

Departmental Climate in the College of Engineering: Evidence from the *Study of Faculty Worklife*

Introduction: *The Study of Faculty Worklife at the University of Wisconsin-Madison*

The *Study of Faculty Worklife at UW-Madison* survey is primarily a workplace climate survey, sent to all UW-Madison tenured and tenure-track faculty and, in some years, to clinical/CHS faculty as well. The survey has been implemented in 2003, 2006, 2010, and 2012. It is designed as a longitudinal study, in order to assess individual changes over time as well as overall campus trends. Response rates to the survey have ranged from 60.2% to 49.8% among the tenured/tenure-track faculty between 2003 and 2012. For full results for all waves and all response groups, and copies of each instrument, visit: <http://wiseli.engr.wisc.edu/facworklife.php>.

In this report, we highlight results for the College of Engineering (CoE) using data from the 2010 and 2012 waves. We look at three topic areas for this study: Departmental Climate, Diversity Issues at UW-Madison, and Satisfaction with UW-Madison. We performed three main types of analyses:

1. CoE faculty responses in 2012 are compared to responses of other Physical Science division faculty on campus.
2. Within CoE in 2012, faculty responses between groups are analyzed (e.g., gender, race/ethnicity, rank, and others where there is the sample size to support the analysis.)
3. Within CoE, changes in responses between 2010 and 2012 are analyzed, both overall and within group where appropriate.

It is important to emphasize that we are analyzing the data as if they are cross-sectional, that is, we have not linked responses of individuals in 2010 and 2012 to look at results longitudinally for this report. Thus, we cannot ascertain causation in any of the findings contained in this report; these are correlations only.

Tables with full results are available upon request. Graphics created to highlight selected results are included in this report. Most survey items are scaled on a 5-point Likert scale, and the response choices for most survey items are provided in the figure captions. We compute the mean response on that scale; these means are often reported directly in this report. Where a red asterisk is included (*) in a graphic, the difference illustrated is a statistically significant *between group* difference in mean (e.g., between women and men, or between CoE faculty and other Physical Science division faculty) at the $p < .05$ level (t-test) for 2012; where a red dagger (†) is included, the difference illustrated is a statistically significant *within-group* difference in mean (e.g., for women, a significant change from 2010 to 2012) at the $p < .05$ level (t-test) between 2010 and 2012.

Response Rates in the CoE

In 2010, 60.5% of CoE faculty responded to the survey, and 55.0% responded in 2012—both are slightly higher rates than for the campus as a whole. Women faculty in CoE responded at higher rates than men CoE faculty in both waves, which is typical for most surveys including the *Study of Faculty Worklife*.

Summary of Major Findings

1. **Untenured faculty and Faculty of Color experience positive climate.** When significant differences in findings arise between Untenured/Tenured faculty, and Faculty of Color (FOC)¹/Majority faculty in the College, the Untenured and FOC seem to have *better* experiences of climate and are more satisfied than the Tenured and Majority faculty.
2. **Women faculty feel more isolated and experience/witness more bias.** Gender differences in departmental climate appeared only for items related to isolation and fit in the department, but not for other areas. Gender gaps on these items appeared to worsen between 2010 and 2012. Women CoE faculty were also more likely to report experiencing or witnessing bias than their men colleagues.
3. **Faculty who are not U.S. Citizens² tended to report having a more negative experience in the College.** They report experiencing or witnessing more bias incidents than faculty who are Citizens.
4. **CoE faculty are only “somewhat” committed to diversity.** Even so, a majority report engaging in intentional actions to increase diversity and a large majority reported knowing what implicit bias is.
5. **CoE faculty reported relatively low satisfaction with their access to research resources.** This is in comparison to their satisfaction with other resources (e.g., teaching, outreach), and in comparison to faculty in other Physical Science departments outside the CoE.

Detailed Results

Departmental Climate

In this section, we asked faculty to assess their interactions with colleagues and others in their departments. CoE faculty as a whole reported a fairly positive personal experience of climate. For example, they were often treated with respect by their departmental colleagues, students, staff, and chairs. They also felt they were solicited for their opinions on work-related matters, and that their research and scholarship were usually valued by their colleagues. When rating the climate experience for others, the faculty believed that the climate in their departments was generally positive. They perceived the climate for women to be positive, and gave slightly lower (but still positive) ratings of the climate for faculty of color.

