NSF ADVANCE Project: Resources on Job Satisfaction

1. **Satisfaction Benchmarking and References Regarding Gender and Ethnicity**

   (a) *Experiencing Michigan: Accounts by Faculty from Underrepresented Minorities.*
   Retrieved February 14, 2013 from
   http://www.advance.rackham.umich.edu/ncid/NCIDqualstudyreport_final.pdf.

   Reports on interviews with faculty from underrepresented minorities at the University of
   Michigan. Focuses on the climate at the University of Michigan and on minority faculty
   interviewees' reasons for wanting to leave the University of Michigan (including
   isolation, a sense of being marginal or unvalued, exclusion from decision-making, and
   exclusion from networks).

   (b) NSF ADVANCE Project, Institute for Research on Women and Gender at the University
   of Michigan. (2004). *Assessing the Academic Work Environment for Faculty of Color in
   Science and Engineering.* Retrieved February 14, 2013 from
   http://www.advance.rackham.umich.edu/S&E%20Race-Ethnicity%20Report.pdf.

   Reports on a number of findings on the climate for Faculty of Color at the University of
   Michigan and provides recommendations for improving the climate for Faculty of Color.
   In comparison with their male counterparts, women scientists and engineers of color
   reported lower rates of recognition, less perceived influence on unit educational
   decisions, and lower career satisfaction.

   (c) University of Michigan ADVANCE Program. (2008). *Assessing the Academic Work
   Environment for Science and Engineering and Social Science Faculty at the University of
   Michigan in 2006: Gender, Race, and Discipline in Department- and University-Related
   Climate Factors.* Retrieved February 14, 2013 from
   http://www.advance.rackham.umich.edu/ADV-FacultyClimate-Rpt2-final.pdf.

   Reports on data that is focused on the work climate at the University of Michigan across
   gender, race, and disciplinary lines.

   (d) University of Michigan ADVANCE program. (2008). *Assessing the Academic Work
   Environment for Science and Engineering Faculty at the University of Michigan in 2001
   and 2006: Gender and Race in Retention-Relevant Career Experiences.*

   Assessment of work environment by faculty, broken down by gender and race, in career
   experiences that relate to retention. Retrieved February 14, 2013 from
   http://www.advance.rackham.umich.edu/ADV-FacultyClimate-Rpt3-final.pdf.

   (e) Trower, C.A. and Bleak, J.L. (2004). Study of New Scholars. *Gender: Statistical Report*
   [Universities]. Cambridge, MA: Harvard Graduate School of Education.

The Study of New Scholars survey was administered to full-time tenure-track faculty at six research universities. This study reports on gender differences on a number of factors related to workplace satisfaction. Females reported significantly lower levels of satisfaction with the following factors than males: elements of work and expectations; relationships; and diversity, salary, and work-life balance.

(f) Turner, C.S.V., González, J.C., and Wood, J.L. (2008). Faculty of color in academe: What 20 years of literature tells us. *Journal of Diversity in Higher Education,* 1(3), 139-168.

This article reviews 20 years of literature on Faculty of Color in academia, including studies that are focused upon job satisfaction.

2. Satisfaction Benchmarking and References Regarding Hypervisibility and Tokenism

(a) Kanter, R.M. (1977). Some effects of proportions on group life: Skewed sex ratios and responses to token women. *American Journal of Sociology*, 82(5): 965-990.

This is a classic reference on critical mass and tokenism that is cited repeatedly in funded NSF ADVANCE IT proposals and other journal articles. The author develops a framework to conceptualize the processes that occur between dominant and token group members.

(b) Etzkowitz, H., Kemelgor, C., Neuschatz, M., Uzzi B., and Alonzo, J. (1994). The paradox of critical mass for women in science. *Science*, 266:51-55.

This article asserts that attainment of critical mass is not enough as a unilateral change strategy and that isolation of women may still exist (depending upon contextual factors). This is a widely cited article in NSF ADVANCE IT proposals.

