

AC 2007-992: SEARCHING FOR EXCELLENCE AND DIVERSITY: DOES TRAINING FACULTY SEARCH COMMITTEES IMPROVE HIRING OF WOMEN?

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Searching for Excellence & Diversity: Does Training Faculty Search Committees Improve Hiring of Women?

ABSTRACT

With funding from the National Science Foundation's ADVANCE program, the University of Wisconsin-Madison designed and implemented training for chairs of faculty hiring committees. Training began in 2004 and continues to the present. The workshops are implemented using a variety of formats, but the common elements that make them successful include:

- Peer Teaching: Incorporating faculty from the unit to deliver short presentations and serve as discussion facilitators;
- Active Learning: Most time is spent in discussion and a sharing of practices from different departments; presentation is kept to a minimum;
- Unconscious Biases & Assumptions: Participants are introduced to the social psychological literature on unconscious biases and assumptions, and learn how these tendencies might impact the hiring process;
- Accountability: Participants report on their success at recruiting diverse applicants to their pools.

In 2004 and 2005, over half (61%) of departments in biological and physical sciences sent at least one faculty member to this training (usually the chair of the search committee). Using data on faculty offers and faculty new hires, we have found that the departments who sent at least one person for training ("participating departments") did increase the percentage of offers that went to women as well as the number of new assistant professors who are women. In this same time period, non-participating departments actually saw the percentage of offers made to women and their percentage of women new assistant professors *decline*. The linkage between participation in the hiring workshops and offers made to faculty of color is less clear, although it does appear to be positive, especially in 2004. Additionally, using data from our faculty climate surveys, we found that new hires in participating departments reported increased satisfaction with the hiring process overall, compared to new hires in non-participating departments which saw a decline in their new hires' satisfaction from 2003 to 2006.

Although a number of factors likely combined to produce these positive results (most significantly a selection effect, whereby those faculty most motivated and committed to faculty diversity in the hiring process were likely those who chose to attend the workshops), our data show that given a willing audience, our training appears to be correlated with increased hiring of women faculty, as well as other desirable changes to our hiring processes at UW-Madison.

INTRODUCTION

After years of attempting to increase the gender diversity of our academic science and engineering leadership through awards to individual women (e.g., Research Opportunities for Women, Visiting Professorships for Women, Career Advancement Awards, Faculty

Awards for Women, and Professional Opportunities for Women in Research and Education¹), the National Science Foundation (NSF) changed course in the early 21st century, choosing instead to focus on the institutions in which academic scientists and engineers are working rather than on the individuals within those institutions. In 2001, the ADVANCE program was announced with a new solicitation for proposals that would result in “institutional transformation.” The goal of the ADVANCE program overall is to increase the participation and advancement of women in academic science and engineering; as such, it is an effort focused primarily on transforming the policies, practices, and climates for faculty in U.S. research institutions^{1,2}.

The University of Wisconsin-Madison (UW-Madison) was awarded one of the first ADVANCE Institutional Transformation grants in January 2002. The ADVANCE team co-PIs formed a research center—the Women in Science & Engineering Leadership Institute (WISELI³)—to centralize all ADVANCE-related activities. WISELI focused immediately on the faculty hiring process as an essential element of success. The primary way to increase the numbers of women faculty in STEM disciplines is to hire more of them. The faculty hiring process of any university determines the demographic composition of the faculty for decades, as the faculty career can span twenty to forty years. Emphasizing the search and screen process and working to add more women to the faculty by reforming that process is an important place to begin if the goal is to increase both the proportion and numbers of women faculty. While retention, promotion, and other factors are certainly important as well, if you cannot get the women hired in the first place you have no hope of retaining them in the future.

CREATION OF THE *SEARCHING FOR EXCELLENCE & DIVERSITY* WORKSHOPS FOR SEARCH COMMITTEE CHAIRS

WISELI convened a design team consisting of faculty and staff from across the campus to assist in the creation of a workshop or workshop series that would educate faculty and staff about best practices surrounding the hiring of faculty. Included on this team were personnel from human resources, faculty with great knowledge of and success in chairing hiring committees, an ombudsperson, the Equal Employment Opportunities (EEO) officer, and others. The design team assisted the WISELI team with understanding what the content of the workshops should be, and gave advice on the implementation of the training throughout the campus. Workshop materials were designed and piloted in 2003. Feedback from these pilots was incorporated into the final materials developed for the workshops, formally named *Searching for Excellence & Diversity* in 2004, when the workshops were implemented campus-wide for the first time. The target audience of the workshops is chairs of search committees, although others (search committee members, departmental administrators who assist with a search) are more than welcome to attend as well.

The content of the workshops revolves around the “5 Essential Elements of a Successful Search⁴.” The first element, *Run an effective and efficient search committee*, provides tips and techniques for organizing the search process, running committee meetings, and successfully utilizing the time and energy of *all* search committee members. The

importance of following state laws in the search process for a faculty member is impressed upon the search chairs in this section, and important selections from the university's *Search Handbook* are introduced. The workshop begins with this element not only because it comes "first" in the process of chairing a committee, but also because it provides new information to chairs that they did not have before and therefore find very useful; it also helps to alleviate any trepidation they have about being "trained" in something they've seen done many times before. Many search chairs are resistant to the idea that they might need some "training" to run their hiring committees. Usually once the first element of the workshop is completed, they see that we do have information to share that is very useful to them, and they are more open to the rest of the workshop material.

In the second workshop element, we discuss the importance of *Actively recruit[ing] an excellent and diverse pool of candidates*. We provide the search committee chair with the background and language needed to discuss diversity within his or her search committee; we provide tips and resources for building a large and diverse pool; and we introduce some of the myths that might limit the diversity of the applicant pool and counteract these myths with research findings and other arguments.

