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The ADVANCE Mentoring-for-Leadership Lunch Series for Women Faculty in STEM at the University of Washington

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This paper has been accepted for publication pending revisions to the Journal of Women and Minorities in Science and Engineering. Reviewed: July 2007.

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Abstract:

Given the increasingly smaller number of women in science, technology, engineering, and mathematics (STEM) fields as one progresses through the academic pipeline, it is often very difficult for women in STEM faculty positions to find a community of women and identify women mentors, especially at the upper rungs of the academic ladder. Group mentoring opportunities are one strategy to connect women STEM faculty and generate greater interest and success in academic leadership. In 2003 the University of Washington (UW) ADVANCE program introduced the Mentoring-for-Leadership lunch series to encourage women faculty to consider leadership; expose women faculty to various career paths; and build a community of women faculty in STEM. This paper describes the UW program, the literature that informs the program, and the participants' experiences. This paper also offers recommendations for replicating this program at other campuses.

Introduction

In February 2007 Harvard University made headlines by announcing Drew Gilpin Faust, a historian, as its 28th – and first woman – president (Rimer & Finder, 2007). While women have been serving at various levels of academic leadership for years, they are still often the exception. According to the Association of American Colleges and Universities, women were only 3% of higher education presidents in 1970, and 21% in 2001 (Musil, 2006). The American Council on Education reported women made up 23% of college presidents in 2006, but only 13.8 % at doctorate-granting institutions (American Council on Education, 2007).

It is even more rare to find a woman scientist or engineer in a high-level academic leadership position. In 2006 the Women in Engineering Program & Advocates Network identified 63 women in academic administrative positions at engineering programs or institutions with engineering programs (WEPAN, 2006). These leaders included 26 female deans or associate/assistant deans, 20 department chairs, 9 provosts or vice-provosts, and 8 presidents of universities. A Summer 2000 survey of science and engineering departments chairs at universities with membership in the Association of American Universities (AAU) by Niemeier and Gonzalez (2004) found that less than 3% (only 8 of 298) of engineering departments had women chairs; less than 6% of the 340 math, statistics, earth sciences, chemistry, and physics/astrophysics departments had women chairs; and only 12.7% of the department chair positions in the life sciences were occupied by women.

In fact, data from the Commission on Professionals in Science and Technology (CPST) indicate women are still lagging behind men in their representation in STEM (science, technology, engineering, and mathematics) fields at all levels of higher education from bachelor's degrees through the faculty ranks. The gender difference in STEM become even more acute when compared to women's representation in all fields of higher education. The data also indicate large gender representation variation between STEM fields (CPST, 2006b). For example, in the biological sciences women make up about 60% of bachelor's degrees, while in engineering women's percentage of bachelor's degrees was only 20%. This differential representation makes networking in certain fields more difficult, which is why bringing women together from across the STEM disciplines can provide opportunities that would not otherwise exist. Women in some of these disciplines have fewer women faculty role models, especially women in leadership positions. Additional barriers faced by women who seek to move into positions of leadership in higher education include assumptions about who can and cannot lead and which leadership styles are better (Heilman, 2001), as well as the fact that women leaders in traditionally male-dominated fields (such as STEM) are often judged more harshly than men leaders (Eagly & Karau, 2002).

To address the issue of women faculty leadership and advancement, the National Science Foundation (NSF) created the ADVANCE program. The goal of the NSF ADVANCE program is to increase the participation and advancement of women faculty in academic science and engineering careers. In 2001 the University of Washington was one of the initial nine institutions to be awarded an ADVANCE Institutional Transformation Award. With this award, the University of Washington created the ADVANCE Center for Institutional Change. Key programmatic areas for STEM faculty include: quarterly leadership workshops for department chairs, deans, and emerging leaders; a national leadership workshop for department chairs; professional and leadership development workshops and activities for faculty at all ranks; a Mentoring-for-Leadership lunch series; a Transitional Support Program that makes small grants to outstanding faculty members who are experiencing a major life transition that may impede their career momentum; and faculty recruitment and retention toolkits. (Visit www.engr.washington.edu/advance for more information about the UW ADVANCE program.) This paper focuses on the Mentoring-for-Leadership lunch series.