(c) Etzkowitz, H., Kemelgor, C., and Uzzi, B. (2000). *Athena Unbound: The Advancement of Women in Science and Technology.* Cambridge: Cambridge University Press.

This reference states that critical mass is sometimes defined as at least a 15% minority, but asserts that critical mass is in reality the presence of a significant minority whose precise number varies by context (see pp. 105-113).

(d) Steffen-Fluhr, N. (2006). Advancing Women Faculty through Collaborative Research Networks. *Proceedings of the 2006 WEPAN Conference, WEPAN-Women in Engineering Programs and Advocates Network.* 1-12.

This paper examines tokenism among women faculty and recommends establishing collaborative research networks to combat tokenism and to advance women faculty. Author Nancy Steffen-Fluhr is from NJIT, an NSF ADVANCE IT school.

(e) Tuitt, F., Hanna, M., Martinez, L.M., del Carmen Salazar, M., and Griffin, R. (2009). Teaching in the line of fire: Faculty of color in the academy. *Thought & Action.* 25, 65-74. Retrieved February 19, 2013 from http://www.nea.org/assets/docs/HE/TA09LineofFire.pdf.

This article reviews much of the literature on tokenism among Faculty of Color, including how it negatively impacts their job satisfaction.

3. **Evidence that Satisfaction Is Related to Faculty Perception of Climate**

(a) Tam, M-Y.S., Khare, M.M., Wichelechi, J., Drill, K. (2012). University of Illinois at Chicago. *Women in Science and Engineering System Transformation (WISEST). NSF ADVANCE Award # 0546843 Final Report (2006-2012).* Retrieved February 14, 2013 from http://www.uic.edu/depts/oaa/wisest/docs/UIC%20WISEST%20End%20of%20Grant%20Report%2001%2018%202013.pdf. (Note: The Appendices to this final report are available at: http://www.uic.edu/depts/oaa/wisest/docs/UIC%20WISEST%20End%20of%20Grant%20Report%20Appendices%2001%2018%202013.pdf.)

By the end of the NSF ADVANCE IT grant period at UIC, female faculty reported feeling that the climate had warmed and that they were more satisfied with their careers.

(b) WISELI (Women in Science & Engineering Leadership Institute) at the University of Wisconsin-Madison. *Results from the 2010 Study of Faculty Worklife at UW-Madison.* Retrieved February 19, 2013 from http://wiseli.engr.wisc.edu/docs/Report_Wave3_2010TT.pdf.

See Figure 4 on p. 19. "Good climate/collegiality" is reported as one of the factors that contributes most to faculty satisfaction at the University of Wisconsin-Madison.

(c) Laursen, S. and Rocque, B. (2006). *An Assessment of Faculty Development Needs at the University of Colorado at Boulder: A Report Prepared for the LEAP Project.* Retrieved February 19, 2013 from http://www.colorado.edu/eer/downloads/LEAPfacultyDevelopmentNeeds2006.pdf.

This report identifies faculty development needs that reduce tenure-track faculty job satisfaction at the University of Colorado at Boulder. Many faculty needs are specific to their career stage.

(d) Cornell University Institutional Research and Planning. (2006). *Cornell's Faculty Work Life Survey: Understanding Faculty Satisfaction.* Retrieved February 19, 2013 from http://www.advance.cornell.edu/documents/faculty_satisfaction_report.pdf.

Analyses of Cornell University climate survey data show that faculty members' perceptions relating to integration or sense of belonging are strongly associated with career satisfaction.

(e) Settles, I.H., Cortina, L.M., Malley, J., and Stewart, A.J. (2006). The climate for women in academic science: The good, the bad, and the changeable. *Psychology of Women Quarterly,* 30, 47-58.

This study found evidence that gender discrimination and sexual harassment had a negative impact upon women faculty's career satisfaction.