The third workshop element, *Raise awareness of unconscious assumptions and their influence on evaluation of candidates*, is the most innovative piece of this faculty training. In this section, we present the workshop participants with a brief introduction to the psychological, sociological, economics, and organizational research on unconscious biases and assumptions, and target our presentation of this research to its implications for the hiring process. The workshop participants discuss not only the research and its relevance to the hiring process, they also discuss how to make this research and its implications for the review of candidates known to the rest of their committees. We provide a brochure entitled "Reviewing Applicants: Research on Bias and Assumptions"⁵ that they can take back to their committees to aid them in having these conversations with their colleagues.

The fourth element of the workshop, *Ensure a fair and thorough review of candidates*, is short and, like the first element, is composed of concrete logistical advice for organizing the review of candidates. The fifth element, *Develop and implement an effective interview process*, provides advice and suggestions for the interviewing of candidates. A brief review of the bias and assumption literature is often included in this section as well, especially if the workshop is run in two or three separate sessions timed to the stages of the search.

The materials we have developed for the *Searching for Excellence & Diversity* workshops are flexible, and allow us to reach search committees in any number of ways to deliver our messages. Our preferred method is a two-session workshop that is timed to the stages of the search. This two-session workshop is usually implemented within a school or college at the request of the dean. In the first session (two hours) we meet before the closing date for the position. We work through the first three elements of the search, and invite campus representatives from areas such as Legal Services, the Office for Equity and Diversity (OED), and the Dean's Office, to answer questions the search chairs may have about writing the position announcement, searching for candidates and/or placing

advertisements in new places, or conforming to the state open meetings and open records laws. The session ends with the discussion of unconscious biases and assumptions, and the search chairs are asked to track the diversity of their pools so that they may report on their success when they return to the second session. The second two-hour meeting is held after the position closes, but before the interviews begin. In this session the chairs report on their success in diversifying their pools, and the rest of the session focuses on reviewing the applicants and providing an excellent interview experience. In this session, we often invite personnel from the Provost's Office (for questions on dual career hires), OED (for interviewing protocol and other advice), the College's Equity and Diversity committee, or Community Relations to assist with questions that often arise surrounding the interview process.

When college deans are unwilling to recommend four hours of training to their search committee chairs, we will instead do a two- or three-hour workshop in one session for that college, where all five elements are covered at one time. We also will hold smaller discussion groups (usually two hours) consisting of up to six search chairs from across campus to cover the material; usually the chairs who attend these were unable to attend their college's workshop for some reason. Finally, we often meet with entire search committees at the request of the search committee chair, or the department chair. This is an especially common way of reaching search committees for high-level administrative positions such as dean or provost.

In the biological and physical science departments (70 departments at UW-Madison are classified as housing disciplines in the biological or physical sciences, and approximately 1200 faculty are employed in these departments), 48 faculty representing 31 departments attended a *Searching for Excellence & Diversity* workshop in 2004, and 49 faculty representing 28 departments (10 of which were new departments to our training) attended in 2005. Eighteen academic staff members representing an additional 5 departments (two new) have attended these workshops in 2004 and 2005 as well. Thus, in two years the *Searching for Excellence & Diversity* workshops have affected the searches in 43 biological and physical science departments at the UW-Madison, 61% of the total.

ELEMENTS OF WORKSHOP SUCCESS

We believe that the workshop series we have developed—especially the two-session model that we prefer—have four elements that make them successful. The first is the use of *peers* in the leading and facilitation of the workshops^{6,7}. Wherever we present these workshops, we rely on faculty leadership both for the short presentations and the facilitation of the small group discussions that occur in the workshops⁸. In the beginning, it was WISELI faculty and staff who led the workshops, but as we have run them for several years we have been able to incorporate additional faculty into their implementation. For the workshops that are college-based, we contact faculty in the school/college who have been through the workshop in the past who we believe would be supportive, and ask them to facilitate a small group discussion, or present some small sections of the workshop such as how to run an effective meeting, or how to bring up and discuss diversity with your search committee members. The presentation on biases and

assumptions—by far the longest of the presentations—is always done by a faculty member when we are working with faculty search committee chairs, and we have been recruiting faculty from each of our schools and colleges and training them to make these presentations^{9,10}. Similarly, when we present to units of academic staff (such as University Health Services), we enlist the help of academic staff to lead and facilitate those sessions.

Post-workshop evaluation surveys we distributed to participants provided an opportunity for workshop participants to comment on both the format and content of the *Searching for Excellence & Diversity* workshops. In these surveys, a number of participants mentioned that they enjoyed meeting and learning from the experiences of faculty in different departments. One participant noted that "it was nice to share experiences with other search committees," while another noted that they would utilize the "experiences of faculty from other departments" that they gained in the workshop in their search committee role.

Other respondents noted that they had found it useful to connect with university staff and faculty whom they could use as a resource in their efforts to achieve excellence and diversity through the hiring process. A few specifically suggested that they appreciated hearing from their peers and campus leaders. For instance one respondent from the Medical School stated that it was, "nice to see [a high-level dean's] involvement."

Several respondents also pointedly commented on the *peer teaching* design of the workshop. As one participant put it, "I enjoyed the many voices approach in giving this workshop. Generally a workshop is richer if more than one person presents. Excellent presenters." Another noted that, "The variety of perspectives and discussion groups were helpful." Taken together, data gleaned from evaluation surveys tends to support the conclusion that the *peer teaching* design successfully enhanced the workshop experience for many participants.

The second reason we believe these workshops have been successful at UW-Madison is the use of *active learning* techniques in their implementation^{11,12}. Whether among the young or old, students or faculty, the most effective way for a person to learn a new concept is to discover it for themselves, especially if the new concept (e.g., "we all have biases and assumptions that may affect evaluation of candidates") is in direct conflict with a deeply-held belief (e.g., "I am a fair person who evaluates each person on their merit alone.") We use as little lecture/presentation as possible in our workshops, relying instead on small- and large-group discussion and occasionally case studies to make our points. It is through the active discussions with other respected faculty colleagues around the table that the real learning can take place; the presentations are utilized only to get the conversation started. In this way, we do not present ourselves as the "experts" on hiring, and instead assume that the people seated around the room are the real experts and we encourage them to all learn from each other. Indeed, after three years of implementing these workshops all over campus for many different departments and units, we continue to learn new things ourselves.

