CASE
CASE WESTERN RESERVE UNIVERSITY

Annual Report for the National Science Foundation ADVANCE Project

Academic Careers in Engineering & Science (ACES)
Case Western Reserve University

Year 2: September 1, 2004 – August 31, 2005

Table of Contents

Section I: Personnel and Financial Report

A. Budget explanations by areas and major functions for the reporting year and the next year.

Senior Personnel

Dr. Lynn Singer, ACES principal investigator, is Deputy Provost and Vice President of Academic Affairs in the Office of the President and Provost. Dr. Singer participates in decision making at the highest level of the University and is responsible for the oversight of the ACES program. Her effort is considered part of her responsibility. In Year 2, Dr. Singer contributed 20% effort to the ACES project without cost to NSF and will continue 20% effort for Year 3 without cost to NSF.

Dr. Mary Barkley, co-PI, professor in the Department of Chemistry, facilitated the ACES project activities in the School of Arts & Sciences, the School of Medicine, and in the S&E departments. Dr. Barkley contributed 30% effort to the ACES project which will continue for Year 3.

Dr. Diana Bilimoria, co-PI, associate professor in the Department of Organizational Behavior, facilitated ACES project activities in the School of Management and in the S&E departments. Dr. Bilimoria provides oversight for the quantitative and qualitative research evaluation effort of the ACES project. Dr. Bilimoria contributed 30% effort to theACES project which will continue for Year 3.

Dr. Donald Feke, professor in the Department of Chemical Engineering and Vice Provost. As an administrator in the Office of the President and Provost, his effort is considered part of his responsibility. However, Dr. Feke has contributed 3% effort to the ACES project and is responsible for project activities in the School of Engineering and in the S&E departments. Dr. Feke will contribute 5% effort to Year 3.

Dr. P. Hunter Peckham, professor in the Department of Biomedical Engineering, is committed to the project and participates in ACES meetings and collaborates with ACES senior personnel. No salary support was requested for Dr. Peckham for Year 2**.** We have not requested co-PI status for Dr. Peckham due to his other commitments

The Resource Equity Committee (REC) meets monthly to plan studies and review results for the research and evaluation effort of the project. One month salary support (direct cost) is provided by NSF, and is allocated for each member of the REC in Year 3.

Other Professionals

Beth McGee, Faculty Diversity Officer in the office of Equal Opportunity and Diversity (EOD), allocated 10% effort to the ACES project without cost to NSF in Year 2 and will continue 10% effort in Year 3 without cost to NSF. She is responsible for the oversight and implementation of new search committee guidelines and methods for conducting entrance and exit interviews.

Amanda Shaffer, Diversity Specialist in EOD, works with Beth McGee to develop and provide tools and training for search committees, and develops the methods for collecting the qualitative and quantitative data on recruitment and retention activities and outcomes. 100% effort (direct cost) provided by the NSF ADVANCE grant in Year 2. Year 3funding will be provided by Case.

Dr. Dorothy Miller, Director of the Center for Women, allocated 10% effort to the ACES project in Year 2 without cost to NSF. The Center for Women host's networking events for faculty, and diversity training workshops for undergraduate and graduate students. 10% effort without cost to NSF will continue in Year 3.

Dr. Susan Perry, Senior Research Associate, works with the REC and collects baseline data, assists with the development, administration, and analysis of questionnaires, conducts focus groups and assists with the research and evaluation of other ACES initiatives. She is responsible for the quantitative and qualitative research evaluation effort (data collection, analysis, and reporting) of the project. 100% effort has been allocated for Year 3.

Dr. Xiangfen Liang, Senior Research Assistant, began work with the ACES Program in January, 2005, and allocates 100% effort (direct costs) to the ACES Project for 7 months of Year 2. She works with the REC to collect baseline data, assists with the development, administration, and analysis of questionnaires, conducts focus groups and assists with the research and evaluation of other ACES initiatives. 100% effort to the ACES Project has been allocated for Year 3.

Graduate Students

In Year 2, 2 graduate students with 100% support from NSF provided assistance with research and evaluation for the ACES project with partial support from NSF, and 100% support (direct cost) for a graduate student working with Dr. Dorothy Miller on student training of gender schemas. NSF support has been allocated for graduate students in Year 3 in the amount of $70,170.

Other Personnel

Shelley White, ACES Project Coordinator, contributes 100% effort (direct cost). She began on January 1, 2005 and provides overall staff support for the ACES program. 100% effort (direct cost) has been allocated for Year 3.

Three student workers began in September and have been supported through cost share funds.

Fringe Benefits
Fringe benefit expenses are calculated at 25.50% for all faculty, professional, and administrative staff.

Travel/Domestic
Travel expenses in Year 2 totaled $11,471 for travel to ADVANCE workshops and conferences. For Year 3, an additional $10,000 has been allocated for travel expenses.

Other Direct Costs – Materials and Supplies
In Year 2, expenses included 1 computer, stationery, office supplies, and books. The total amount expended was $10,492.35. In Year 3, $7,000 has been allocated or committed to materials and supplies.

Other Direct Costs – Consultant Services
Eight external consultants facilitate the executive leadership coaching for two Provosts (Deputy Provost and Vice-Provost), two Deans, 10 Chairs, two Associate Chairs, 25 women faculty (at all ranks from Instructor to Full Professor), and one male minority faculty member.

One consultant was hired to continue the facilitation of the strategic planning process of the Chemistry Department. (Danielle Zandee)

One consultant was hired to provide one-on-one and small group coaching on oral communications/presentation/teaching skills. (Sarah Walleck)

Two consultants were hired to provide workshops on mentoring and academic/ professional skills (Sandra Donovan, Claire Scott Miller).

Other Direct Costs – Other
Participant support costs were expended for the ACES summer undergraduate research program for 8 minority students and to support one University of Puerto Rico Ponce faculty member as part of the Faculty Exchange program. In addition, funds were used to support professional development and networking events, website development, workshops, and a leadership retreat A total of $57885.30 has been expended as of June 30, 2005.

