

AC 2010-1402: ADVANCE-PURDUE: STRATEGIES TO MAKE THE DIFFERENCE FOR NEW FACULTY SUCCESS

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Introduction

The unequal representation of gender and race in the STEM academic workforce has been long noted. In fact, concerted efforts have been made over the past two decades to remove barriers that have prevented women and minorities from full participation as faculty. As a result, the percentage of female PhD holders in full-time STEM academic positions at 2-year and 4-year colleges and universities has increased from 10.6% in 1985 to 25.1% in 2006 ¹. This increase has been attributed to the increase in the number of females earning science and engineering PhDs. However, progress in faculty representation at research intensive institutions has been painfully slow. A study of the top 100 science and engineering departments (as ranked by NSF) shows that female science and engineering faculty had increased only 3% in the past five years up to a total STEM representation of 17% ².

In 2001, the National Science Foundation announced the ADVANCE program to address the disparity in faculty representation. The goal of ADVANCE is to "... develop systemic approaches to increase the representation and advancement of women in academic science and engineering careers, thereby contributing to the development of a more diverse science and engineering workforce." (NSF ADVANCE grant webpage www.nsf.gov/crssprgm/advance/index.jsp). Purdue was awarded an Institutional Transformation ADVANCE grant in October 2008. The overarching goal of ADVANCE-Purdue is to be an advocate for institutional change. To become embedded into the fabric of the institution, policy and/or procedural changes must occur at the institutional level.

At the heart of ADVANCE-Purdue is the Purdue Center for Faculty Success (PCFS) focused on developing programming and implementing activities for the success of all faculty. The activities are designed around the three goals: 1) to increase the number of women of color in STEM faculty positions, 2) to improve the success of all women STEM faculty, and 3) to engage all faculty in transforming Purdue. Current programming includes:

- Search Chair Workshops on Faculty Hiring designed to increase awareness of the impact of unconscious bias;
- Cultural Center Events for faculty that celebrate the culture and heritage of African American, Latino, and Native American people, particularly those currently employed by or enrolled at Purdue;
- a Mentoring Institute for newly hired assistant professors to develop a peer-mentoring network across campus;
- Leadership Development opportunities for tenured faculty, with a focus on STEM female faculty;
- facilitated discussions regarding Work-Life Balance for STEM female faculty;
- President's Luncheons for newly hired STEM female faculty to offer validation and provide a networking venue; and
- Diversity Education Workshops to develop active participants in facilitating the success of women and faculty of color in the all disciplines.

ADVANCE-Purdue continually provides the campus leadership with evidence of program effectiveness and will offer a basis for campus-wide changes to policy and practice. This paper will discuss the implementation and formative evaluation of three activities in detail; the Search Chair Workshop on Faculty Hiring, the Mentoring Institute, and the President's Luncheons.

Search Chair Workshop on Faculty Hiring

In January 2009, the PCFS team hosted *Searching for Excellence & Diversity: A Workshop for Search Committee Chairs and Members* presented by the University of Wisconsin-Madison, Women in Science & Engineering Leadership Institute (WISELI). This workshop provided search committee chairs and members, and Department Heads with best practices to aid in obtaining a diverse pool of candidates. Evaluation data indicated that participants found the information about non-biased evaluation of applicants to be especially useful. Based on the success of the inaugural workshop, PCFS modified the WISELI workshop to address Purdue faculty. The revised workshop was held in Fall 2009 with the goal of increasing search chairs' knowledge about current search and hiring best practices and procedures that lead to the employment of an excellent and diverse faculty. Evaluation data and participant demographics are presented below.

Attendance at the WISELI workshop was excellent. Eighty-four faculty and staff members, representing all of the Colleges/Schools on campus attended the four-hour workshop. The participants were seated at round tables of 8 – 10 with a facilitator at each table. The facilitators were selected based on their previous knowledge and experience and were trained by the WISELI staff the previous day. The WISELI staff also debriefed the facilitators in a train-the-trainer session during the afternoon following the workshop. Using this method, a cadre of facilitators was developed in order to produce a future workshop using Purdue personnel. WISELI provided excellent materials that were developed for the University of Wisconsin at Madison. In addition to the presenters from WISELI, presenters from Purdue who served specific roles, such as the Director of Institutional Equity, interacted with the group. Although the feedback of the workshop was good, the participants indicated that they would like to have more Purdue-centric materials in addition to the research-based materials on unconscious bias and assumptions.