In evaluation surveys, some participants reported that the discussion and interaction aspects of the workshop had a positive effect on their learning experience. As one participant noted, “I think the conversations and Q&A can be the most valuable parts of a workshop like this – providing committee members time and opportunity (and direction) to think about key issues.” Others commented that they found the active discussions and interactions both enjoyable and productive. One respondent noted that, “I liked the localizing of facilitators at each table and the back-and-forth between localized discussion and whole-room discussion.” Another commented that, “I found the mix of presentation and discussion ... [to be] valuable for me.” A number of participants also suggested that their workshop experience could have been improved by the inclusion of “more opportunities for discussion” and “as much interaction as possible.” Taken together, these comments suggest that the *active learning* techniques we employed accomplished their aim for at least some workshop participants.

The third reason we believe that the workshops we have created have been successful is our employment of peer-reviewed research on *unconscious biases and assumptions*, and our very specific targeting of the implications of this literature for the search process. Our use of the literature to establish the pervasiveness of biases and assumptions coupled with the linkages we draw to the evaluation of candidates in the academic hiring process help to convince many faculty that these issues are relevant for all search committee members. Even those faculty who are aware of the research on biases and assumptions have often not taken the step to apply the research findings directly to their own work in the evaluation of candidates in the hiring process. Most faculty we have worked with are genuinely grateful to have the opportunity to learn about their own unconscious biases so that they might lessen their impact, as most faculty want to be fair in their reviews. They find the specific tips and advice we give, based on the research literature, to be especially helpful—especially the concise summary we provide to them in the form of our “Reviewing Applicants⁵” brochure.

Responses from our post-workshop evaluation survey indicate that many participants have found our review of the research on biases and assumptions in the hiring process and the tools we present to minimize these influences to be enlightening, valuable, and readily applicable to the search committee.

In an open-ended item that asked workshop participants to *identify up to three things that you gained at this workshop and will apply in your role as Chair or as a member of your search committee*, the most common response pointed to the third element of the workshop (*Raise awareness of unconscious assumptions and their influence on evaluation of candidates*). With comments such as “specific biases to be aware of in the search process and how to identify and address bias in the recruitment process,” and “knowledge of likely biases and tools for limiting their influence,” respondents indicated that they had both gained a new appreciation of the pitfalls of biases and assumptions in the hiring process and that they intended to utilize our suggestions on how to minimize the influence of biases and assumptions in their role on the search committee. A few comments also pointed to the importance of our evidence-based approach. As one skeptic noted, “The idea that college professors discriminate because of (maybe) unconscious bias is,

probably, a tough sell. Thus, the need to be convinced with hard evidence.” One respondent even suggested that given a longer workshop, they would have liked to learn *more* about the research.

Aggregate ratings of the workshop also point to participants’ high perceptions of the *unconscious biases and assumptions* components. Our post-workshop evaluation survey asked respondents to rate the value of each aspect of the workshop on a scale from one (*not at all valuable*) to three (*very valuable*). The *raising awareness of unconscious assumptions and their influence* component, where we present evidence from the literature, received higher average ratings than any other part of the workshop (mean rating of 2.7 among 98 respondents). Similarly, the *ensure a fair and thorough review of candidates* component, in which we suggest tools to minimize the impact of unconscious bias on the evaluation of candidates, also received high marks (mean rating of 2.6 among 97 respondents).

Overall, the feedback we received clearly indicates that participants found this aspect of the workshop to be convincing and valuable. Many intended to implement both their new-found knowledge of the literature and our suggestions on how to reduce the effects of unconscious assumptions in their search committee role.

Finally, for those search committee chairs we have the opportunity to work with over the course of their entire search in the two-session model outlined above, the element of *accountability* that is produced has been very useful. It is useful not only because it provides us, the workshop developers, with direct feedback about the use of the information we provide and its implementation in the “real world” of an actual search, it also creates a motivation for the search chairs to actually do something differently. When the search chairs know that they will be reporting back to their peers, and sometimes even their dean (who often attends the beginning of session two), about what specifically they did to increase the diversity of their pools and what their pool composition looks like—the competitive nature of the faculty present often takes hold and action occurs where it might not have if they did not have to return to the workshop to report.

The post-workshop evaluation surveys provided us with less feedback on the *accountability* aspect of the workshop than the other key features discussed here. This lack of feedback might be partially explained by the relatively fewer number of participants who were trained in the two-session format. Nevertheless, the comments we did receive about the two-session format suggest that the *accountability* aspect of the second workshop was at least partially successful.

Among those participants who did comment on the two-session format, most agreed that two sessions were needed to successfully meet the workshop aims. As one participant stated, “generally [with] these types of workshops it is best to have multiple sessions with time in-between to allow us to process the information.” Several respondents also suggested that the second workshop enabled participants to follow-up on what had happened during the course of their searches. One respondent noted that, “The two sessions were useful; the first gave some important data and the second a useful way of

checking that ideas had been implemented." In a similar vein, another suggested that in the second session, "results and problem-solving discussions become relevant." A few respondents suggested that differences between departments and inconsistencies with the timing of searches across departments limited the effectiveness of this aspect of the workshop.

Overall, the feedback from the post-workshop survey indicates that the two-session workshop was perceived as providing a useful element of accountability by at least some participants. It also suggests that ensuring that the workshops fit with the search cycles of different departments could strengthen the achievement of this aim.

EVIDENCE OF WORKSHOP SUCCESS

Though it is encouraging that workshop participants report a good experience in the workshops and almost all participants report that the workshops are useful and that they would recommend the workshops to others¹³, it is most important to know if the workshops are meeting their goal of diversifying the new faculty hires in the sciences and engineering on the campus on which they are implemented. The implementation of these workshops across campus has costs associated with it, and in an era of tight budgets it is helpful to know if resources spent on such an initiative will be rewarded with more diversity in the faculty. At the UW-Madison, the answer appears to be "yes."