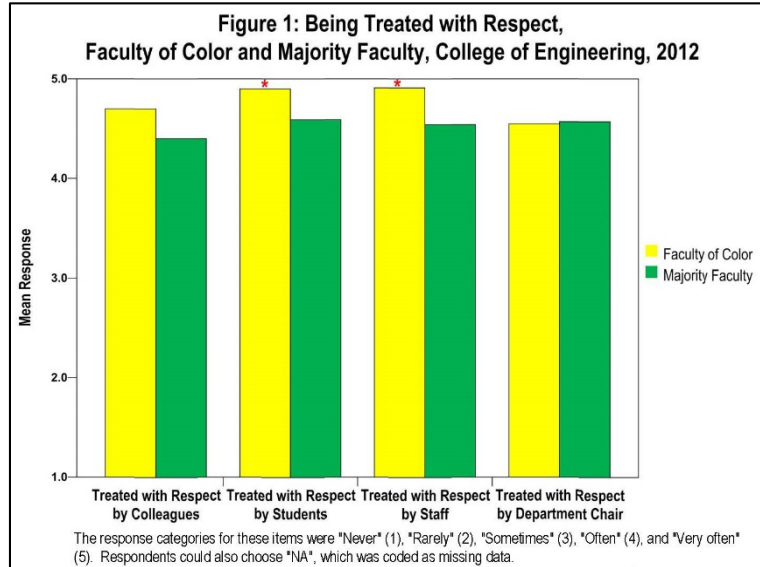
Almost all changes we observed between 2010 and 2012 for all CoE faculty were positive climate changes. We found that CoE faculty reported an increase in the frequency with which colleagues’ solicited their opinions about work-related matters, and they felt their colleagues valued their research and scholarship more. The total CoE group was also more satisfied with their chair’s efforts to obtain resources for them. For women faculty in CoE, this satisfaction increased significantly between 2010 and 2012 (from 2.58 to 3.19). Finally, all CoE faculty members were more comfortable in discussing personal responsibilities with regard to scheduling in 2012.

¹ Faculty of Color are defined as faculty who indicated African American, Hispanic, Asian, American Indian, or Native Hawaiian racial/ethnic heritage *and* indicated that they are U.S. Citizens.

² Faculty respondents could choose U.S. Citizen, US Permanent Resident, or Non-Resident Alien. Non-Citizens are defined as those *not* choosing U.S. Citizen.

Respect in the Workplace

Overall, CoE faculty reported that they are often treated with respect by colleagues (4.43), students (4.63), staff (4.58), and their department chairs (4.57). We did not find any gender, citizenship, or tenure differences for these items in 2012, although Untenured faculty reported an increase in the frequency with which their chairs treated them with respect between 2010 and 2012 (4.60 to 5.00). Faculty of Color felt they were treated with respect more often than Majority Faculty by both students (4.91 versus 4.59) and staff (4.91 versus 4.45); these differences are shown in Figure 1.



Informal Interpersonal Interactions

CoE faculty generally reported positive informal interpersonal interactions with their colleagues and others in their departments. They felt very able to navigate unwritten rules about conducting themselves as faculty members (3.65), only a little reluctant to voice concerns about the behavior of departmental colleagues (2.16), and were somewhat comfortable about raising personal and family responsibilities when scheduling departmental obligations (3.34). As with the previous items, we did not find any gender or tenure differences, although Untenured faculty were more likely to report feeling comfortable raising family issues in 2012 than in 2010 (increasing from 2.63 in 2010 to 3.55 in 2012). Faculty of Color were less reluctant to voice concerns about the behaviors of their colleagues compared to Majority Faculty (1.60 versus 2.22). We also found that Non-Citizen faculty felt less able to navigate unwritten rules about conducting themselves as faculty members when compared to Citizen faculty (3.00 versus 3.73—see Figure 3).

