EXECUTIVE SUMMARY
Wayne State University
CLIMATE SURVEY
January 2007

ESCALATE
Engineering and Science Careers in Academia, Learning from ADVANCE and Translating Effectively
Karen L. Tonso, PI & Co-Director  Ece Yaprak, Co-PI & Co-Director
Ann Sodja, Michele Grimm, & Allen Batteau, Co-PIs

1 Dr. Gail Fahoome, faculty in Educational Evaluation and Research Methodology, College of Education, performed statistical analysis of the survey and wrote the preliminary report.

2 ESCALATE is an NSF-sponsored program (NSF#0620013 Social, Behavioral, & Economic Sciences, ADVANCE-PAID: Partnerships for Adaptation, Implementation, & Dissemination). The findings included here do not represent the opinions of the National Science Foundation.

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ADVANCE-PAID at Wayne State University
INTRODUCTION

In January 2007, a Climate Survey was distributed to faculty in two Colleges: Engineering and Liberal Arts and Sciences. This report provides an executive summary of the results of that survey. A follow-up survey is planned for the final year of the project, tentatively January 2010.

The pool of respondents included 87 engineering and 428 liberal arts and science faculty, a total of 515 faculty members (based on information provided by the WSU Office of Research). Of these, 153 returned completed surveys, a respectable response rate of 29.7% for a comprehensive instrument. Overall, of those completing demographics information (only a handful did not), 30% of respondents indicated they were women, over 85% of respondents indicated that they held US citizenship, and 11% of respondents indicated that they came from under-represented racial or ethnic communities.

Representation by field and gender was similar to expectations for these colleges. Because of the low numbers of women in some disciplines, respondents were divided into two pools—science/engineering and humanities/social sciences. Science/engineering respondents (82) comprised 53.5% of the total (35.9%, in sciences, 17.6% in engineering); women comprised 17.8% of respondents in science/engineering. Humanities/social science respondents (66) comprised 43.2% of the total (19.0% in humanities, 24.2% in social sciences); women comprised 44.6% of humanities/social sciences respondents. Five (3.3%) provided no demographics.

Respondents included faculty at all contractual ranks: instructor, lecturer, senior lecturer, assistant professor, associate professor, and full professor. Overall, 10.6% of respondents came from among instructors, lecturers, and senior lecturers, while assistant professors comprised 26.1% of respondents, associate professors 23.9%, and full professors 39.4%.

PROFESSIONAL EXPERIENCES

In ways typical of U.S. comprehensive universities. Women’s numbers decline moving up the ranks. In fact, women in science/engineering disciplines received their highest degree, came to WSU, and began the tenure track more recently than men. Women tend to hold more non-tenure-track positions than men, as well as hold less senior positions relative to men in their discipline. In fact, in the science and engineering departments, only about 40% of men respondents were hired in the last 10 years, while 75% of women were; compared to a 50-50 split in men’s and women’s hires over the last decade in humanities and social sciences.

Almost all respondents hold only one full-time position, while those with multiple appointments held less seniority or were off tenure track. Faculty stay at associate professor levels somewhat longer than at assistant. Over a third of respondents held researcher positions in non-academic settings before their WSU appointment. Almost 4% of faculty reported being unemployed for 1-2 years after receiving their highest degree. Thirteen respondents reported holding unfunded appointments, and seven have changed fractional appointments in the last 10 years. These changes were associated with moving from 12-month to 9-month faculty, serving as department chair, university or institute restructuring, and research grant requirements.
Teaching

Teaching proved the backbone of faculty career satisfaction; however imbalances in responsibilities exist. For instance, women in the humanities/social science prepared more new courses than did other faculty members. Sabbatical was significantly different by field, with humanities/social science faculty taking more sabbaticals, and “other uses of time” was significantly different by rank with those at higher ranks using course release for “other” reasons, such as union work, department chair duties, and administrative leave.

Significant differences exist in advising duties. For PhD students, women faculty among science and engineering faculty, and faculty at higher ranks perform more doctoral advising. For undergraduate students, science and engineering faculty perform more undergraduate advising. Humanities and social science faculty advise larger numbers of students across all levels. Faculty reported 3–4 hours of informal student mentoring activities per month.

Service

Faculty reported serving on from one to four committees a year and chairing one or two. However, taking a leadership position is relatively unimportant to respondents, though about 40% reported being asked to serve in this capacity, with most agreeing to do so. Men are more frequently asked to serve as chair (in all disciplines), and women in science and engineering are less frequently asked to serve as chair than women in humanities and social sciences. Faculty, search, curriculum, and graduate admissions committees led in importance’s among faculty.

Mentoring

Consistent with men’s larger numbers at higher ranks, significant differences exist by gender and by field in having a mentor, with women in both fields having more mentors relative to men, and humanities/social science faculty having more mentors than science/engineering faculty. Because of the ways in which women’s low numbers lead to isolation from social capital needed to gain grants, and tenure and promotion, the distinctly different amounts of advice given about department politics to women and men may leave women without adequate advice in these important area. Overall, just under half of the assistant professor respondents (without regard to gender or field) report getting advice from their mentor about preparation for advancement, another area of concern since such advice can prove central to success. Not surprisingly, when asked to indicate areas where they could use more mentoring, faculty indicated greater need for advice about preparation for advancement, having a mentor who is an advocate, who serves as a role model, and who advises about department politics and obtaining needed resources. Though mentors in the same unit as the respondent led in most categories, results suggest the importance of mentors at other institutions for providing guidance about: serving as a role model (for women mentors), promoting a respondent’s career through networking, and advising about getting work published.
The Tenure Clock

Few faculty take advantage of stopping the tenure clock, with four doing so for childbirth or childcare duties, three for other reasons, and two as part of their start-up package. Faculty found their departments moderately supportive to stopping their clock. An almost equal number elected not to stop their tenure clock, citing as reasons the lack of need or informal department norms that “you’re not supposed to need ‘extra’ time.”