The effectiveness of our workshop series in creating a more diverse set of newly-hired faculty can be measured at many points along the hiring process. We might measure the diversity of applicant pools, short-lists, interviewees, offers made, offers accepted, and ultimately the diversity of the new hires who arrive on campus. We might measure the experiences of candidates within the hiring process. We might investigate the reasons why offers were refused. We might even uncover whether participation in the workshop resulted in other changes in faculty attitudes or behavior in areas besides the search process.

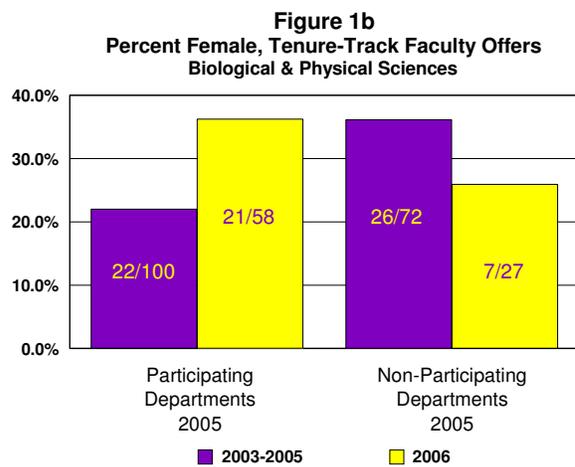
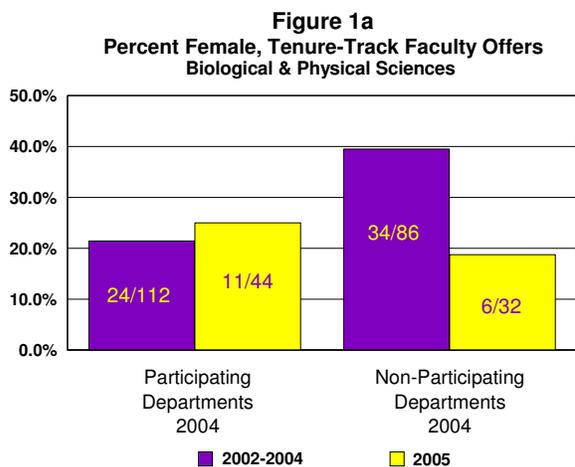
We are not able to utilize all of these measures in the evaluation of our *Searching for Excellence & Diversity* workshops; however, the measures we do have indicate that the goal of increasing the diversity of faculty new hires is being met, and some additional benefits of implementing the workshops are also accruing. We unfortunately do not have good data on the diversity of pools, short lists, or interviewees at this time, although as our federally-required EEO reporting moves to an online system we may have better access in the future. We also are not able to interview or contact those candidates who refused offers. The data we will utilize in our evaluation are generated later in the hiring process—offers made, offers accepted, and the diversity of new hires actually coming to campus. We can also use survey data to look at attitudes of both new hires on campus, and also attitude change in the faculty who attended the workshops.

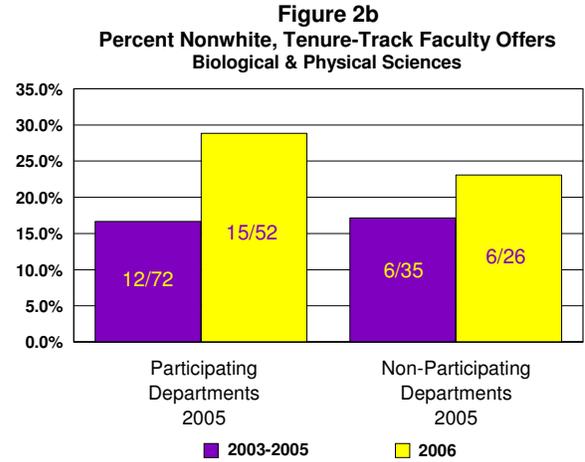
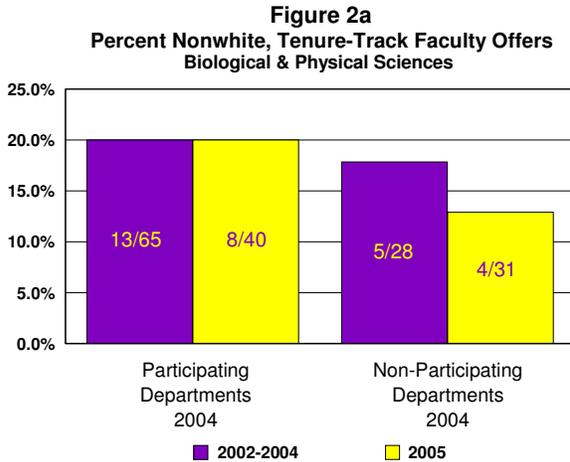
Hiring Outcomes

In the analyses that follow, we will restrict the data to only biological and physical science departments, the primary departments to which the workshops were advertised. Two years worth of data will be presented individually; combining data from the few departments who did not participate at all in either 2004 or 2005 but did make an offer creates numbers that are too small for meaningful comparison. We are comparing the outcomes (offers made, offers accepted, and new junior hires) for those science and engineering departments who participated in our workshops in 2004 and 2005 to those who did not. We will compare their numbers from the three hiring seasons prior to workshop implementation, to the hiring season following implementation. For example, for departments that participated in 2004, hiring seasons from 2002-2004 are compared to outcomes in 2005; for those departments that participated in 2005, hiring seasons from 2003-2005 are compared to 2006. The reason that the participation year is included as a “pre” measure is because most of the workshop participants take the training in the fall; thus, participants in the 2004 workshops (for example) would not generally make offers to candidates until spring 2005 at the earliest, and the new hires would actually arrive on campus in fall of 2005 at the earliest.