Indirect Costs
Indirect costs are calculated at 53%.

Cost sharing
Cost sharing was committed in the amount of $253,378 for Year 2. A cost sharing report will be submitted to NSF per the cooperative agreement after August 31, 2005, the close of business for Year 2. These funds have been assigned to specific allocations or have otherwise been committed.

B. **Current other support information for key personnel:**

1. Psychosocial Sequelae of BPD and VLBW - Phase III
Principal Investigator - Lynn T. Singer, Ph.D.
Agency: MCH Type: R40 MC0034 Period: 7/1/89-12/31/06
To assess school age outcomes of previously studied infants with VLBW and BPD.

2. Cocaine Exposed Children at School Age
Principal Investigator - Lynn Singer, Ph.D.
Agency: NIDA Type: RO1 DA07957 Period: 7/1/94 – 09/34/08
Continuation of a longitudinal, prospective investigation of the medical, environmental, and developmental correlates of fetal cocaine exposure, with the cohort previously seen from birth-2 years, and at 4 and 6 years.

3. Developmental Outcomes of Prenatal Exposure to MDMA (Ecstasy)
Principal Investigator - Lynn T. Singer, Ph.D.
Agency: NIDA Type: RO1DA14910-01 Period: 09/30/01-09/28/06
To assess environmental and maternal psychological correlates of outcomes in MDMA-exposed children in the United Kingdom.

4. Oral Health Problems of BPD and VLBW Adolescents
Principal Investigator - Suchitra Nelson
Co-Investigator Lynn Singer, Ph.D., 5% time,
Agency: NIH (NIDCR) Type: RFA Period: 10/01/04 09/30/06
Collect data on outcome (dental caries), mediating (enamel defects, oral health behavior, oral hygiene status), and independent (oral health knowledge, parent's dental behavior) variables

5. Novel Hypothesis for HIV-1 RT Resisteance to NNRTIs
Principal Investigator – Mary D. Barkley, Ph.D.
Agency: amFar Type: 10654-36-R66N Period: 10/1/04-9/30/05
To study subunit interactions in drug resistance mutant RTs.

OTHER

Research Supplements for Underrepresented Minorities, Predoctoral Fellowship for Teresa Linares
Sponsor Lynn Singer
Period: 2003-2006 $99,658.

Section II: Summary of Project Activities

A. Project Staff

Dr. Lynn Singer, ACES principal investigator, is responsible for the oversight of the ACES program. In Year 1, Dr. Singer facilitated departmental initiatives and implementation of the ACES Steering Committee, Provost Leadership Retreat, and establishment of the ACES External Advisory Board. She presents the ACES program to the Case Western Reserve University community. Dr. Singer will continue 20% effort for Year 3.

Dr. Mary Barkley, co-PI, allocates 30% effort to the ACES project and facilitates the ACES project activities in the School of Arts & Sciences, the School of Medicine, and in the S&E departments. She is responsible for the oversight of the ADVANCE Distinguished Lectureships and the ADVANCE Opportunity Grants program. Dr. Barkley heads the ACES Team comprised of scientists from different disciplines who serve as an internal advisory board and review proposals and provide recommendations for ACES programs. In addition, Dr. Barkley is responsible for the Fisk Faculty Exchange Program, ACES Summer Undergraduate Research Program, and the partner hiring network which all began in the Summer, 2004.

Dr. Diana Bilimoria, co-PI, allocates 30% effort to the ACES project and facilitates ACES project activities in the School of Management and in the S&E departments. She is responsible for oversight of the research and evaluation effort of the ACES program including the baseline data collection, climate survey, chairs survey, and the space and salary analysis. In addition, Dr. Bilimoria provides oversight and evaluation for the following interventions: leadership coaching for deans and chairs, career-based coaching for women faculty, and mentoring committees for women faculty. Dr. Bilimoria provides resources, assessment tools, workshops, and consultations to faculty, chairs, and departments. Dr Bilimoria supervises two graduate research assistants, one who assists in all the research and evaluation activities of the REC, and another who has just completed a study on the Neurosciences Department (for her doctoral qualifying exam) and who will now be undertaking her doctoral dissertation on an ADVANCE-related topic.

Dr. Donald Feke, professor in the Department of Chemical Engineering and Vice Provost. As an administrator in the Office of the President and Provost, his effort is considered part of his responsibility. Dr. Feke is responsible for project activities in the School of Engineering and in the S&E departments. He has contributed 3% effort to the ACES project Year 2, and will contribute 5% effort to Year 3.

Susan Perry, Senior Research Associate, is responsible for the qualitative and quantitative data collection (administering the baseline climate survey, conducting focus groups and interviews). She is responsible for correcting and verifying data, writing of the climate survey reports, creating faculty databases, and collecting the evaluation indicators needed for the year-end report. She also assists in the design, collection, and administration for the data needed for intervention activities such as the coaching and mentoring evaluations. Susan codes survey responses and enters survey data into the database. She researches and consolidates multiple sources of data, records, and prepares the data for analysis, supervises the transcription of focus group tapes, and creates codebooks. Susan allocates 100% of her time to the ACES project.

Xiangfen Liang, Senior Research Assistant, is responsible for assisting the ACES Research and Evaluation Team and its Senior Research Associate in the conduct, preparation and collection of quantitative and qualitative data analysis, specific program evaluation activities, and the preparation of progress reports and presentations. In addition, she will perform complex quantitative and qualitative analytic procedures, and assist with creation of marketing materials for ACES.