UW ADVANCE created the Mentoring-for-Leadership lunch series for women faculty in STEM fields to focus specifically on women as leaders and to offer personal counterexamples to the dearth of women leaders in STEM. The decision to offer these lunches exclusively for women was in alignment with the goal of the NSF

ADVANCE program. Like many academic societies that have special sub-organizations addressing issues specific to women, these lunches are spaces in which women faculty can collectively strategize on how to successfully integrate into male-dominated institutions. Studies like The Campus Climate Revisited: Chilly for Women Faculty, Administrators, and Graduate Students demonstrate that women experience both overt and subtle differential treatment in co-educational settings, which isolates academic women, impedes their advancement and lowers their sense of confidence (Sandler & Hall, 1986). The groundbreaking book, Taking Women Seriously: Lessons and Legacies for Educating the Majority, documents thirty years of research on women in higher education and concludes that women's colleges produce two to three times as many science Ph.Ds and M.Ds as well as "high achievers" recognized in Who's Who of American Women (Tidball et al., 1999). One of the factors that the book identifies as critical to high levels of female achievement is exposure to a critical mass of female leaders, a finding which Lisa E. Wolf-Wendell corroborates in her research on supportive academic climates for women (Wolf-Wendell, 2000).

Therefore, each month, UW ADVANCE features a different woman leader who discusses her career trajectory and the benefits and challenges of being a leader. The purpose of mentoring, as employed in the Mentoring-for-Leadership lunches, is "academic advancement and professional development, helping individuals to achieve their full potential" (Girves, Zepeda, & Gwathmey, 2005). This program aims to encourage STEM women faculty to consider leadership and to expose women faculty to different career paths. Women are increasingly taking on positions of leadership, and in doing so, providing a path and goal for other women. Sharing personal examples of differing career paths shows that there are many ways to become a leader in the academy. For example, the first four women engineering deans at research universities (Duke, Johns Hopkins, Michigan State, and the University of Washington) did not serve as department chair before being appointed dean and did not fit the stereotypical engineering faculty model. In constructing the Mentoring-for-Leadership program, ADVANCE chose to use a network mentoring model rather than the traditional one-on-one model to maximize the number of leaders with whom participants interact while minimizing the effort of all involved.

This paper begins with a discussion on mentoring women faculty and the benefits of group and network mentoring models. Next is a detailed description of the Mentoring-for-Leadership lunch program, followed by a discussion on program evaluation findings. A discussion of potential challenges to implementing this type of program appears next. The paper concludes with recommendations for replication.

Why Mentor Women Faculty in Groups? Creating Critical Mass and Community

If an institution wants to establish a mentoring program, it is critical that the structure of the program fit the institutional culture. There are many mentoring models including traditional one-on-one models, network models, and peer mentoring models. At the University of Washington, a group or network mentoring model fits well with the institutional culture. Thus, the mentoring program described in this paper is informal, network-based, and is fluidly structured. What follows next is a discussion on the need for and benefits of this type of mentoring model.

The literature shows that women, in general, disproportionately benefit from (Bilimoria et al., 2006; Chesler & Chesler, 2002), and are disproportionately denied access to mentoring (Niemeier & Gonzales, 2004; Smith, Smith, & Markham, 2000). Mentoring relationships have been shown to result in increased job satisfaction, commitment to the institution, rates of promotion, salary, and retention, and in reduced work and family conflict (Baugh & Scandura, 1999; de Janasz & Sullivan, 2004; Moody, 2004; Nielson, Carlson, & Lankau, 2001; Tenenbaum, Crosby, & Gliner, 2001; Young & Perrewé, 2000). Moreover, junior faculty members who receive regular feedback and guidance from mentors are better prepared to navigate organizational structures and the requirements for tenure and, thus, are more likely to enjoy success in their academic pursuits (Moody, 2004). The ADVANCE Mentoring-for-Leadership program design is motivated by these findings as well as other research that demonstrate:

- the lack of mentoring opportunities available to women faculty and faculty from underrepresented minorities and the call for institutions to provide mentoring;
- the role that mentoring plays in faculty productivity, satisfaction, success, retention, and advancement:
- the benefits specific to group mentoring, including a sense of belonging and a stronger collegial network.

Higher education has traditionally been male-dominated and the obstacles that impede women's advancement in the academy make it more difficult for women faculty members to find mentors. The marginalization of women faculty members persists due to exclusionary practices, structural segregation and stereotypical assumptions about women's abilities (Smith et al., 2000). These conditions combine to limit both formal and informal opportunities for women to develop mentoring relationships (Ragins & Cotton, 1991).