Hiring Outcomes: Offers Made

As the figures below indicate, departments that participate in our hiring workshops have tended to slightly increase the percentage of offers they extend to women in the year following their workshop participation, while the departments who did not attend have actually shown a decrease in the percentage of their offers to women. Similarly, slight increases (or no change) were seen in the percentage of offers presented to nonwhites (African American, Hispanic, American Indian, and Asian) compared to whites for those departments attending the *Searching for Excellence & Diversity* workshops, while those who did not attend decreased among the 2004 participants. (It should be noted here that data on race/ethnicity of candidates receiving offers is incomplete prior to 2005; thus, some of the “pre” measures are unreliable.) Attendance at a 2005 workshop does not appear to be related to changes in the percentages of offers made to racial/ethnic minorities in 2006, as both the participation and non-participation groups increased the percentages of their offers to racial/ethnic minorities in the following year.





One might argue that the increase in offers to women for participating departments is due to an increase in the number of women in the available PhD pool. This may be the case; however, the *decrease* in offers to women in the non-participating departments, particularly in light of their previously very high levels of offers to women, casts some doubt on this as a primary explanation.

Hiring Outcomes: Offers Accepted

The same patterns of slightly improved outcomes for women and minority candidates appear when we examine the gender and racial proportions of offers accepted. In general, women and racial/ethnic minorities comprised greater proportions of the persons accepting offers in the departments who attended the training, while the proportion of accepted offers going to women or minority candidates tended to decrease over time for those departments who did not undergo the training. The exception again is for offers accepted by racial/ethnic minority candidates in 2006; training in 2005 appeared to have no effect on the future offers accepted by minority candidates.

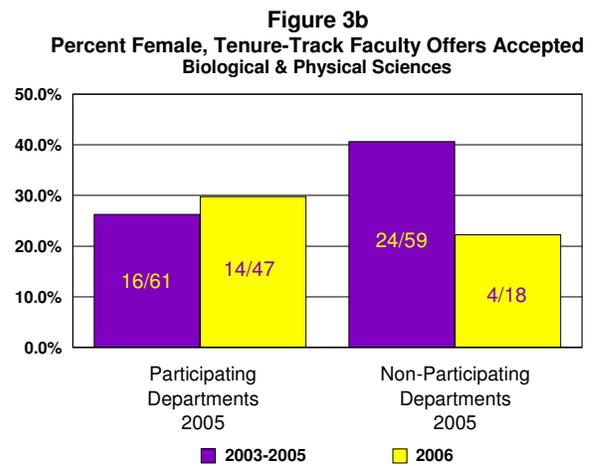
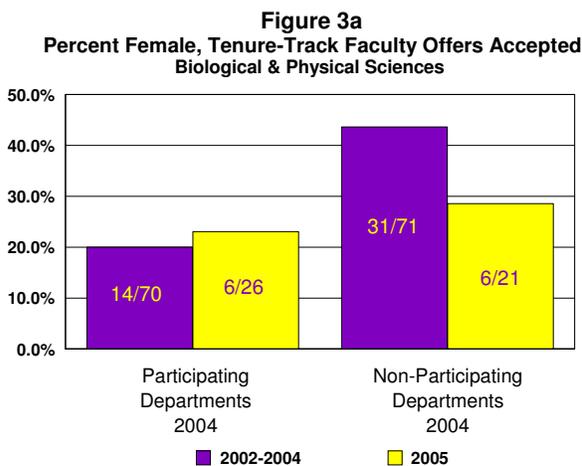


Figure 4a
Percent Nonwhite, Tenure-Track Faculty Offers Accepted
Biological & Physical Sciences

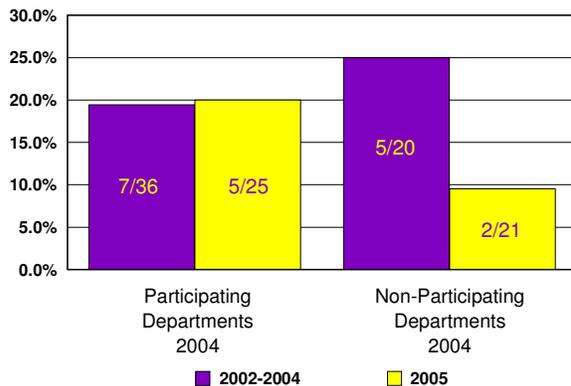
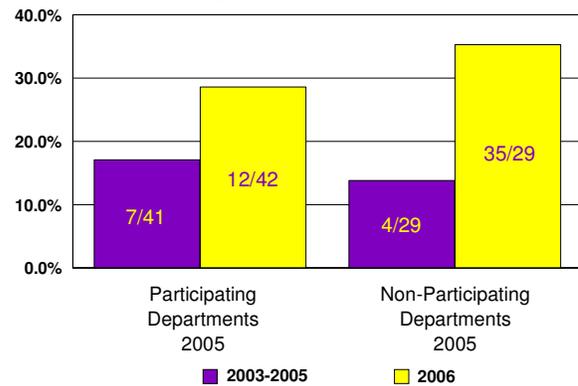


Figure 4b
Percent Nonwhite, Tenure-Track Faculty Offers Accepted
Biological & Physical Sciences



Another way to look at the offer acceptance data is to ask what happened to the acceptance rates for departments who participated in the workshops, compared to those who did not.

Table 1. Percentage of Tenure-Track Faculty Offers Accepted, by Sex*

Year	Participated in Workshop				No Workshop Participation			
	Women		Men		Women		Men	
	Pre-	Post-	Pre-	Post-	Pre-	Post-	Pre-	Post-
2004	58.3%	54.5%	63.6%	60.6%	91.2%	100.0%	76.9%	57.7%
2005	72.7%	66.7%	57.7%	89.2%	92.3%	57.1%	76.1%	70.0%

* Biological and Physical Science faculty only.