Beth McGee, Faculty Diversity Officer, is responsible for issues concerning Faculty Diversity, and for ACES, the oversight and implementation of conducting entrance and exit interviews and providing search committee support. She meets with Lynn Singer, ACES PI, and John Anderson, Provost, to discuss implementing these initiatives. Beth allocates 10% of her time to the ACES project without cost to NSF. In the past year, resources established by ACES have enhanced diversity initiatives at Case. Such initiatives include:

- A faculty diversity website with resources for search committees and administrative assistants who generate Affirmative Action files for approval
- The School of Medicine has established an ad hoc committee to review faculty complaints due to increased salary equity requests and climate concerns expressed to the Faculty Diversity Officer and the Office of the Provost
- Dean Robert Savinell of the School of Engineering has agreed to make diversity initiatives an element of the yearly review of all Engineering department chairs

ACES has also promoted policy change in the area of family friendly polices:

- The newly established Case Partner Hiring Policy has been used to hire/retain three women faculty members, two of whom are in STEM departments
- Plans are underway for the building of a new childcare center on the South side of the Case Campus
- Evaluation of existing women's lounges is underway for the planning of more convenient lactation centers on campus
- A Consensual Relationships policy has been developed and passed by the Case Faculty Senate to promote respectful and ethical professional relationships for all faculty, staff and students.

Amanda Shaffer, Diversity Specialist, works with Beth McGee in providing training for search committees and faculty recruitment skills. She develops web-based and other tools to assist search committees in diversifying their applicant pools. She is responsible for faculty exit surveys and collects qualitative and quantitative data on recruitment and retention activities and outcomes. Amanda prepares presentations to deliver at faculty meetings, conferences, and workshops. The co-PIs, Faculty Diversity Officer, and department chairs work with Amanda to develop departmental and institutional programs. Amanda allocates 100% effort to the ACES program. Continued funding for this position after Year 2 will be provided by Case.

Dorothy Miller, Director of the Center for Women, allocates 10% effort on the ACES project without cost to NSF. She provides networking events at the Center for Women and training of undergraduate and graduate students to eliminate gender bias toward women faculty. She also supervises a graduate student, who assists with the student training. Dorothy allocates 10% of her time to the ACES Project without cost to NSF.

Weekly co-PI's meetings with Lynn Singer, the ACES co-PIs, Beth McGee, Amanda Shaffer, Dorothy Miller, Susan Perry and Xiangfen Liang are held to discuss current initiatives and progress. The REC attends Co-PI meetings quarterly.

Graduate Students

In Year 2, three graduate students worked on ACES and assisted with research, data collection, evaluation, and training. NSF support has been allocated for two graduate students in Year 3. Continued funding for a graduate student assisting with student training after Year 2 will be provided by Case.

Project management system and infrastructure

Project Coordinator, Shelley White, coordinates all activities under the ACES program. In addition to providing administrative support of printing, copying, library searches, and web research, she also coordinates all meetings, works on presentations, promotional materials, project website, and publicizes programs and events as well as the newsletter. She drafts correspondence and reports on project activities. She is also responsible for managing the NSF ADVANCE budget, Opportunity grant budgets, and providing event planning for the Distinguished Lectureships program, Summer Undergraduate Research Program, and the Fisk Faculty Exchange program.

Partners

The ACES Team comprises the co-PIs and 10 faculty members from various disciplines. The Team serves as an internal advisory board and reviews proposals for Opportunity Grants and Distinguished Lectureships.

The ACES Steering committee meets monthly to guide the direction of the ACES program and make recommendations on implementing ACES initiatives. The committee consists of the PI, co-PIs, deans of the 4 participating schools (College of Arts and Sciences, School of Engineering, Weatherhead School of Management, and School of Medicine), the Faculty Diversity Officer, and the Women's Center Director.

The Resource Equity Committee (REC) meets monthly and assists with the design, implementation, and analyses of data and questionnaire for the ACES program. Attendees include Diana Bilimoria, Nahida Gordon, Patricia Higgins, Xiangfen Liang, Susan Perry, Eleanor Stoller, Cyrus Taylor and a graduate student. Diana Bilimoria serves as liaison and provides oversight for the research and evaluation efforts. Susan Perry, Xiangfen Liang, and two graduate students provide research support to the REC and ACES program.

The External Advisory Board provides evaluation and recommendations for the ACES program. An Advisory Board meeting was held on April 20, 2005 on the campus of Case Western Reserve University. Members of the board include Lotte Bailyn (Department of Organizational Behavior at MIT), Jeanette Graselli Brown (Chair of the Ohio Board of Regents), Jean-Lou Chameau (Provost of Georgia Institute of Technology), Janie Fouke (Provost and Senior Vice President for Academic Affairs, University of Florida), Mary Salomon (R & D Research Manager, New Products at Lubrizol), Abigail Stewart (Institute for Research on Women and Gender at the University of Michigan), and Isiah Warner (Vice-Chancellor of Strategic Initiatives at Louisiana State University).

Other collaborators or contacts

Internal Collaborators
Ann Boughner, Director of Human Resources & Leadership Development, Case School of Engineering
Daniel Anker, Associate Dean of Faculty & Institutional Affairs, Case School of Medicine
Patricia Gallagher, CPMSM, Director, Medical Staff Services, MetroHealth Hospital
Gerold Goldberg, Dean, Case School of Dental Medicine
Thomas Matthews, Director, Career Center
Latisha M. James, Director, Community Relations, Center for Community Partnerships
Sarah Taylor, (Chair), Newcomers Committee
Hue-Lee Kuang, Associate Professor, Anatomy; President, Women Faculty of the School of Medicine
Megan Linos, Instructional Designer, Instructional Technology and Academic Computing (ITAC), Information Technology Services

External Collaborators
HR Solutions
Michael E. Kovach, Ph.D.Assistant Professor & Chair, Department of Biology & Geology, Baldwin-Wallace College

SEARCH PROCEDURE INTERNAL COLLABORATION
With the assistance of Ann Boughner, the Faculty Search Guidelines that were approved by the Provost in Spring of 2004 were presented to the department assistants and business managers in the Case School of Engineering in a training session conducted by Amanda Shaffer and Beth McGee. Dean Robert Savinell provided a boxed lunch as an incentive for participation and issued the invitation to attend the training. Similarly, Patricia Gallagher arranged for the business managers and department assistants at MetroHealth Hospital, a Case School of Medicine affiliate, to receive the search training provided by Beth McGee, Amanda Shaffer and Michael Bono in the school of Medicine.