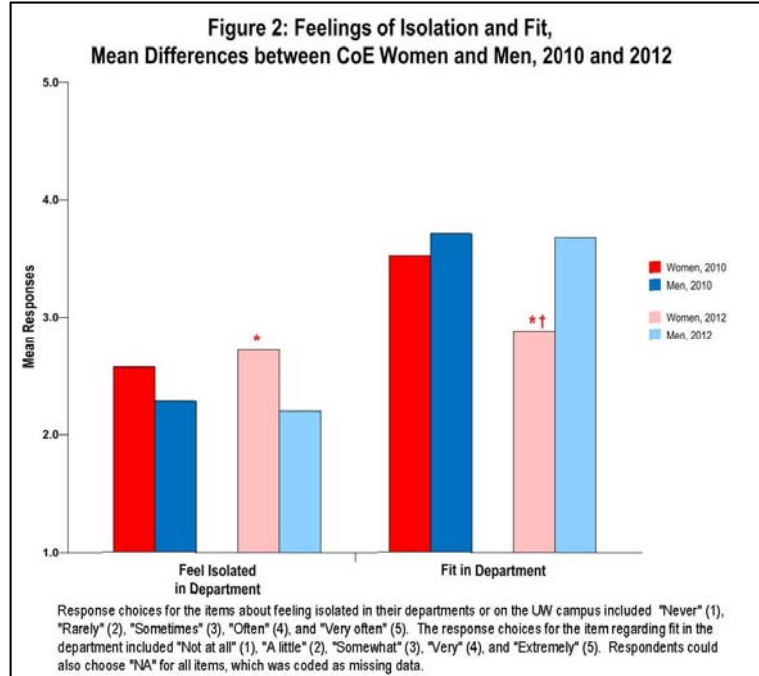
Valuing Scholarship and Contributions

CoE faculty reported that their colleagues valued their scholarship and other contributions. They felt that their colleagues valued their research and scholarship very much (3.37), and that their colleagues often solicited their opinions about work-related matters, such as teaching, research, and service (3.68). They also reported that they only have to work a little harder than some of their colleagues to be perceived as legitimate scholars (2.40). However, they reported that they sometimes or often do work that is not formally recognized by their departments (3.46). We found almost no differences between groups for these items, although we did find that Tenured faculty are more likely to perform work that goes unrecognized by their departments when compared to Untenured faculty (3.56 versus 2.73).

Satisfaction with Chairs' Efforts

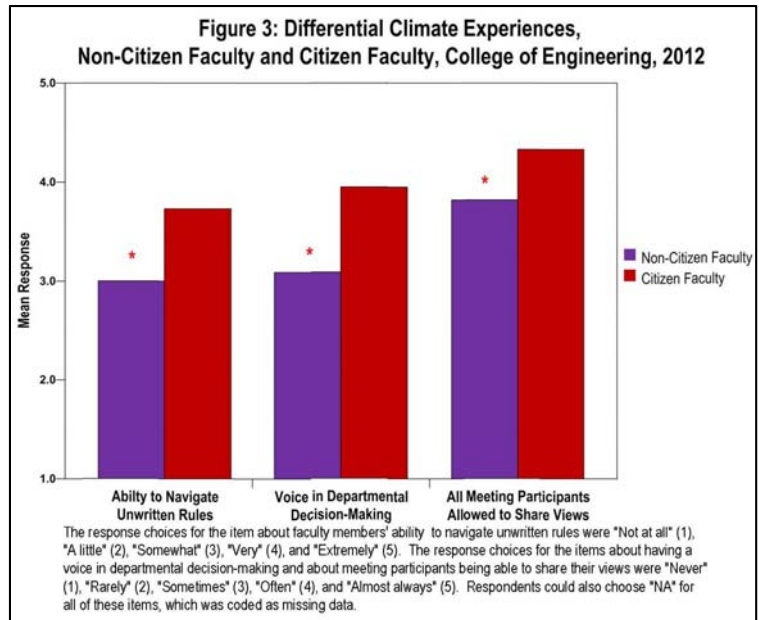
CoE faculty were very satisfied with the efforts their chairs make to create a collegial and supportive environment (3.78), and were somewhat satisfied with the efforts their chairs, director, or dean make to obtain resources for them (3.17). As with the previous section, we found only one difference between groups for these items. Tenured faculty were significantly less satisfied with the efforts their chairs, directors, or dean made to obtain resources for them when compared to Untenured faculty (3.08 versus 3.82).