Understanding these challenges and uniting with other women scholars to share experiences and advice can help promote women's professional development (Niemeier & Gonzales, 2004; Wunsch, 1994).

Similarly, underrepresented minority faculty face institutional barriers that limit mentorship opportunities (Smith et al., 2000). For women who are also members of an ethnic minority, opportunities for mentoring are further reduced (Wunsch, 1993). As a result, women faculty and faculty from underrepresented minority groups are creating mentoring opportunities for themselves, including relationships that go beyond organizational boundaries (Smith et al., 2000). Academic institutions should support mentoring programs, such as the Mentoring-for-Leadership Lunches, that offer information about advancing within the academy and provide opportunities for women faculty to interact with and build a supportive network of colleagues.

UW ADVANCE designed the Mentoring-for-Leadership lunch program to provide mentoring opportunities to women faculty in STEM fields at the UW. The Mentoring-for-Leadership lunches provide a forum for women faculty to discuss "issues facing higher education in general and the challenges facing women specifically" (Niemeier & Gonzales, 2004, p. 164.). As such, the lunch series is an institutional intervention designed to assist women faculty in joining social networks (Moody, 2004), and receiving mentoring (Austin & Rice, 1998; Yale University Office of Public Affairs, 2007). This effort is vitally important to women's success in academia because, although they receive less support, they benefit more from mentoring than do men (Chesler & Chesler, 2002). In fact, when compared to men faculty, studies have found that women faculty receive almost twice the amount of support from mentoring relationships (Bilimoria et al., 2006).

An important benefit of mentoring is the "buffer" it provides to reduce the impact of discrimination and help faculty get on the "fast track" to career advancement (Ragins & Cotton, 1991). Women who have supportive networks in academia early in their careers are more likely to advance into positions of leadership (Moore & Salimbene, 1981; Wright et al., 2003). In addition, exposure to women leaders can influence whether women faculty see themselves as potential leaders (Markus & Nurius, 1986). For this reason, the Mentoring-for-Leadership lunches expose women faculty to women leaders with the dual goals of increasing the awareness of models of and paths to leadership, and expanding ideas of what is possible in their own careers (Markus & Nurius, 1986).

Higher education careers are changing and the one-on-one, single mentor model is no longer an efficient means for mentoring junior faculty (de Janasz & Sullivan, 2004). Faculty benefit most from a network of multiple mentors and from interacting with a large group of potential mentors rather than having a few 'traditional' mentors (Baugh & Scandura, 1999; Blackburn, Chapman, & Cameron, 1981; de Janasz & Sullivan, 2004; Higgins, 2000). This idea is supported by the work of Granovetter (1973) that found that people benefited more from 'weak ties' to numerous mentors than from strong, intimate relationships with only one mentor. Similarly, being part of a mentoring network allows each participant to receive mentoring from a number of people, as well as to mentor others (Haring, 1999). Using a group or network mentoring model promotes community and collegiality among faculty (Austin & Rice, 1998; Boice, 1992; Gappa, 2002; Tierney & Bensimon, 1996). Group or network mentoring encourages mutual support within the group, benefiting all participants (Haring, 1999). Similarly, participation in a mentoring group increases a faculty member's involvement with the campus community, potentially increasing the sense of belonging and therefore increasing retention. This concept is based on research that shows that involvement relates to 'persistence,' or the completion of an academic degree, among undergraduate students (Astin, 1975, 1984; Tinto, 1993) and that departmental climate and academic/social integration are key factors influencing the retention and advancement of female graduate students (Tinto, 1997).

In addition to helping faculty navigate a system wrought with inequities, mentoring can serve as a means to transform institutional climates (Wunsch, 1994). As a form of academic socialization, mentoring permits newcomers and experienced members of a group to interact, creating opportunities to challenge an inequitable status quo (Antony, 2002; Wunsch, 1994).

Finally, mentoring and the ability to discuss strategies for work/family balance have been linked to increased satisfaction with work, personal life, and the balance between the two (Hopkins, 2004; Kossek, Noe, & Colquitt, 2001; Nielson et al., 2001). A key element of the Mentoring-for-Leadership lunches is the opportunity to hear personal stories of women leaders and peers, including strategies for balancing academic and family responsibilities. The Mentoring-for-Leadership lunches allow women to identify with other women's successes and provide tools and incentives for women to advance in their careers.