The Faculty Search Guidelines were subsequently introduced to the Case School of Medicine through a collaboration with Associate Dean of Faculty Affairs Daniel Anker. In the spring of 2005, Amanda Shaffer and Daniel Anker held a total of eight one-hour meetings with department chairs (Anatomy, Biochemistry, Epidemeology, Genetics, Molecular Biology & Microbiology, Neurosciences, Nutrition, and Pharmacology) to review the new search guidelines, present materials from the ACES program, research about bias in the hiring process, and strategies for diversifying the candidate pool. This process will continue through 2005/2006. An additional panel discussion for the women faculty of the School of Medicine was arranged by Hue-Lee Kuang, President of Women Faculty. The ACES PI's, Dean Ralph Horwitz, Associate Dean Anker and approximately 30 women faculty discussed ACES and the future of the women faculty in the School of Medicine,

Even though he is not part of the NSF-ACES targeted schools or departments, Gerald Korngold, Dean of the School of Dental Medicine, scheduled a mandatory meeting of his department chairs at which Amanda Shaffer presented the search training, guidelines, and relevant research about bias.

PARTNER HIRING/RETENTION COLLABORATION

Working with Thomas Matthews, Director of the, Career Center, Amanda Shaffer and Beth McGee are creating a proposal for a number of services to be offered to assist faculty partners (both new and current) in finding non-academic work in the surrounding area. These services will include a database of professional contacts offered through Northeast Ohio Case Alumni Relations Department; personal attention for networking purposes from the director of the Career Center until such time as a staff person is assigned; and resume refining with a career center staff person. To this end a partnership has also been established with Latisha M. James, Director, Community Relations, to help inform and engage faculty partners in the Case Community activities. A proposed activity for 2005/2006 is introducing faculty partners to volunteer opportunities at local non-profits and community organizations in the somewhat impoverished area surrounding the university. We are working with Ms. James on the creation of a "Partner Card" (2006/2007) that mimics a popular Community Card offered to residents in select areas, that would enable partners to have, for example, withdrawal privileges at the Case libraries and any associated discounts in the community that are enjoyed by other Case affiliates. Additionally, Sarah Taylor, (Chair), Newcomers Committee, is working cooperatively with Amanda Shaffer to engage new faculty, their partners and families in the Case community through one-on-one contact, networking events, and casual coffees and picnics.

External collaborators include Michael E. Kovach and Academic Affairs at Baldwin Wallace College and other local colleges and universities that Amanda Shaffer is contacting regarding working cooperatively to set up a partner hire system for academic faculty partners in Northeast Ohio.

EXIT INTERVIEW EXTERNAL COLLABORATION

A Faculty Exit Survey was launched as a pilot version in Spring of 2005 at the request of Provost John Anderson, and was administered by a third-party company HR Solutions, Inc. This pilot consisted of a paper version and an online version and is further reported on in the evaluation section of this report.

FACULTY TRAINING DEVELOPMENT

In responding to Dean Mark Turner's observation that female faculty tend to neglect the maintenance of their websites, Amanda Shaffer has collaborated with Megan Linos to develop a series of templates for faculty website development. Ms. Linos met with our test subject Beth McGee to help guide her in the development of a professional web page. After the initial development, Ms. Linos then trained Professor McGee in simple html so that continual updating of information, publications, and CV are less time consuming, and therefore more likely to be done by a busy faculty member.

Amanda Shaffer also developed a tip sheet to assist those faculty that wish to work on their websites themselves, "Gentle Suggestions for an Effective Website", that explains the basics of a dynamic, content-rich, usable website.

B. Activities and Findings

VISION

The ACES vision at Case Western Reserve University is for institutional transformation that leads to increased transparency and accountability as well as more equitable practices, policies, procedures, and structures. Our activities and findings for Year 2 are summarized below including the difficulties in implementing proposed activities and approaches to address them.

We had originally planned to work with four test departments in Years 1 and 2 of the ACES project, which we called Phase 1. Because of the exceptional response in the test departments and the 27 departments remaining for use to work with in Phase 2, we moved up the beginning of Phase 2 to January 2005. Ten more departments, suggested by the deans of the four college/schools, are receiving the successful mentoring and coaching interventions: Anthropolgy, Geological Sciences, Mathematics, and Political Science in the College of Arts & Sciences (CAS); Biomedical Engineering, Chemical Engineering, and Electrical Engineering & Computer Science in the Case School of Engineering (CSE); Biochemistry and Molecular Biology & Microbiology in the School of Medicine (SOM); and Marketing & Policy Studies in the Weatherhead School of Management (WSOM).

Retention Activities promoted by the Faculty Diversity Officer

Plans to increase lactation centers
Plans to build a child care center
Faculty Diversity Officer invited to Faculty Orientation of the School of Engineering and the College of Arts and Sciences

TRAINING AND DEVELOPMENT

Mentoring

Diana Bilimoria, co-PI, oversees the mentoring program and provides guidance in implementation of mentoring committees. Briefly, mentoring committees consist of a senior departmental colleague, a faculty member from within the university but outside the department, and a disciplinary member from outside the university. The mentors have field-specific or institution specific experience and expertise that a mentee can draw on for guidance and counsel. Mentees drive this process, and are responsible for setting up mentoring committee meetings for facilitation of their career development. Each woman faculty chooses the members for her committee, and the department chair invites them to serve on her committee for a period of two years. Mentees drive the process, and are responsible for scheduling mentoring committee meetings to facilitate their career development. The mentoring committees of 13 women faculty in the four test departments are in their second year. The mentoring committees of 24 women in the ten new departments are being set up. The ACES program sponsored a "Successful Mentoring" workshop for men and women faculty and postdocs through the Center for Women. Mentoring workshops for mentees in the 10 new departments and their mentors will be scheduled when school resumes in the fall.