Table 2. Percentage of Tenure-Track Faculty Offers Accepted, by Race/Ethnicity*

Year	Participated in Workshop				No Workshop Participation			
	Nonwhite**		White		Nonwhite**		White	
	Pre-	Post-	Pre-	Post-	Pre-	Post-	Pre-	Post-
2004	53.8%	62.5%	55.8%	62.5%	100.0%	50.0%	65.2%	70.4%
2005	58.3%	80.0%	56.7%	81.1%	66.7%	100.0%	86.2%	55.0%

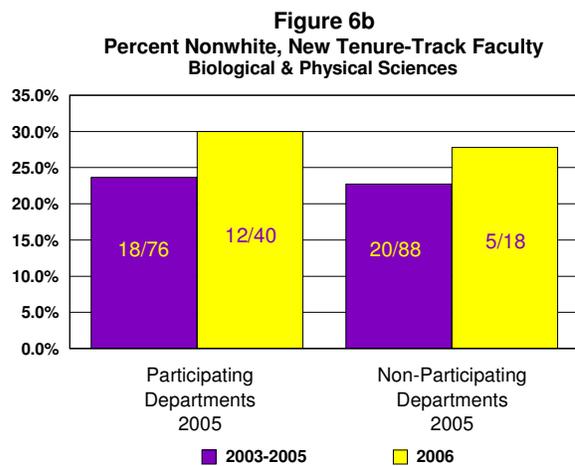
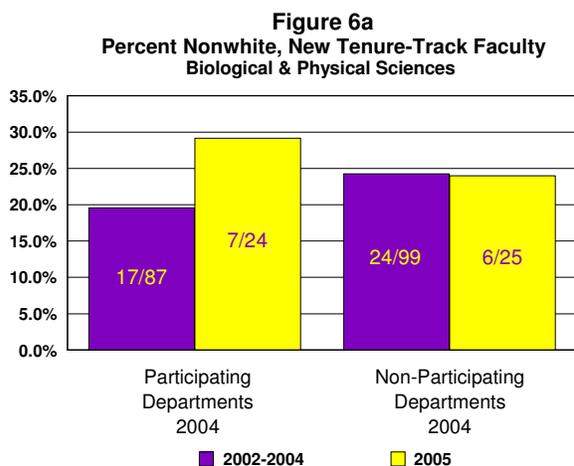
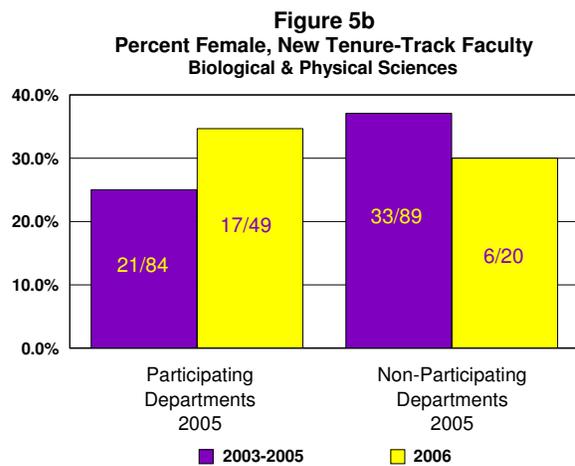
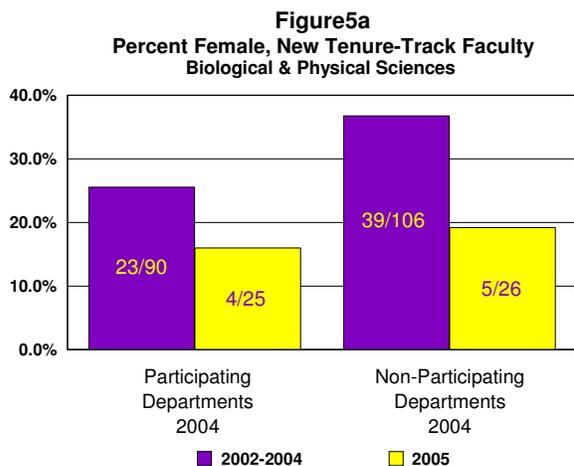
* Biological and Physical Science faculty only. Race/ethnicity missing for some colleges.

** African American, Asian American, American Indian, or Hispanic.

Participation in the hiring workshops does not appear to be associated with better acceptance rates for women and faculty of color. Either acceptance rates increased for hires across the board, or else they increased or decreased for some groups in ways not easily explained by the training status of the home departments.

Hiring Outcomes: New Faculty Hires

Next, we examine the composition of incoming cohorts of new tenured and tenure-track faculty at the UW-Madison. This measure is ultimately the one that our university is hoping to change—increasing the percentages of new hires who are women and/or members of racial and ethnic minority groups.



The incoming cohort of 2005 had very few women. The departments that participated in our workshops the year before as well as those who did not showed decreases in the percentages of women beginning their faculty careers at UW-Madison that year. In 2006, we saw an increase in the percentage of women assistant professors for those departments trained the previous year, while for those departments not trained, the precipitous decline continued. It should be noted that the UW-Madison has had low hiring in the past few years, compared to the level of hiring in past years. Biological and physical science departments hired 70 new faculty on average in the years prior to 2005. In 2005 and 2006, approximately 50 new faculty were hired each year in these departments, a loss of 40 positions in two years. Restricting the overall number of positions might be especially harmful for hiring women.

In terms of hiring faculty of color, we see that participation in the hiring workshops may have been associated with the increased presence of minority faculty members in 2005, but not in 2006, when the increase existed for all departments, not just those participating in the hiring workshops.

Hiring Outcomes: Summary

In summary, it does appear that participation in the Searching for Excellence & Diversity workshops is associated with increased offers made to women and minority candidates and increased presence of women assistant professors on campus. Offer acceptance does not appear to be increased due to participation in the workshops for either women or minority candidates, and the evidence is less clear whether the increase in numbers of new faculty from racial/ethnic minority groups is related to workshop participation; if so, the relationship is weak.

It is important to note that the relationships reported here are correlations only. With the exception of some departments in 2005, participation in these workshops was entirely voluntary. Thus, much of the effects that we see could be due to the search chairs being committed in general to hiring diverse candidates, and their attendance at the workshops and their final results are merely coincidental to that initial commitment.