Mentoring-for-Leadership Program Description

The ADVANCE Mentoring-for-Leadership lunch series is a monthly lunch gathering for STEM women faculty interested in positions of leadership. The program is quite informal. Each hour-and-a-half event occurs over lunch. Participants socialize and eat for the first 20-30 minutes. This structure provides time for the speaker to eat and for informal conversation among attendees. Once the speaker has finished her lunch, she makes approximately 20 minutes of remarks on her personal experiences and thoughts on being in a position of leadership. For example,

previous speakers have told their personal history; summarized career obstacles and how they overcame them; discussed success strategies; described what surprises they found when moving into academic leadership or the challenges encountered; explained how and why they made the decision to take on a leadership position; and shared work/life and research/administration balancing strategies. The program concludes with a general question and answer session. The entire event format is discussion-based.

Speakers have held a variety of leadership positions. Although many of the speakers have a STEM background, the program has invited leaders from a variety of fields across campus. Between May 2003 and December 2006, 44 women have spoken. During that time, 54.5% of the speakers were from the University of Washington and 45.5% were from other universities or national organizations. Table 1 illustrates the various leadership levels of past speakers. Sixty-five percent of the speakers have been at the associate dean level or higher. Several of the speakers have moved to higher leadership positions since speaking in the program. While many of the speakers occupy administrative leadership positions, speakers also represent research leaders or occupy other nonpositional leadership roles. The program aims to include a variety of leadership examples.

[Table 1 about here]

One of the key elements and benefits of the program is cross-unit networking and community building. In addition to learning from the guest speaker, participants have the opportunity to learn from each other. Past participants represent over 30 STEM departments at UW and at other institutions and range from recently arrived faculty to emerita faculty to visiting faculty. The typical academic hierarchical norms do not impede the conversation. While attendees occasionally invite a woman post-doc or graduate student, the program is intended to provide women faculty an opportunity to interact with one another and to meet women leaders. This program offers women faculty a chance to gather with colleagues whom they might not normally see. Furthermore, as women are still significantly underrepresented in STEM faculties, faculty women may have few opportunities to gather in a room full of fellow women science and engineering faculty. The networking and mentoring is multi-directional. Even the speakers have commented on the powerful experience of being in a room full of Ph.D.-level women scientists and engineers.

For many of the attendees, a close-up look into the life of an academic leader is a unique experience. The typical lunch size is 15-30 faculty women, which enables intimate discussion. The feeling in the room is more of a dinner party than a formal presentation. Speakers have commented that this event has given them an opportunity to reflect on their own accomplishments and consider how gender influenced their successes. Learning from other women about what it is like to be in a particular leadership position and what strategies other women leaders use to navigate their various responsibilities, women faculty can be inspired to consider being leaders themselves.

Program Outcomes Assessment

The program goals and expected outcomes have evolved since the Mentoring-for-Leadership program began in May 2003. When the luncheon series began, the main goals were to encourage women to consider leadership and to expose them to myriad career paths. As the luncheons continued, it became obvious that this program was not only exposing women to leadership, but also was offering a community and network of scholars that did not exist prior to the luncheons. Separate evaluation strategies address the original and the final, 'evolved' program goals. Quarterly evaluations occurred from the beginning of the Mentoring-for-Leadership program and include formative and some summative evaluation. More recently, a one-time goals assessment instrument measured the attainment of the evolved goals, and provided an expanded summative assessment of the program. Four themes emerged from the data during analysis. The sections below describe both of the evaluation methodologies and report on the four themes, namely: the mentoring model, networks and community, professional development, and retention.

Quarterly Evaluation and Goals Assessment Methodologies

Since the program began, there have been five anonymous quarterly evaluation surveys administered. In general, administration is once per quarter, but some evaluations have combined quarters together. Earlier quarterly evaluations used paper and pencil while the more recent luncheon evaluations utilized an online survey. There have been 66 responses to all five quarterly surveys. Because each survey is anonymous, it is possible that a person could respond to all five and be in this sample five times over. A quarterly evaluation survey typically lists from 5 to 15 of the most recent Mentoring-for-Leadership luncheons, and asks which luncheons people attended. The survey asks about the perceived usefulness of topics, the parts of the luncheons that are helpful to their professional growth, questions about mentoring, leadership interests, as well as changing attitudes about leadership and acceptance of new responsibilities. Response rate to the quarterly evaluation surveys varied from 12.3% to 52%. The average response rate of the five survey administrations was approximately 30%.