Feelings of Exclusion, Isolation, and Fit
 CoE faculty rarely felt excluded from informal networks in their departments (2.43), isolated in their departments (2.30), or isolated on the UW campus (2.12). They also felt that they fit somewhat or very well in their departments (3.54). We found two gender differences for these items, and no differences between other demographic groups. Women faculty felt more isolated in their departments (2.72 versus 2.20) and felt that they fit less well in their departments (2.88 versus 3.68) in comparison to Men faculty. Furthermore, women CoE faculty assessed their “fit” significantly lower in 2012 than they did in 2010 (from 3.52 to 2.88). These differences are shown in Figure 2.



Participation in Departmental Decision-Making

CoE faculty felt that they often (3.86) have a voice in the decision-making that affects the direction of their departments, and that all participants are often allowed to share their views in meetings (4.27). The sense that they have a voice in decision-making increased for Majority faculty between 2010 and 2012 (3.63 to 3.91). They also felt that committee assignments sometimes or often rotated fairly (3.57), and that their department chairs sometimes or often involve them in decision-making processes (3.53). These ratings are lower than those for other Physical Sciences



faculty. CoE faculty also reported that they only sometimes have a voice in how resources are allocated (2.99); this value was significantly lower than for other Physical Sciences faculty (see Figure 6). We did not find any gender, race and ethnicity, or tenure differences for these items. Non-Citizen faculty reported feeling included in decision-making that affects the direction of their departments less often than Citizen faculty (3.09 versus 3.95). Non-Citizen faculty were also less likely than Citizen faculty to report that all participants are allowed to share their views in meetings (3.82 versus 4.33). Selected differences between Non-Citizen faculty and Citizen faculty are shown in Figure 3.

Department Climate

CoE faculty rated their overall department climate (4.01), the department climate for women (4.12), and the department climate for faculty of color (3.93) as positive. We observed only two differences between groups for these items, both according to tenure status. Untenured faculty gave significantly higher ratings of overall department climate (4.45 versus 3.95) and department climate for women (4.63 versus 4.07) compared to Tenured faculty.

Diversity Issues at UW-Madison

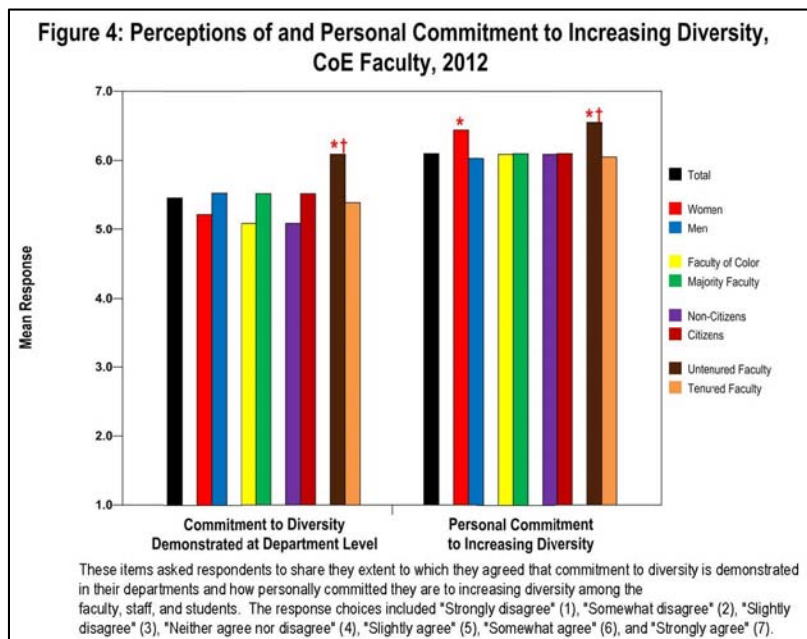
This section assessed the extent to which faculty members perceived a demonstrated commitment to diversity in their departments and at UW-Madison more generally, and also asked about their personal commitment to increasing diversity.