The mentoring program has been difficult to administer, despite help from the coaches in encouraging women faculty to set up and use their mentoring committees. To facilitate setting up mentoring committees, a mentoring web site with password protected database was recently constructed: http://www.acesproject.com/index.php The structure of the mentoring program will

be discussed and refocused at a PI retreat in mid July. Challenges of the mentoring program range from difficulty of women faculty in identifying suitable male colleagues in their departments to serve as mentors and resistance on the part of department chairs to sending the invitation form letters to getting women faculty to take responsibility for driving the process. We have done no formal evaluation of the program, but developing an evaluation plan will be part of the PI retreat. Informal feedback from the bimonthly networking luncheons with the women faculty in the 14 departments indicate that women continue to have positive experiences when they have utilized their committees. For example, one woman faculty received advice on her NSF proposal from the external committee member, which resulted in the grant being funded.

Coaching

Diana Bilimoria oversees the executive coaching program for women faculty and chairs of the test departments and deans of the four participating schools. An executive coach is someone who has general academic/organizational experience and who provides performance-related and career-related advice. The coach helps the coachee to specifically determine career and leadership vision, goals, plans, and actions. They give advice, resources, and feedback on how to best accomplish the identified vision. The executive coaching intervention consists of a 6-session coaching program for women faculty and a 10-session coaching program for deans and chairs. Bi-monthly Coaches Cohort meetings, which consists of the co-PIs and eight coaches, are conducted to plan, design and debrief the coaching activities.

Coaching activities for Round One coaching (January – December 2004) were completed for most participants in December 2004. Occasionally, one or two additional closure sessions were provided for some of the 2004 participants during the Spring 2005 semester. To recap, Round One (2004) coaching participants consisted of 2 deans, 3 department chairs, and 16 women faculty in four test departments: Chemistry, Mechanical & Aerospace Engineering, Organizational Behavior, and Physiology & Biophysics. Final coaching evaluations received from these participants were extremely high and are reported in the oval section in Appendix 6.

Templates for the coaching of department chairs and women faculty were created at the end of the first round of executive coaching (in December 2004), for extension to all S&E departments in Phase II (starting in January 2005). These templates provide the overview, objectives, activities, homework assignments, and follow-up activities of each coaching session. These templates for coaching chairs and women faculty are attached as Appendix 8.

Executive coaching in 10 new departments was initiated in January 2005. These departments were: Biomedical Engineering, Electrical Engineering and Computer Science, and Chemical Engineering from the Case School of Engineering; Biochemistry, and Molecular Biology & Microbiology from the School of Medicine; Anthropology, Geological Sciences, Mathematics, and Political Sciences from the College of Arts and Sciences; and Marketing and Policy Studies from the Weatherhead School of Management.

Coaching in these departments involved executive (leadership development) coaching of the chairs of these departments. All but one chair (who was an Interim Chair at the time) chose to move forward with their coaching. Two associate chairs (of Electrical Engineering and Computer Science) were also provided executive coaching. Performance and career-based coaching was also offered to 25 women faculty at all academic levels (Instructors, Assistant Professors, Associate Professors, and Professors) and to 1 male minority faculty member in the Department of Organizational Behavior (which was a test department last year).

In addition, executive (leadership development) coaching was provided in 2005 to 2 Provosts (Deputy Provost and Vice-Provost), 2 Deans, and 2 Associate Deans. One of these two deans appears to have moved forward well with the executive coaching, the other has been bogged down by other pressing commitments. Two other deans (who joined Case after the Award was received) declined the personal coaching. One of these deans chose to establish his own external mentor/coach.

While the overall coaching initiative is going well, we face a few challenges:

(1) To bring the Deans more on board with the ACES effort,
(2) To create a community among the Department Chairs, and
(3) To create a community among women faculty.

Toward the first of these challenges, we are scheduling an Internal ACES Team retreat in July 2005 to revisit the entire issue of the involvement of Deans. We are seeking to derive ways to engage the Deans in the creation of Diversity Plans and hold them accountable for their implementation.

Towards the second of these challenges, we are initiating bi-monthly luncheons of department chairs (some sessions are attended by the Provost). Additionally, last year (in October 2004) we initiated a one-day retreat (the first time ever at our university) of the Provost, Deans, and Chairs of all the S&E departments to discuss issues relevant to the recruitment, advancement, and retention of women faculty. This retreat is described in more detail in the section on training and development.

To address the third challenge above regarding the creation of a community among women faculty, we are continuing the bi-monthly luncheons and other networking seminars (specifically targeted at women faculty) that were initiated in 2004. These luncheons and networking workshops provide a chance for women faculty to talk about their experiences at Case and to share stories about their successes and difficulties in achieving their goals.

Mid-term evaluation of the 2005 coaching intervention will be sent out shortly to chairs and women faculty to provide insight into improving the coaching experience.

