mentees reported the desire to remain in same-sex groups, whereas male mentors and mentees reported the desire to be in mixed-sex groups. We found it understandable that some men may prefer mixed working groups though also indicative of potential climate issues on campus. In some ways, this challenge is difficult to address. Now, in its third year, we have a few teams that are mixed gender.

Second, some of the cohort groups had difficulty in meeting due to conflicting schedules. This issue is unique to cohort mentoring, as attempting to gather five individuals can be more challenging than expecting two people to meet. We have not yet fully resolved this challenge; however, we encourage groups to offer multiple meeting times so that at least part of the group can attend. We strongly feel that the advantage of cohorts outweighs traditional one-on-one mentoring, and most faculty in our first cohort have successfully completed their third year reviews with their cohorts intact.

Conclusions

Many university mentoring programs acclimate new faculty for a year, or a semester. In our mentoring program we provide the opportunity to involve mentors in the careers of new faculty for at least those crucial first three years. Our mentoring cohorts are same sex and we provide several training opportunities for faculty mentors and those mentored concerning issues, roles, opportunities, and goal setting. The sort of single gender, mixed-discipline, mixed rank mentoring nature of our program has not previously been studied for success in a three- or six-year longitudinal study; the results of our program could be of much wider interest beyond our own institution.

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