The purpose of the goals assessment evaluation was to assess the effectiveness of the Mentoring-for-Leadership lunches and the overall impact of the program. All the UW women faculty and post-docs who had participated in at least one lunch between May 2003 and December 2006 were invited to complete an anonymous web-based survey during the first two weeks of February 2007. In total, 106 women faculty were invited to participate and 54 responded, a response rate of 51%. The goals assessment survey was designed to collect information such as whether attending the lunches increased community, retention, awareness of paths to leadership, and desire to pursue positions of leadership.

Mentoring Model

One of the key programmatic questions was whether the program format was an effective mentoring model. Women who returned the quarterly evaluations and answered the question (n=60) overwhelmingly (83.3%) indicate that the luncheons are an effective approach to mentoring for them. Another 15% indicate that it is possibly an effective approach to mentoring. Only one person responded that it was not effective for her. Likewise, of the 18 comments provided for an open-ended question about the effectiveness of this mentoring model, only two responses indicated that one-on-one mentoring would be more effective, while several indicated that the group mentoring style was very effective. Comments about the effectiveness of the model include:

"It's great to be able to hear perspectives of many people instead of just a single mentor."

"I think the group lunches are much better than one-on-one because you get more/different perspectives and cover more ground."

When respondents were asked on the quarterly evaluations whether they would like a more formal mentoring program where they are matched with one individual, 63 women responded, and only 16% indicated they would like a more individual mentoring relationship. Over half of the respondents said they did not want that type of a relationship. The participant comments and evaluation demonstrate that the program format suits the leadership mentoring needs of the majority of women faculty participating in this program.

Finally, when asked on the goals assessment if they would recommend that 'the Mentoring-for-Leadership lunch series be adopted at other institutions, '53 (98.1%) said "yes" and the remaining one respondent indicated "maybe."

Networks and Community

As the mentoring literature has suggested, mentoring opportunities often foster community building (Chesler & Chesler, 2002; de Janasz & Sullivan, 2004; Tierney & Bensimon, 1996; Wunsch, 1994). Program evaluation found that the lunches are successful at building community. In addition to frequent anecdotal comments about the community the Mentoring-for-Leadership luncheons created, participants also indicated in the quarterly evaluations that networking with other women faculty was an important aspect of the luncheons (See Figure 1).

To further explore this concept, three questions were included in the goals assessment to evaluate whether participation in the lunches increased aspects of community. On the statement that participation has resulted in a 'greater sense of community at UW' 52 (96.3%) responded "agree" or "strongly agree." Likewise, 46 (85.2%) indicated that they "agree" or "strongly agree" that the lunches resulted in an 'expanded network of scholars.' Finally, 28 (51.9%) indicated that they "agree" or "strongly agree" that they have 'initiated contact (outside of the lunches) with other lunch participants.'

The lunches have helped reduce isolation and have increased a sense of belonging among the women faculty. Participant comments from the open-ended questions of both evaluation instruments include:

"Now I find myself more aware of opportunities for women and I feel I have a support network that I never found in my own department. I strongly recommend these lunches for women faculty." "... as I am relatively young compared to the rest of the group, one of the most beneficial parts for me is the more casual conversation that occurs as we gather and eat. Before this experience I had never met a Dean, or University President (unless I was interviewing); now an [Associate] Dean knows me by name."

While providing a network of scholars and community of support was not an initial goal of the program, this outcome has been extremely beneficial for many of the participants.

Personal and Professional Development

Many of the participants found particular aspects of the Mentoring-for-Leadership luncheons helpful for their professional growth. Figure 1, based on the quarterly evaluation data, indicates that women find hearing different perspectives on leadership the most helpful aspect of the luncheons. One participant remarked that these lunches "have given me a model for leadership that I did not have before." Another participant commented, "it has been interesting to see how a leadership role is 'worn' by a woman. It seems more interesting and original than when 'worn' by a man. There seems to be more room for innovation." It is purposeful that only women leaders thus far have been invited to speak. Women faculty are surrounded by many male leadership models, but few have had the opportunity to work with a woman leader. However, approximately 35% of the quarterly evaluation respondents have indicated that they would like to hear from male leaders, and 40% have said that they might like to hear from

male leaders. If the program began to include male leaders in the luncheon series, careful evaluation will determine the success of the change.