A team from PCFS in conjunction with the Office of Institutional Equity (OIE) and the WISELI materials developed the ADVANCE-Purdue Search Chair Workshop on Faculty Hiring. The goal of the workshop is to make faculty search committee chairs more aware of the impact that unconscious bias and assumptions play in faculty searches, and to provide them with tools to enable unbiased faculty searches resulting in the hiring of high-quality and diverse faculty members. The workshop was first presented in September 2009 and will be held annually. Fortunately, the OIE was in the process of rewriting their excellent manual entitled *Faculty Search and Screen, procedures manual for faculty search and screen committees*. They were willing to make appropriate additions based on the WISELI materials. A brochure was developed by the PCFS entitled *Reviewing Applicants, Research on Bias and Assumptions*, based on a WISELI brochure by the same name. The WISELI workshop script was revamped in order to be Purdue-centric. The presenters and facilitators were all Purdue faculty and staff members.

This workshop attracted fifty-four participants (67% completed the survey) who rated it highly. Participants were asked to rate (on a 5 point scale) the hiring strategies offered as well as the effectiveness of the overall workshop. The majority of participants considered the hiring strategies offered to be meaningful. Although ratings were not markedly different between topics, the lowest rating was related to how to successfully hire a chosen candidate (4.00); while the highest rating dealt with how to run an effective search committee (4.42). Of note is the positive response about the unconscious assumptions and biases portion of the workshop (4.33). All participants agreed that the materials distributed were useful (4.50). The high quality of the materials was also mentioned in the open response portion of the survey. Furthermore, 34 of 36 respondents agreed that the workshop should be offered in the future. In response to the open ended questions, participants stated that the group discussions, information about legal aspects of the search and hire process, and the materials distributed were among the most beneficial aspects of the workshop. Many also mentioned the workshop experience confirmed and clarified their perspectives about the challenges of hiring a diverse and excellent faculty. A web-based survey will be sent to all attendees seven months after the workshop to determine how information from the workshop informed their search and hire practices; additionally, participants will be asked to provide suggestions to improve the recruitment and hiring of a diverse and excellent faculty.

Future plans are to train a larger number of facilitators. Invitations will be sent to the individuals who participated in either the January or September workshops. A training program will be presented in spring 2010 in order to have facilitators available for subsequent workshops. Modifications will be made to the materials and the script to reflect the feedback from the previous workshops. By partnering with the OIE we hope to institutionalize the unconscious bias and assumption literature into the Search and Screen process.

Mentoring Institute

One of the goals of ADVANCE-Purdue is to improve the success of the female faculty. PCFS is using mentoring as a vehicle to foster success and retention through a Mentoring Institute (MI). The MI is an opportunity for peer and group mentoring, networking, and information gathering, and is open to all new assistant professors, regardless of gender, ethnicity or discipline. In addition, at least one senior faculty from each college participates in the MI. This commitment demonstrates the importance and support of the MI to new faculty. Participation by senior faculty is also expected to encourage attendance of the junior faculty thereby improving networking and information exchange. Assessment will be conducted twice during the academic year and the results will be presented.

In order to establish mentoring as a priority, PCFS has established a common hour for all first-year assistant professors. It was paramount that the common hour be held during regular work hours and at a time that the faculty are not required to participate in other departmental activities such as teaching, faculty meetings or colloquiums. The MI is held once per month during this time, which allows the Colleges/Schools to use the common hour to hold other professional development opportunities for their new faculty.

PCFS felt that it was important not to single out the females and/or the faculty of color but to invite all first-year faculty. In this way, the underrepresented faculty do not have an extra burden

and are not stigmatized as needing extra assistance. Approximately 70 first-year faculty and 10 senior faculty were invited to participate. The senior faculty have been encouraged to extend the learning from each MI session by having additional sessions with the first-year faculty from their individual College/School during subsequent common hours. Some, but not all, Colleges/Schools are having additional mentoring activities.