To try and control for a variable such as “committed to diversity”, we compiled some additional evidence that compares data from the one college that mandated attendance in 2005 (the College of Letters & Sciences (L&S)) to other departments in the University. Because the Dean of L&S made attendance at the *Searching for Excellence & Diversity* workshops mandatory in 2005 before he would release a faculty position, for the first time we encountered workshop participants who were actively antagonistic to the messages and spirit of the workshop. Yet, even though some participants in L&S may not have been “committed to diversity”, L&S still showed increases in their offers to women and minorities, and the percentage of new hires who were women and minorities in 2006.

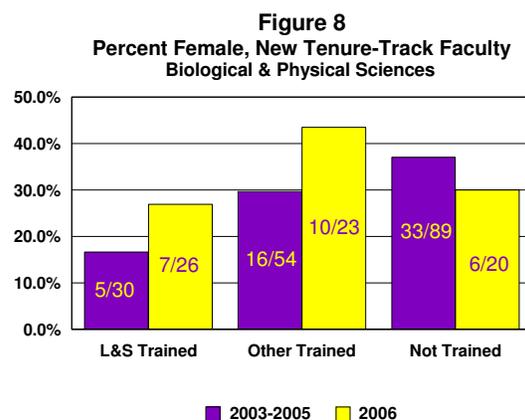
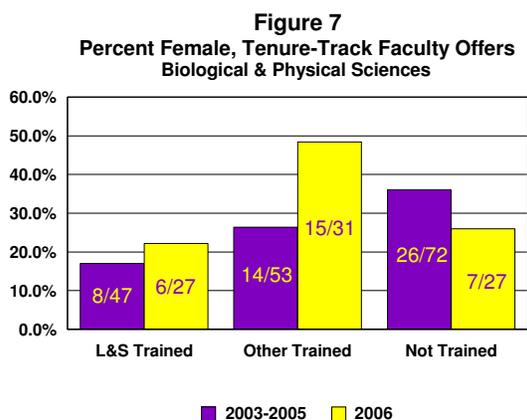


Figure 9
Percent Nonwhite, Tenure-Track Faculty Offers
Biological & Physical Sciences

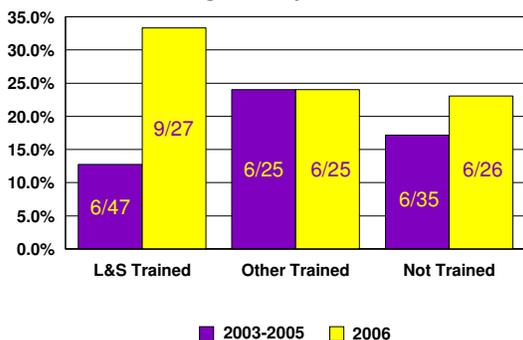
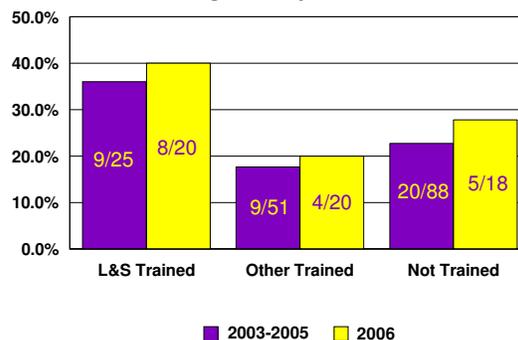


Figure 10
Percent Nonwhite, New Tenure-Track Faculty
Biological & Physical Sciences



Changes in Perceptions and Attitudes

By implementing the *Searching for Excellence & Diversity* workshops at UW-Madison, we are hoping to change both the attitudes and behaviors of faculty and staff. We have some evidence that behaviors are changing—more women and minorities are being hired—but evidence of attitude changes must come from another source, such as a survey.

The *Study of Faculty Worklife at UW-Madison* survey^{14,15} was conceived of in 2001, as an element of the proposed ADVANCE project at UW-Madison. Development of the survey instrument began in 2002 with in-depth interviews of 26 women faculty in the biological and physical sciences. Their comments formed the basis of an instrument designed to investigate gender differences in workplace experiences of men and women faculty in biological and physical sciences. In late 2003, just before the instrument was to be fielded, the Office of the Provost requested that the survey be sent to all faculty in all divisions, and funded the additional costs associated with the expansion of the survey. This survey was implemented from February through June of 2003, and received a 60.2% response rate.

In 2006, as proposed in the original ADVANCE grant, faculty members were re-surveyed in order to evaluate the impact of WISELI on campus, and to document any changes that occurred between 2003 and 2006. The 2006 instrument was nearly identical to the 2003 instrument. The survey was again extended to UW-Madison faculty in all divisions through the contributions of the Office of the Provost. It was in the field from February through April of 2006, and received a 55.7% response rate.

The two surveys in 2003 and 2006 now provide the UW-Madison campus with a rich source of faculty attitude data. The datasets are reasonably representative of the faculty at large, with some exceptions. As is common in most surveys, women tended to respond at higher rates than men, and response rates also varied quite widely across schools and colleges, with the Law School and School of Business showing the lowest response. In the 2003 survey, women faculty of color responded at the same or higher rates as majority faculty women, and men faculty of color tended to respond at lower rates, particularly Asian males. In 2006, all faculty of color (men and women, all racial/ethnic groups) tended to respond at lower rates than their majority counterparts, and in contrast to their

high participation in the 2003 survey. Aside from these differences, response was quite consistent across measurable demographic characteristics of the faculty.

Satisfaction of New Faculty with the Hiring Process

Because the *Searching for Excellence & Diversity* workshops place a great deal of emphasis on the interview process, we might expect that newly-recruited faculty to the University are having a better experience with the hiring process than was previously the case, before the University invested time and resources in training search committee chairs to run effective interview processes. Fortunately, we can test this hypothesis using the climate survey data described above. We hoped to make an impact in the percentage of new faculty who “agree strongly” to three items in particular:

I was satisfied with the hiring process overall

Faculty in the department made an effort to meet me

My interactions with the search committee were positive

In the table below, we compare new faculty in 2003 (hired between 2000 and 2002) to new faculty in 2006 (hired between 2003 and 2005). We restrict the sample to faculty in biological and physical science departments only (this eliminates the low-response schools such as Law and Business.) In these analyses, we are looking to see whether departments that sent at least one faculty member to a *Searching for Excellence & Diversity* workshop in 2004 have differential response of new faculty to these three items.