[Figure 1 about here]

One of the goals of the luncheons is to help women see that leadership is a possibility and understand that not everyone gets to leadership by the same path. On the quarterly evaluations, participants were asked if they have an interest in leadership, and none of the respondents said "no." Fully 45% said they had an interest, 52% said they might be interested, and 3% indicated they were currently in leadership.

Many of the qualitative comments from the quarterly evaluations noted how this program has made leadership more accessible. Not only do participants have access to women in positions of academic leadership and access to their personal stories, but they have also started to view themselves differently. One participant remarked that these lunches have "opened my mind about the possibilities within my career." Another said that hearing these speakers has "shown me that leadership is a possible option. These are normal women who are not that different from me." The Mentoring-for-Leadership lunches provide evidence that women can and should be academic leaders, and that the next leader might just be someone sitting at the table.

In fact, many of the attendees are embarking on new leadership experiences. The respondents from the 2004 quarterly evaluation surveys forward were asked if they had taken on new responsibilities in their department, within their professional society, or at the university in general since attending the lunches. Of the 53 respondents asked this question, 27 indicated they had taken on new responsibilities. Of those 27 taking on new responsibilities, 14 indicated they had taken on new responsibilities in their department (26.4%), 12 said they had taken on new responsibilities in their professional society (22.6%) and seven said they had taken on new responsibilities at the university in general (13.2%). Furthermore, 22 women had taken on one new responsibility, four women had taken on two new responsibilities, and one woman indicated taking on three new responsibilities.

Four questions on the goals assessment address leadership and the degree to which participation in the lunches has influenced understandings of leadership. On the statement that participation has increased awareness of 'diverse paths to leadership' 52 (96.3%) responded "agree" or "strongly agree." A respondent shared, "It has shown me there are so many different paths possible and so many ways to be a leader. Just meeting so many intelligent, capable women is inspiring!" Similarly, another respondent shared, "I am in an administrative position myself, and have found the lunches to be enormously useful in expanding my awareness of the multiple routes to such positions, and the many ways in which one can practice leadership." Likewise, 52 (96.2%) indicated that they "agree" or "strongly agree" that the lunches resulted in increased awareness of 'various leadership styles.' Another 39 (72.2%) indicated that they "agree" or "strongly agree" that they are 'more likely to pursue a position of leadership at some point' in their career. In fact, one respondent shared, "I had never really imagined myself going into leadership at a university until I started attending these lunches." Finally, 43 (79.7%) indicated that they "agree" or "strongly agree" that they have a 'more positive perception of being in a leadership position.'

On the goals assessment, respondents were asked how many lunches they had attended to determine if there is a relationship between the positive effects of the lunches and higher levels of attendance. Of the respondents, 16 (29.1%) attended 1-3 lunches, 20 (37.0%) attended 4-6 lunches, and 18 (33.3%) attended more than six lunches. Using a two-tailed Pearson correlation analysis of the number of lunches attended, four of the variables have positive relationships at the .05 level of significance with how many lunches respondents attended. A greater number of lunches attended is correlated with: 'greater sense of community at UW' (r= .34), 'expanded network of scholars' (r= .28), 'initiated contact with other participants' (r= .31), and 'more likely to pursue a position of leadership' (r=.36). That is, the more lunches in which a woman indicated participating, the more likely she was to view the UW community and network of scholars positively. In addition, the more lunches she attended, the more likely she was to initiate contact outside of the lunches with other participants and more likely she was to think about pursing a position of leadership. This finding suggests that the effect of the lunches may in part be cumulative. The greater the number of lunches attended, the greater the exposure to both women leaders and potential colleagues.

Retention

Given the literature on community and retention (Austin & Rice, 1998; Boice, 1992; Gappa, 2002; Tierney & Bensimon, 1996), the goals assessment survey included a question about retention. Of the 54 respondents, 36 (66.7%) indicated that they "agree" or "strongly agree" that participation in the lunches increased the likelihood 'of staying at the UW.' Given the paucity of women faculty progressing through the academic pipeline, even if only a few women indicated that the lunches increased their likelihood of staying at the university, the lunches would be considered a success.