CAREER SATISFACTION

Overall, faculty expressed moderate satisfaction with their WSU career (µ=3.65, scale 1 to 5). Two subscales rose to the level of statistical significance in comparative analysis. Women in humanities/social sciences feel that their students value them more than is the case for women in science/engineering, though levels of satisfaction are relatively high. Notably, items faculty rated among the highest included issues of teaching and being valued for teaching, as well as contributing to theoretical developments in their discipline. And, items faculty rated lowest included balance between professional and personal life, intellectual stimulation from colleagues, salary, and level of funding for research or creative efforts. Faculty were moderately unlikely to leave within the next three years.

Productivity

Faculty’s sense of the importance of different measures of productivity varied by rank, but overall number of articles published, number of national presentations, number of external grant proposals, and amount of external grants led. When asked to rate their own productivity and their perception of their department’s sense of their productivity, answers varied in statistically significant ways only for tenure rank. Full professors rated their productivity higher and their department’s sense of their productivity higher than did professors at lower ranks.

Recognition

When asked about being nominated for an award, statistically significant differences existed only for rank, with associate and full professors receiving more nominations than off-track and assistant professors.

Felt Influence on Educational Matters and Resources

Faculty felt they had little to moderate influence in their departments, a finding that held across gender and field comparisons. Comparisons across faculty rank indicated statistically significant results with full professors reporting more influence for subscales related to selecting new faculty members, determining who gets tenure, and selecting the next unit head. Faculty reported little to moderate influence on unit resources or unit climate across gender, field, and rank comparisons.
Resources – Effort and Satisfaction

Faculty reported expending minor to moderate effort to secure resources necessary for their work, but tended to express dissatisfaction with some of these resources, particularly office and research spaces, as well as lab and computer equipment. Analysis by field and gender revealed no significant differences in means, either by gender, field, or interaction of gender and field. In open-ended items about resource allocations, faculty wrote about budget issues, support for teaching, and other space issues.

When asked about receiving outside offers, up to half of faculty in some fields had entertained an outside offer. A gender imbalance seems to exist in whether the offer led to increased income. In science/engineering, only one of the five women, but 11 of the 19 of the men received an increased salary; in humanities/social science, only one of the nine women, but four of the 11 men received an increased salary.

UNIVERSITY CLIMATE

Though most respondents see the campus climate as a tolerant, positive environment, significant differences exist in several areas:

- Men rate the atmosphere as more gender egalitarian than women, suggesting the need to raise awareness about women’s experiences.
- Women report more scholarly isolation.
- Science and engineering faculty feel more surveillance of their activities than do faculty in other disciplines.
- Faculty in science and engineering departments report a greater sense of tokenism than other disciplines, with women’s sense of tokenism across fields greater than men’s.
- Humanities and social science faculty are more positive about their chair being fair, than are faculty in science and engineering.
- Science and engineering faculty are less positive about the commitment of their chair to ethnic/racial diversity.

In addition, significant correlations exist between satisfaction and climate measures for all ranks in several areas. Career satisfaction increases with gender egalitarian atmosphere, and department chairs being fair and creating a positive environment become more positive. Career satisfaction declines as scholarly isolation, felt surveillance, and felt tokenism increase. Women’s career satisfaction in science and engineering departments correlated positively with gender egalitarian atmosphere, and department chairs being fair and creating a positive environment, but negatively with ethnic/religious stereotyping and felt surveillance.

Eight percent of faculty reported receiving unwanted sexual attentions, and about a fourth of these filed reports. Those reporting these advances responded in a variety of ways from ignoring the behavior to reporting it or making a joke about it, and these actions had about the same likelihood of decreasing the behavior as increasing it, and of making the person receiving the advance feel better or feel worse.
Correlations between satisfaction and climate scales of those who experienced discrimination (or harassment) first for all faculty, then for women in science and engineering departments, did not rise to the level of significance, due to low “n’s.” However, differences suggest relationships exist between having experienced discrimination or harassment, and one’s responses to climate items. For instance, having experienced discrimination diminishes respondents’ satisfaction, which is true for all faculty, as well as for women scientists and engineers. Likewise, experiencing discrimination is associated with lower responses on gender egalitarian atmosphere and seeing the department chair as fair, creating a positive atmosphere, and committed to ethnic/racial diversity. Conversely, having experienced discrimination is associated with higher scores on felt surveillance and felt tokenism. However, these differences do not rise to the level of significance, because of low “n” in some cells. Also, having experienced harassment lowered the score of the gender egalitarian atmosphere item, and increased the score on the felt surveillance scale. These results suggest the importance of eliminating discrimination and harassment to improving faculty satisfaction.

PERSONAL LIFE

No statistically significant difference exists for gender among respondents with a spouse or partner and they sought WSU’s assistance with employment for their spouse or partner at similar rates. Such assistance is of moderate importance to respondents, and science/engineering professors (women and men) expressed more satisfaction with such assistance than did faculty in humanities/social science positions. Women in all fields are more likely to leave to improve career opportunities for their spouse or partner, supporting evidence that men’s higher earning power—coupled with traditional gender roles—influence household decision-making, and that women are more often faced with having to leave to follow their spouse-partner.