Provost's Leadership Retreat

A one-day Provost's Leadership Retreat was held on the Case campus on October 26, 2004. For the first time ever, the President, Provost, the deans of the schools of Engineering, Management, and Medicine and the College of Arts and Sciences, and the chairs of the 31 S&E departments participating in the NSF-funded ACES program were brought together to discuss issues pertinent to the recruitment, retention, advancement, and leadership of women faculty. Kick-off presentations were made by Case's President, Edward M. Hundert, M.D. and Provost, John Anderson. NSF ADVANCE program directors, Drs. Alice Hogan and Lloyd Douglas spoke about the overall ADVANCE program and Drs. Abby Stewart and Sam Mukasa from the University of Michigan, informed the deans and chairs about key programs and findings from their ADVANCE project. Deputy Provost Lynn Singer, Ph.D. and Dr. Diana Bilimoria described ACES program activities during the first year including executive coaching of deans, chairs, and women faculty, mentoring committees of women faculty, training and development, networking, search committee support, and student awareness training. The chairs of the ACES first year departments (Chemistry, Mechanical & Aerospace Engineering, Organizational Behavior, and Physiology & Biophysics) shared the experiences, successes, and challenges in their

departments. Two of the chairs who attended the University of Washington's Chairs' Leadership Workshop (the chairs of Biology and Chemistry) presented their experiences during and learnings from this workshop. The four school/college deans led discussions around current and emerging initiatives at Case addressing the advancement of women faculty, including partner hiring, child care, and service load issues. The ACES research and evaluation committee (REC) reported on findings during the first year from faculty focus groups and interviews, coaching feedback, and the 2004 University Community and Climate Survey. The retreat concluded with a discussion of strengths, weaknesses, opportunities, and threats for moving forward with the ideas discussed, followed by dinner and a talk by Dr. Sue Rosser from the ADVANCE program at Georgia Institute of Technology. Evaluations of the one-day retreat were very favorable, and plans are underway to convene another similar day during Year 3 of our award.

ADVANCE Opportunity Grants

$60,000 is available annually (cost share) to provide support for women faculty in the S&E departments for projects and activities where funding is difficult to obtain through other sources. We have received a total of 23 proposals and were able to award 17 small grants to maximize chances for success of women faculty at Case. After assessing the need, we have found that these grants are in strong demand and have awarded $205,938 (funded in cost share).

ADVANCE Opportunity Grant Awards	
Awardee	**Department**
Alexis Abramson	Mechanical & Aerospace Engineering
Cynthia Beall	Anthropology (CAS)
Anne Marie Broome	Physiology & Biophysics (SOM)
Cheri Deng	Biomedical Engineering (CSE)
Moren Levesque	Marketing & Policy Studies (WSOM)
Lisa Maillart	Operations (WSOM)
Heidi Martin	Chemical Engineering (CSE)
Emilia McGucken	Sociology (CAS)
Monica Montano	Pharmacology (SOM)
Anna-Liisa Nieminen	Anatomy (SOM)
Deborah O'Neil	Organizational Behavior (WSOM)
Julie Rennecker	Information Systems (WSOM)
Claire Rimnac	Mechanical & Aerospace Engineering (CSE)
Helen Salz	Genetics (SOM)
Beverly Saylor	Geological Sciences (CAS)
M. Cather Simpson	Chemistry (CAS)
Amy Wilson-Delfosse	Pharmacology (SOM)

OUTREACH ACTIVITIES

ADVANCE Distinguished Lectureships

$100,000 is available annually (cost share) to provide 10 Distinguished Lectureships to senior women scientists a year for a minimum stay of 2 days and a maximum stay of 2 weeks at Case. The lecturer is invited based on mutual research interests with faculty in the host department. She will give 3-6 lectures and a public lecture followed by a reception. In Year 2, ACES sponsored 11 ADVANCE Distinguished Lectureships and approved funding for all 12 visits. We have received 1 proposal for the ADVANCE Distinguished Lectureships. The goal of the ADVANCE lecturers on campus is to provide networking opportunities and raise the visibility of S&E women faculty.

ADVANCE Distinguished Lectureship	
ADVANCE Lecturer	**Host Department**
Ana Achucarro University of Leiden, Netherlands	Department of Physics (CAS)
Cristina Amon Carnegie Mellon University	Department of Mechanical & Aerospace Engineering (CSE)
Mary Beckerle University of Utah	Department of Physiology & Biophysics (SOM)
Viola Birss University of Calgary	Department of Chemistry (CAS)
Kristin Fichthorn Pennsylvania State University	Department of Chemical Engineering (CSE)
Martha Gray Harvard-MIT Heath Science Technology	Department of Biomedical Engineering (CSE)
Naomi Lamoreaux UCLA	Department of Economics (WSOM)
Jennifer Lewis University of Illinois @Urbana	Department of Materials Science & Engineering (CSE)
Maria Minniti Babson College	Marketing & Policy Studies (WSOM)
Julie Morris Washington University	Department of Geological Sciences (CAS)
Nancy Reid Toronto University	Department of Statistics (CAS)

Outreach to Departments

A one-hour presentation about the ACES program was given to the 10 Phase II departments by Diana Bilimoria, Lynn Singer, or Mary Barkley, accompanied by several other ACES Team members (Donald Feke, P. Hunter Peckham, Amanda Shaffer, Beth McGee, Patricia Higgins, Cyrus Taylor, and Eleanor Stoller). The presentation covers what to expect during the ACES year, research regarding the promotion and status of women in STEM nationally and at Case, the resources available to the departments such as networking events, customized training (a presentation skills workshop was developed for one department), the role of the chair, the role of the women faculty, and the role of the male faculty. These presentations, which strive to ensure buy-in and signal the importance of the ACES activities, often lead to spirited discussions within the department about some of the underlying philosophies of the department.

All chairs, faculty and department assistants of the 31 ACES departments receive our Bi-Annual Newsletter, regular email updates about activities and flyers reminding them of distinguished lectureships, networking events, and application deadlines. Lynn Singer, PI, has also given

presentations and updates about ACES at Faculty Senate Meetings and Deans Council Meetings and provides handouts of the ACES newsletter at events and meetings which she attends.

Amanda Shaffer and Beth McGee have also made presentations of the search guidelines and procedures to the business managers and department assistants in the Case School of Engineering, the School of Medicine, and MetroHealth Hospital. We anticipate duplicating this outreach effort at the College of Arts and Sciences, Weatherhead School of Management, and University Hospitals in 2005/2006.