(f) August, L. and Waltman, J. (2004). Culture, climate, and contribution: Career satisfaction among female faculty. *Research in Higher Education,* 45(2): 177-192.

The authors found that the most significant predictors of career satisfaction for all women faculty in their study included measures of problematic departmental climate, a supportive relationship with the unit chairperson, and the level of influence within the department or unit.

(g) Callister, R. (2006). The impact of gender and department climate on job satisfaction and intentions to quit for faculty in science and engineering fields. *Journal of Technology Transfer*, 31: 367-375.

The author found that department climate has a major impact on job satisfaction and intention to quit of women faculty in science and engineering. This work was funded by an NSF ADVANCE IT grant to Utah State University.

(h) Hult, C., Callister, R.R., and Sullivan, K. (2005). Is there a global warming toward women in academia? *Liberal Education*, 91(3): 50-57.

Faculty at Utah State University (an NSF ADVANCE IT school) listed the following as the top four sources of job satisfaction: positive interactions with colleagues, access to campus resources, support of administrators, and positive teaching experiences.

4. Evidence that Satisfaction Is Related to Faculty Perception of Work/Life Balance

(a) The American Council on Education. (2005). *Executive Summary. An agenda for excellence: creating flexibility in tenure-track faculty careers.* Retrieved February 19, 2013 from http://www.acenet.edu/leadership/programs/Documents/2005-tenure-flex-summary.pdf.

This Executive Summary examines factors that are involved in faculty career satisfaction and recommends ways to improve faculty career satisfaction, including offering part-time tenure-track positions (that can be used for up to five years) and multiple-year leaves for personal or professional reasons.

(b) Rocque, W. and Laursen, S. (2007). *Faculty Career Trajectories and the Institutional Factors that Shape Them: Comparative Analysis of Longitudinal Faculty Interview Data: A Report to the LEAP Project.* Retrieved February 19, 2013 from http://www.colorado.edu/eer/downloads/LEAPtrajectoriesReport2007.pdf.

The study upon which this report is based identifies tenure/career status, climate, work/life balance, and finances as four significant institutional factors in faculty career satisfaction at the University of Colorado (an NSF ADVANCE IT school).

(c) Tetrick, L. and King, E. *Academic Climate Survey Technical Report* (Rice University). Retrieved February 19, 2013 from http://cohesion.rice.edu/centersandinst/advance/emplibrary/AdvanceReport4-28-08B.pdf.

This study at Rice University (an NSF ADVANCE IT school) found intercorrelations among faculty career satisfaction and several aspects of faculty experiences, including satisfaction with work/family balance. See Table 12 on p. 28 of this report.

(d) *Advance VT* Climate Committee (2008). *Creating a Positive Departmental Climate at Virginia Tech: A Compendium of Successful Strategies.* Retrieved February 19, 2013 from http://www.advance.vt.edu/resources_links/climate_compendium/department_climate_compendium.pdf.

This document reports that the results of two recent Virginia Tech surveys show that work-life balance issues are sources of dissatisfaction for both women and men in tenure-track and tenured appointments. In the surveys, women were significantly more likely to agree with statements that indicated a high degree of tension between professional and family commitments. See p. 27 of this document.

(e) Gatta, M.L., and Roos, P.A. (2004). Balancing without a net in academia: Integrating family and work lives. *Equal Opportunities International*, Vol. 23, Issue: 3/4/5, pp. 124 – 142.

This paper describes the results of qualitative survey research of female and male faculty in academia. It demonstrates through many personal accounts that family/work conflicts are a major problem in academia. The women interviewed for this study felt that they were marginalized. The article recommends that university policies be changed to provide for better work/family balance (rather than, for example, relying on women to be the ones to make the majority of the accommodations).

(f) Rosser, V.J. (2004). Faculty members' intentions to leave: A national study on their worklife and satisfaction. *Research in Higher Education,* 45(3), 285-309.

This national study used structural equation modeling to show that faculty members' perceptions of their work life have a strong impact on their career satisfaction.