Table 3. Changes in Percentages of New Faculty Strongly Agreeing to Hiring Items, 2003-2006

	Department Attended Hiring Workshop in 2004			Department Did NOT Attend Hiring Workshop in 2004		
	Total	Women	Men	Total	Women	Men
I was satisfied with the hiring process overall	+ 7.5%	+ 18.8%	+ 4.2%	- 24.1%	- 14.7%	- 30.8%
Faculty in the department made an effort to meet me	- 16.3%	- 0.8%	- 22.2%	- 14.2%	- 14.7%	- 12.4%
My interactions with the search committee were positive	- 18.7%	+ 14.4%	- 28.6%	- 7.5%	+ 0.7%	- 16.6%

Italics indicate significant t-test at $p < .10$ level; **Bold** indicates significant t-test at $p < .05$ level.

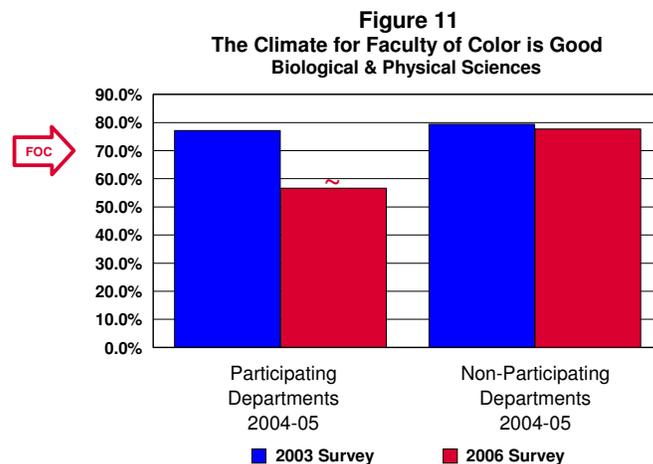
* Postive values indicate strong agreement to the item increased between 2003 and 2006; negative values indicate a decline.

Only 2004 attendance is used for this analysis because the faculty who participated only in 2005 would not have had the opportunity to improve the hiring process for those new faculty who arrived 2003-2005. New faculty in departments who participated in the hiring workshops increased their satisfaction with the hiring process overall (non-significant), while new faculty in those departments that did not participate actually showed significantly decreased satisfaction with the hiring process compared to their peers hired in 2000-02. Interactions with the search committee showed a positive increase for women faculty in those departments who participated, but men in any department decreased their strong agreement that their interactions with the search committee were positive. Most faculty were less likely to agree strongly in 2006 that the faculty in their departments made

an effort to meet them than the new faculty in the 2003 survey; however, this decline was not nearly as sharp for women in departments that attended the hiring workshops, and was most pronounced for the new male faculty. In general, we conclude that participation in the *Searching for Excellence & Diversity* workshops is associated with a more positive search process experience for women, but not necessarily for men. It is important to note that satisfaction with the search process overall is strongly correlated with not only the interactions with search committee members and other faculty in the department, but also with the securing of resources (i.e., a good start up package.) Many new hires in 2006, particularly men, indicated dissatisfaction with their startup packages and other resources, and the more negative ratings of the entire search process in 2006 is related to this. Conversely, the item “My interactions with the search committee were positive” is not related to the securing of resources. That new male faculty (regardless of whether their departments participated in our workshops) are reporting significantly less satisfaction with their interactions with the search committees is a phenomenon that requires further investigation on our campus.

Other Attitude Changes

Participation in the *Searching for Excellence & Diversity* workshops at the UW-Madison appears to be correlated to other changes we are observing on campus—a wholly unintended yet welcome effect. Specifically, we find that participants in our hiring workshops are revising their attitudes about the climate that faculty of color are experiencing in their departments. In 2003 (prior to workshop participation) there was little difference in the percentages of faculty who indicate that the climate for faculty of color in their departments is good, yet by 2006, those faculty who participated in the *Searching for Excellence & Diversity* workshops in either 2004 or 2005 had revised their opinions about the climate experienced by their colleagues of color:



We do not interpret the change in perception of the climate for others as a negative change in climate overall. In fact, about 70% of faculty of color themselves report that climate in their departments is good (see “FOC” arrow above). Rather, we are surprised to find that the estimation of “good” climate for faculty of color is revised downwards only for those

faculty who participated in the hiring workshops and were exposed to the literature on unconscious biases and assumptions.

Conclusion

The UW-Madison has been extremely pleased with the reception of faculty to the *Searching for Excellence & Diversity* workshops, and also with the results. The period of funding from the original ADVANCE grant has ended, but UW-Madison has committed resources to continuing the workshops in order to continue building a more diverse faculty. In 2006 we trained even more faculty than we had in the past as new schools and colleges (non-STEM) have requested the workshops in their colleges, and we continue to monitor the diversity of hires across the University.

Implementing the workshops is not cost-free. Staff time and some materials are needed. However, many campuses are beginning to look at their search processes with a critical eye and are beginning to make these investments and implement training for their search committees on their own campuses. WISELI has been helping disseminate the *Searching for Excellence & Diversity* workshop content and materials to requesting campuses. We can send our brochures and booklets at cost, or even come to a campus or group of campuses to administer our “train the trainers” workshop we call *Implementing Training for Search Committees*⁹. Regardless of how a campus chooses to implement reform of their faculty hiring processes, the experience at UW-Madison shows that the hiring process can be successfully altered such that women and minorities are more often offered positions, and more often join the faculty. We recommend an approach that is led by faculty in an active learning environment, incorporates empirical research findings on unconscious biases and assumptions, and is implemented in a way that encourages accountability. Increased offers to and hiring of women and minorities in STEM fields is one reward for these efforts, and changes in attitudes in the faculty overall is a side effect that will enable the retention of these new faculty for years to come.

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