Demonstrated Commitment and Actions to Increase Diversity

CoE faculty slightly or somewhat agreed that commitment to diversity was demonstrated both in their departments (5.47) and at the campus level (5.54). They also somewhat agreed that they were personally committed to increasing the diversity of faculty, staff, and students at UW-Madison (6.10). A majority (63.27%) of faculty also reported having intentionally engaged in an action to increase diversity on the campus during the six months before the survey was conducted.

We found only a few differences for these diversity items among faculty subgroups. Women faculty agreed more strongly that they are personally committed to increasing the diversity of campus members than did Men faculty, but both groups agreed at fairly high rates (6.44 versus 6.03). Untenured faculty agreed more strongly that commitment to diversity was demonstrated in their departments (6.09 versus 5.39) and that they were personally committed to increasing diversity (6.55 versus 6.05) compared to Tenured faculty. These high ratings for

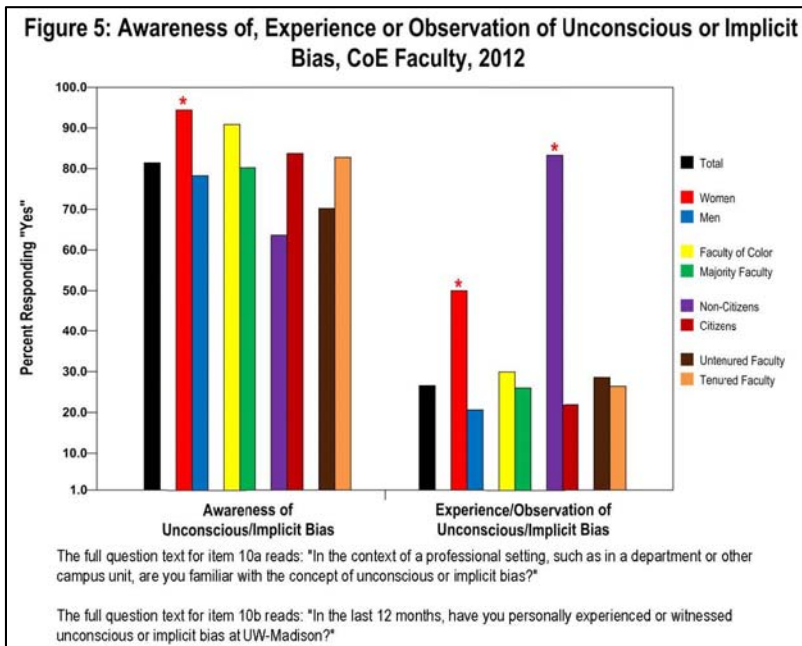
Untenured faculty at both the department and individual level were significant increases from the ratings Untenured faculty reported for these items in 2010. Differences for 2012 for this item are shown in Figure 4. There were no significant differences in the proportions of faculty who reported participating in an action to increase diversity.



Awareness of and Experiences of Implicit Bias

The majority of CoE faculty (81.44%) reported that they were aware of the concept of unconscious or implicit bias in the context of a professional setting, such as in a department or other campus unit. Of those who were aware of the concept, about one-quarter (26.58%) reported experiencing or witnessing unconscious or implicit bias at UW-Madison during the 12 months before completing the survey.

We observed more frequent differences between groups for these items. Women faculty were significantly more likely than Men faculty to say that they were aware of bias as a concept (94.44% versus 78.48%) and that they had either experienced or witnessed an incident in which bias could be at play (50.00% versus 20.63%). Finally, while there was no significant difference in their reported awareness of unconscious or implicit bias, Non-Citizen faculty were significantly more likely to have experienced or observed bias than were Citizen faculty (83.33% versus 21.92%). These differences are shown in Figure 5.



Satisfaction with UW-Madison

In this section, we asked faculty members about their satisfaction with being a faculty member and their career progression at UW-Madison, with the institutional resources, and with their salaries. We also asked them about the likelihood that they would leave UW-Madison in the next three years, and about the extent to which they had considered a number of reasons for leaving the institution.