(g) Ward, K.A. and Wolf-Wendel, L.E. (2004). Academic motherhood: Managing complex roles in research universities. *Review of Higher Education*, 27(2), 233-257.

This article describes the work-family tensions that many female faculty experience and the ways in which they manage the conflict. Work-family balance affects female faculty members' career satisfaction, and the article provides quotes from some female faculty who provide reasons why they are considering leaving academia due to dissatisfaction with work/family balance.

5.   Evidence that Satisfaction Is Related to Faculty Perception of Value and Influence

(a) University of California Irvine. *Exit Interview – Data Analysis; Voluntary Resignations of Regular Ranks Faculty (Telephone Interviews Conducted under the Auspices of the UCI ADVANCE Program).* Retrieved February 19, 2013 from http://advance.uci.edu/images/Exit%20Interview%20for%20web.pdf.

Twenty-two former UCI faculty members (11 female, 11 male) completed an exit interview via telephone. Interview data revealed very few gender differences in men's and women's ratings of their employment at UCI. Both male and female faculty showed high mean dissatisfaction scores with regard to their department's commitment to (or appreciation of) their area of research.

(b) Eber, C.E. (2008). *A Diamond in the Rough: Faculty Retention at New Mexico State University. A report on research exploring why faculty leave NMSU. Under the auspices of ADVANCE, NMSU.* Retrieved February 19, 2013 from http://www.advance.nmsu.edu/Documents/PDF/Retention_Report-Nov08.pdf.

This report explores why faculty leave New Mexico State University (NMSU) and is based upon interviews with 34 former NMSU faculty members.

The report states that:

"Respondents felt lack of appreciation for their contributions**.** Respondents viewed the faculty as a major strength of NMSU and felt that administrators do not respect faculty members or appreciate their contributions and achievements. They felt that NMSU culture accepts and even enforces mediocrity, and projects a sense of low self- and collective-esteem. This feeds a myth that NMSU is not as good as other universities" (p. 2).

"Respondents observed a lack of transparency. A large communication gap exists between the faculty and administrators that is fueled by lack of transparency in decision making. Faculty members do not feel that their input in decision making is welcome. Faculty members are apprehensive about the corporate model of leadership that pits programs and people against one another in a competitive system" (p. 2).

(c) Trower, C.A. and Bleak, J.L. (2004). Study of New Scholars. *Gender: Statistical Report* [Universities]. Cambridge, MA: Harvard Graduate School of Education.

The Study of New Scholars survey was administered to full-time tenure-track faculty at six research universities. It reports on gender differences on a number of factors related to workplace satisfaction. Females reported significantly lower levels of satisfaction with the following factors than males: elements of work and expectations; relationships; and diversity, salary, and work-life balance.

(d) Trower, C.A. (2011). Senior Faculty Vitality. *Advancing Higher Education.* TIAA-CREF.

Focus groups with senior, tenured faculty at six public universities revealed that feeling valued and appreciated for their work is one of several factors that most affects their workplace satisfaction.

(e) Trower, C.A. (2011). Senior faculty satisfaction: Perceptions of associate and full professors at seven public research universities. *Research Dialogue,* 101. TIAA-CREF.

In this study of associate and full professors at seven public research universities, an open-ended survey question asked respondents to state the "number one thing that you, personally, feel your institution could do to improve your workplace." The most frequent response to this question (with 16% of respondents providing it) was to increase salaries. This relates to valuing faculty contributions and to rewarding faculty for outstanding work. See pp. 5-6 of the report.

(f) Fox, M.F. and Colatrella, C. (2006). Participation, performance, and advancement of women in academic science and engineering: what is at issue and why. *Journal of Technology Transfer* (issue on Women in Science). 31: 377-386.

This study is part of Georgia Tech's NSF ADVANCE initiative. Female faculty described "impact and recognition" as a chief area of satisfaction. See p. 381 of the article.