The goals assessment retention data above support findings from an analysis of the retention/attrition rates of women faculty in the participating departments. From Spring of 2003 when the luncheons began to the Fall of

2005, there were seven tenured and tenure-track women faculty in the original 19 ADVANCE departments¹ who left UW to go to another institution. The total number of ADVANCE female tenure and tenure-track faculty during the 2003-2004, 2004-2005 and 2005-2006 years were 72, 68, and 66, respectively. Thus, depending on the point in time, the retention rate is 90% to 89% for ADVANCE tenure and tenure-track women faculty. Sixty-two tenure and tenure-track women faculty from ADVANCE departments have participated in the series, and since only 3 of the 7 women who left UW had also attended the Mentoring-for-Leadership lunch series, the retention rate among the tenure and tenure-track Mentoring-for-Leadership participants is 95%.

There does seem to be a better retention rate for women who attended the Mentoring-for-Leadership lunches, although it is not clear if the difference is significant. What is known is that of the three women who attended the lunches but who left the university, one left for a leadership position, one left for career advancement, and the third left for dual-career reasons. The other four women, who did not attend the lunches but who also left the UW during the specified period, left for reasons of career advancement, negative department culture, poor career fit and dual career. The Mentoring-for-Leadership lunch participants all left the UW for positive or neutral reasons. Two of the non-participants left for negative reasons.

Potential Challenges

As with most new initiatives, there are potential challenges to the success of a mentoring program for women faculty. Defining the specific goals of a program and the appropriate target demographic can be difficult. If there are too few women faculty to sustain a group mentoring program, it may be necessary to include others – whether women post-docs or graduate students, or men faculty. Depending on state regulations and the source of funding for a women's mentoring initiative, it may be difficult to establish a program exclusively for women. Because of the focus of the NSF ADVANCE grant, the UW was able to target this program to women faculty. Eventually, upon the suggestion of the College of Engineering dean in 2007, a quarterly co-ed mentoring for leadership lunch was also created.

Speaker selection can also pose challenges. Not all speakers are created equal, and few narratives resonate with all faculty. Having speakers with a range of leadership models and career paths is desirable. Keep in mind that some faculty may be resentful of narratives that include more domestic support than they enjoy, while other faculty are disappointed by hearing "superwoman" narratives that they do not see themselves emulating. Additionally, some

¹ The original UW ADVANCE departments included 10 engineering departments and 9 science departments.

speakers may deny or simply not address experiencing hardships and discrimination in their careers, which can be frustrating to participants who are seeking advice on how to overcome cultural barriers to success.

Some institutions may face a scarcity of women leaders. In these cases leadership should be broadly defined and extend beyond positional leadership. Research and teaching scholars, campus visitors, community leaders, and advisory board members would make excellent speaker candidates. While speakers need not occupy formal leadership positions, speakers who can be thoughtful about their leadership style and experience and can more easily refer to themselves as leaders on some level better serve the program.

Not all institutional or discipline cultures may support this type of program. Organizational politics, hierarchies, and culture may prevent the community element of this program from flourishing or prevent the honest expression of personal insights and lessons learned. When this program began in May 2003, UW ADVANCE identified 68 women faculty in the original 19 ADVANCE departments at the start of this program. Given the size of UW, many of these women faculty did not know each other and were open to expanding their campus network. By spanning two colleges and multiple departments, pre-existing department and college politics are less salient. Institutions interested in establishing a program like the one described here should carefully consider how the organizational context might interact with the program goals.

A final challenge is funding. Paying for lunch is a rather small portion of the programmatic costs. Without funding for staff support, this program becomes an additional item on already full plates. Secure funding signals the importance of and investment in leadership development and faculty community. Also, having dedicated staff helps maintain program continuity and momentum. Without ongoing support, programs such as these can easily fade away.

Recommendations for Replication

This Mentoring-for-Leadership lunch series is a low cost, high impact program that fosters peer and network mentoring, facilitates networking and sharing of experiences, and builds a culture of leadership. The program is easy to administer and contributes to a sense of belonging. Moreover, the group format and informal nature of the discussions require relatively less time commitment on the part of faculty or staff administering this program compared to other styles of mentoring programs. The design of the Mentoring-for-Leadership lunches is specifically tailored to the needs of women in STEM departments at the University of Washington, a large, public, Doctoral/Research University where STEM women faculty are in the minority. This format can be restructured to

address most effectively mentoring at other types of academic institutions and need not be limited to leadership development, but could address myriad issues related to faculty success. In addition, this program is readily adaptable to different target audiences, for example faculty of color, junior faculty, senior faculty, graduate students, etc.