Male Faculty Initiative for Increased Faculty Involvement

Planning for a new initiative in which ADVANCE objectives are promoted by (non-chair) faculty members is underway. In this plan, a small group (~12) of male faculty members pre-disposed to promoting women faculty will be recruited (by the Provost). This group will develop strategies that (non-chair) faculty can implement to address women's faculty issues at the department level. The intent is that each member of this group will seed and catalyze appropriate actions, build awareness of women faculty issues, and work for attitudinal changes within their respective departments. The ultimate goal is to increase the number of male faculty members interested in the advancement of women. This initiative is being spearheaded by co-PI Donald Feke and P. Hunter Peckham.

Search Committee Support

Amanda Shaffer continues to conduct one-on-one meetings with department chairs to assess current faculty search procedures and areas for improvement in the department prior to conducting the faculty search committee training. This policy allows the training to be somewhat customized to the department and avoids the “one-size-fits-all” mentality that can increase resistance to implementing the proposed changes. Accountability for the diversity of the candidate pool on the part of the deans has been incorporated into the process with a form that requires the dean to sign off on the candidate pool before any candidates can be invited to interview.

In the past year the search committee training has been split into three 45-minute sessions Reviewing the Search Guidelines, Best Practices for Evaluating Candidates, and Interviewing & the Campus Visit. Web tools have been developed to assist with self-training and to increase dissemination of the information. The website is at http://www.cwru.edu/president/aaction/aaeeo.html

Additionally, Faculty Welcome Packets have been created for women interviewees that explain the ACES program, resources available such as lactation centers, partner hiring networks, and relocation services. We also provide maps of the area, brochures of museums and attractions, visitor guides, minority and special interest newspapers (Jewish News, Hispanic Times, Call & Post, Gay People’s Chronicle). In the spirit of transparency, the Diversity Specialist is available to offer candid information about child care/elder care options, domestic partner benefits for LGTB, and any other issues that a candidate may be hesitant to discuss with a search committee or host. Much of this information is also available on the Faculty Diversity website.

A network of women faculty has been created that are available to meet with candidates to discuss climate issues and their experience of being a woman scientist at Case. Most especially PI Lynn Singer rearranges her calendar in order to speak personally with candidates. We have received positive feedback from several candidates who were subsequently hired into Case STEM departments that we were the only university that made efforts to openly address climate issues with them and schedule interviews with senior women scientists.

A new voluntary online Affirmative Action Tracking Form has been approved and will be operational by the hiring season of 2005/2006. This form will allow us to better track the applicant pool beyond the final candidate list. This confidential database will be housed in the Office of Equal Opportunity and Diversity and only be accessed by the Faculty Diversity Officer and the Diversity Specialist for reporting purposes.

Faculty Exit Survey

The pilot exit survey was developed through careful review of the Case Climate and Accreditation Survey, the NSF indicators for ADVANCE, and the already developed survey instruments from NMSU, Kansas State, and Virginia Tech. The Case Faculty Exit Interview questions focus on three areas, 1) Reasons for Accepting the Position at Case, 2) Rating Your Experience at Case, and 3) Reasons for Leaving your Position at Case. The survey was administered by an outside company HR Solutions, Inc. in a paper format and a secure, online format. The survey was sent to all faculty who left the university between June of 2000 and October of 2004 (See Appendix 5), which consisted of 228 mailed paper surveys and 159 e- mail-only contacts, for a total of 387 possible respondents. The total number of responses to the survey was 50. Of these responses women comprised 48% (N=24) of the sample, and men were 52% (N=26) of the sample.

A careful review of the survey instrument will be made by the ACES co-PI's, and evaluation team, in conjunction with Provost John Anderson, before the next round of survey's if conducted in August/September of 2005.

Minority Pipeline

In Year 2, ACES funded 8 minority women students for the Summer Undergraduate Research Program. Three of these students were from Fisk University building on our university collaboration with Fisk. The other fives students were from Edinboro University in Pennsylvania, Barry University in Florida, College of Wooster in Ohio, University of Puerto Rico Ponce, Puerto Rico, and one from Case Western Reserve University. All ACES fellows have been placed with Case faculty mentors. They spend 10 weeks conducting research in an area of their interest. In addition, they are invited to participate in social events sponsored by other summer research programs. The goal of the summer program is to encourage minority women students to pursue academic careers in S&E. Participants will return an evaluation form at the end of the program.

ACES Summer Undergraduate Research Program	
ACES Fellow	**Faculty Mentor/Department**
Juliana Anquandah, College of Wooster	Dr. Vernon Anderson, Biochemistry Dr.
Jourdan Bowe, Fisk University	Dr. Anna-Liisa Nieminen, Anatomy Dr.
Irelys Cruz, University of Puerto Rico Ponce	Dr. Henry Boom, Molecular Biology
Dionne Griffin, Edinboro University	Dr. Mary Barkley, Chemistry
Kiedra Kincaide, Fisk University	Dr. Chris Cullis, Biology
Susana Lopez, Barry University	Dr. Anthony Pearson, Organic Chemistry
Dyianweh Queh, Fisk University	Dr. Helen Salz, Genetics
Willainia Studmire, Case Western Reserve University	Dr. Lynn Singer, Psychology

Due to financial problems at Fisk University, their faculty are not able to make extended visits to Case during the academic year. Moreover, Fisk S&E faculty also teach during the summer semester, so they are only available for short visits during the time between

semesters. In Year 1, Dr. Gerald Saidel, Professor in the Department of Biomedical Engineering, hosted Dr. Sanjukta Hota, Professor in the Department of Mathematics at Fisk, for two weeks in June 2004. In Year 2, we broadened the faculty exchange program to other minority universities. Dr. Edu Beatrice Suarez-Martinez, Assistant Professor in the Department of Biology at the University of Puerto Rico Ponce, is currently visiting Case for 2 weeks in July. Dr. Suarez-Martinez is hosted by Dr. Joseph Nadeau, Professor and Chair in the Department of Genetics.