Each session of the MI includes a guest speaker and light refreshments. Most importantly, time is allotted for the first-year faculty to interact with each other that is facilitated by a senior faculty member. The MI topics have included Mentoring, Grant Writing, Teaching, Promotion and Tenure, Interdisciplinary Research and Graduate Student Recruitment and Mentoring. Topics were determined by polling the participants in order to get buy-in and maintain interest.

A participant survey was conducted after the first (October 2009) MI session. The attendees indicated the session was relevant and worthwhile. Some offered suggestions to improve the format of the session so more time could be spent interacting with colleagues and senior faculty; these opportunities for networking were valued. Future assessment includes a survey being sent in January 2010 to those who meet the criteria for the MI but have not attended and in May 2010 to those who have attended to inform content and implementation of future MI sessions.

President's Luncheons

The President's Luncheons are held once per semester to let the newly hired female STEM assistant professors know their value and worth to Purdue as well as facilitate a networking opportunity for these faculty with each other and with select senior female STEM faculty. The 'newly' hired cohort includes those who have joined the university within the past 2 years. Assessment from the first event showed that the luncheon provided a relaxed venue for sharing and networking with other female faculty members, especially those outside of their department. Evaluation data and participant demographics follow.

The inaugural Luncheon was held in May 2009. Twenty five new and ten senior female STEM faculty attended. Tables were arranged to include 2 senior and 5 new faculty. The President spent time at each table. The senior faculty led a discussion centered on recruiting female faculty. The responses to the open-ended questions confirmed that the attendees highly valued the opportunity to spend time with other female colleagues, especially outside of their departments. Other comments centered on the value of the workshop and the desire to have more time with each other and the President.

The second luncheon was held in November 2009 in conjunction with the ADVANCE-Purdue External Advisory Board Meeting. Seating was arranged such that a board member, a senior faculty member and 3-4 new faculty members were at each table. The board members led the lunch discussion. Following lunch, the board members and the President held a panel to share their experiences with the new faculty. Twenty-one new faculty invitees attended this second luncheon. Ten of the twenty-one new female faculty attendees (48%) responded to the online survey administered a few days after the luncheon. Again, the consensus was that the luncheon served its purpose to provide a venue for collaboration and peer mentoring.

A new faculty attendee summed up the experience of many: “I certainly benefited from the opportunity to meet new people from other departments / schools...these sorts of events can provide a catalyst for unexpected / serendipitous opportunities.”

Conclusion

In its first year of existence, the PCFS offered many exciting programs to enhance the success of the Purdue faculty. Program design, formative assessment and evaluation are central to achieve the objectives of this complex project. The information collected from all the PCFS initiatives works synergistically to inform the development, implementation and redesign of the activities offered to enhance opportunities for faculty members at Purdue University. Each program has been designed to directly address one or more of the goals of ADVANCE-Purdue which are to 1) to increase the number of women of color in STEM faculty positions, 2) to improve the success of all women STEM faculty, and 3) to engage all faculty in transforming Purdue. For example, the Search Chair Workshop on Faculty Hiring focused on non-biased evaluation of applicants aligns with Goal 1 and the Mentoring Institute for all newly hired assistant professors across campus and the President’s Luncheons for non-tenured female STEM professors both align with Goal 2. Initial results from these activities indicate that the programming is helpful and valued by the participants. However, it can be challenging to obtain high response rates and minimize survey fatigue when many of the initiatives are attended by the same individuals. Strategies to overcome this challenge include using web-based surveys, providing feedback to attendees, and keeping surveys brief and pertinent. Flexibility and responsiveness in evaluation is critical. Respecting participants’ perspectives and suggestions demonstrates a formative evaluation philosophy that encourages partnership with faculty and interested others. Moreover their contribution will lead to the success of this project, the identity development of the Purdue Center for Faculty Success, and ultimately the institutional transformation of Purdue University.

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