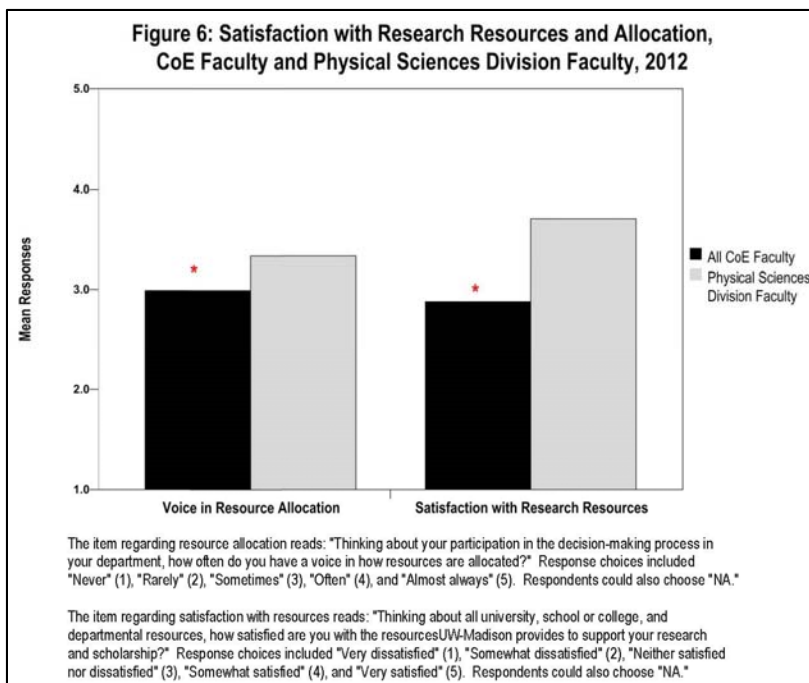
Faculty Job and Career Satisfaction

CoE faculty were somewhat satisfied with being a faculty member at UW-Madison (3.81) and with their career progression at UW-Madison (4.06). We observed only one difference between demographic groups for these items; Women faculty were significantly less satisfied with their career progression than were Men faculty (3.61 versus 4.16). In fact, Men faculty members' satisfaction with their career progression increased significantly between 2010 and 2012 (4.16 in 2012 versus 3.76 in 2010).

Faculty Satisfaction with Resources and Salary

Faculty were neither satisfied nor dissatisfied with the resources that UW-Madison provides to support various aspects of their professional work. They were most satisfied with the resources that support their extension and outreach (3.25) and teaching activities (3.24) and least satisfied with the resources supporting their research and scholarship (2.88). CoE faculty members are significantly less satisfied with research resources when compared to faculty in other Physical Science departments on campus. We found a single difference between demographic groups for these items; Tenured faculty were

significantly less satisfied with resources that support their research and scholarship than were Untenured faculty (2.78 versus 3.64). Overall satisfaction ratings with research resources and with having a voice in resource allocation, comparing CoE faculty to other Physical Science faculty are shown in Figure 6.



CoE faculty were neither satisfied nor dissatisfied with their salaries (2.87) in 2012 and we did not find any significant differences between faculty groups for this wave. When comparing faculty satisfaction with salary between survey waves, we note that there

were no changes in satisfaction for CoE faculty as a whole group. However, Women faculty were significantly less satisfied with their salaries in 2012 than they had been in 2010 (2.78 versus 3.48).

Intent and Reasons for Leaving UW-Madison

CoE faculty were neither likely nor unlikely to consider leaving UW-Madison in 2012 (3.22). There were no significant differences between any comparison subgroup for this item in 2012, although Tenured faculty were slightly more likely to say they considered leaving in 2012 compared to 2010 (3.22 in 2012 compared to 3.63 in 2010). We did see several differences in the extent to which faculty considered different reasons for leaving. Women faculty more often considered improving their prospects for tenure or enhancing their career in other ways (2.12 versus 1.67), increasing their time to do research (2.00 versus 1.51), and reducing stress (2.24 versus 1.51) than did Men faculty. Majority faculty had also considered reducing stress as a reason for leaving to a greater extent than Faculty of Color (1.69 versus 1.28). Non-Citizen faculty considered leaving in order to find a more supportive work environment more often than did Citizen faculty (2.36 versus 1.63).

We saw several differences in the extent to which various groups considered leaving UW-Madison in order to improve the employment situation of a spouse or partner, though the difference was not significant for the whole group. Women faculty, Non-Citizen faculty, and Untenured faculty all considered this reason more strongly than did members of their comparison groups.