What follows are some key recommendations for replicating this model:

- Hold the events over lunch to help faculty better manage their time constraints and when possible, provide lunch
- Hold regular events, for example monthly or quarterly
- Reduce speaker preparation time by keeping the structure informal, asking people to discuss their personal experiences, and limiting speaker comments to 20 minutes to allow time for questions and discussion
- Invite faculty from all career levels to encourage peer and vertical mentoring (both up and down the career path)
- Include speakers from a range of leadership levels and career pathways
- Annually solicit speaker suggestions as faculty may be inviting colleagues to campus for other events who might also be good speakers
- To help facilitate networking, conduct a round of introductions at the beginning of each event and distribute a list of participant contact information

Identifying a home unit to manage program administration is important for maintaining program consistency and continuity. Partial staff support is highly recommended. The staff could then manage program logistics such as creating and maintaining an email list serve to facilitate communication and solicit ideas for future speakers. The staff could also manage speaker invitations and schedule events, circulate a two-paragraph speaker biography in an email call for RSVPs, and share the list of participants with the speakers prior to the lunch to give them a sense of the audience. Finally, the staff could also conduct focus groups or online surveys to identify broad topics of interest.

For more information, visit the Mentoring-for-Leadership website at http://www.engr.washington.edu/advance/mentoring/leadership lunch.html.

Conclusion

This paper outlines a simple and effective strategy for mentoring women STEM faculty and building a culture of leadership so that more women will consider and pursue positions of leadership and effect positive change in the academy. By using a network mentoring strategy, the UW ADVANCE program has created an ongoing forum that has influenced women faculty to consider and pursue positions of leadership and created a community of women STEM faculty at the University of Washington. The community generated through this program helps women faculty reduce isolation, increase understanding of structural barriers and how to confront/navigate them, and develop allies that can bolster career advancement. As one participant reflected, "I derive an intangible benefit and sense of encouragement just knowing that these luncheons exist. Thank you." This program leverages the power of individual stories, community, and personal exposure to support and encourage women's academic careers and nudge more women to consider and pursue academic leadership.

Acknowledgements

This work is made possible through a National Science Foundation grant (SBE-0123442). The authors would like to recognize and thank the late Denice D. Denton, former Dean of the College of Engineering at the University of Washington, whose vision inspired the creation of the ADVANCE Mentoring-for-Leadership lunch series. The authors would also like to thank the former and current ADVANCE Program Operations Specialist David Atsales and Debbie Jung who provided the logistical staff support for this program. Lastly, the authors thank the two anonymous referees for their helpful questions and comments which have improved this paper.

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Table 1. Leadership levels of Mentoring-for-Leadership lunch speakers, May 2003 – December 2006

	Number	Percentage
President/Chancellor	4	9%
Provost/Vice Provosts/Vice Presidents	9	20%
Deans/Associate Deans	17	39%
Academic/Non-Academic Directors	5	11%
Chairs	3	7%
Faculty/Scientist	6	14%

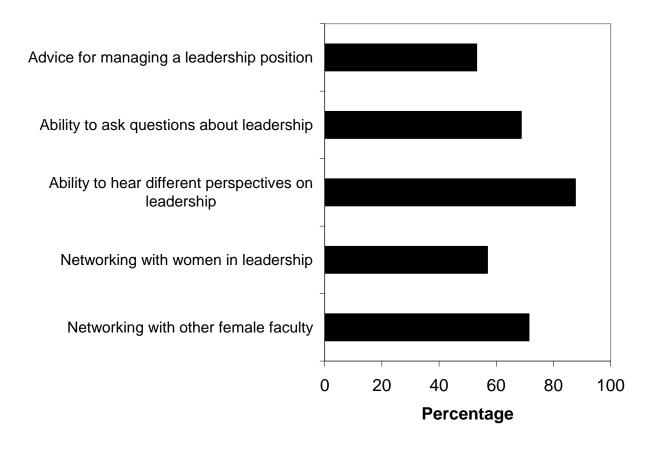


Figure 1. Percentage of respondents who indicated that a particular aspect of the luncheons is helpful for their professional growth