The goal of the faculty exchange is to build a strong bridge with minority universities for minority students and to provide role models for minority women students at Case. An evaluation of the program will be provided by Dr. Suarez to provide insight into her visit at Case

Networking Luncheons
ACES hosts bimonthly networking luncheons for women in the 14 departments. These luncheons were initiated during Phase 1 upon request by women faculty in the four test departments. The luncheons have been well attended and provide women faculty a chance to talk about their experiences at Case and to discuss success stories and challenges with the mentoring and coaching initiatives. One co-PI, either Diana Bilimoria or Mary Barkley, attends the luncheon in order to receive feedback about the ACES project from the women faculty.

Networking Events
The Center for Women held four networking and faculty development events in the past year. Sandra Donovan, who is a business consultant and also has Ph.D. in Chemistry, spoke on "Success in Academic Careers," and was very well received. The sixty attendees included Case faculty and women scientists from Lubrizol, who engaged in lively discussions with the presenter. Claire Scott Miller, a well-known business consultant, conducted a workshop on mentoring in the spring that included about 30 participants from the faculty and from industry.

Miriam Levin, from the Case Department of History, spoke to a gathering of 50 women faculty and students about her new book, *Defining Women's Scientific Enterprise: Mount Holyoke Faculty and the Rise of American Science.* The event was co-sponsored with the Women in Science and Engineering Roundtable (WISER) undergraduate program and brought together both students and faculty. In May, we took advantage of the opportunity to feature a talk by noted author Riane Eisler, who was presented with an honorary degree at Case this year. She spoke to an audience of twenty-eight women scientists, alumnae and administrators, including the provost, about her model of cooperation between women and men.

The Center featured two women scientists in our Spotlight Series on Women's Scholarship, through which women scholars on our campus present their work and discuss their career struggles and achievements. Noted Case astronomer Professor Heather Morrison and Dr. Dorothy Merritts, visiting professor in Geology, were featured speakers.

Finally, we launched a Women of Achievement Luncheon, an event that will become an annual feature of our programming. We honored women faculty and administrators who had received tenure, promotion and honors in the past year. The 55 attendees were very pleased and we expect a larger turnout this coming year.

Undergraduate and Graduate Student Training

The Center for Women piloted its classroom gender awareness training workshops for graduate and undergraduate students. We worked extensively with a professor and students from the Theatre Department to develop original short skits about the gendered relationships between students and faculty. With this content, we did three workshop presentations to a large undergraduate class in Mechanical and Aerospace Engineering. At the last session we gathered extensive student feedback and as a result decided to discontinue the theatrical component of our workshops.

We also did three workshop sessions with a graduate seminar in Chemistry and one in Biochemistry. The workshops utilized PowerPoint presentations and in-depth discussion. The feedback indicated that the students want more information about gender research in the workshops, but keep many of the discussion questions and interactive features of the workshops.

We have evaluated both process and content very thoroughly and have revamped our procedures for next year with regard to: preparation of the department's chair and faculty; briefing and de-briefing with the classroom or lab professor; classroom techniques and styles. We are investigating interactive computerized "games" that we can use for the students. In preparation for the coming year, we have met with eight of the ten chairs of the new ACES departments and have begun scheduling meetings with their faculty and negotiating what classes we will visit over the next academic year.

Conferences/Workshops

- Lynn Singer, Dean Robert Savinell, and Diana Bilimoria participated in the Engineering Deans Conference, Arlington, Virginia, in December 2004.
- Diana Bilimoria participated in the mini-PI meeting, Arlington, Virginia in December 2004.
- Beth McGee (Faculty Diversity Officer) and Amanda Shaffer (Diversity Specialist) participated at the Keeping Our Faculties: Addressing the Recruitment and Retention of Faculty of Color at the University of Minnesota November 18-20, 2004.
- Beth McGee and Amanda Shaffer attended the National Conference on Race and Ethnicity in American Higher Education in New York City May 31st-June 4th, 2005.
- Beth McGee participated in the University of Michigan training Setting the Stage for Change Summer Institute June 15-17, 2005.
- Provost John Andersen, Lynn Singer, Vice-Provost Donald Feke, Diana Bilimoria, Beth Mcgee, Dorothy Miller, Cyrus Taylor (incoming Acting Chair of Physics and ACES Evaluation Team member), Nahida Gordon (ACES Evaluation Team member) Susan Perry, Xiangfen Liang, Amanda Shaffer, and two coaches (Miggy Hopkins and Deb O'Neil) attended the NSF ADVANCE PI Meeting in Washington, D.C. in May 2005.

  Three presentations were made at this meeting:
  - Lynn Singer spoke at a session on Chairs' development,
  - Diana Bilimoria spoke at sessions on Institutional Transformation and on Climate Changes.

  Four posters were prepared for this meeting, as follows:
  - Bilimoria, Diana, Hopkins, Margaret M. & O'Neil, Deborah A. May 2005. An Integrated Coaching and Mentoring Program for University Transformation.

  - Bilimoria, Diana & Jordan, C. Greer. May 2005. A Good Place to Do Science: A Case Study of an Academic Science Department.
  - Bilimoria, Diana, Perry, Susan, Liang, Xiangfen, Higgins, Patricia, Robson, Linda, Stoller, Eleanor & Taylor, Cyrus. May 2005. How Do Female and Male Faculty Members Construct Job Satisfaction?
  - Perry, Susan R., Joy, Simy, Liang, Xiangfen, Bilimoria, Diana, Gordon, Nahida, Higgins, Patricia, Stoller, Eleanor P., & Taylor, Cyrus. May 2005. Graduate Student-Faculty Relations: Exploring Gender and Nationality.
- Diana Bilimoria participated in a session on NSF ADVANCE (organizers: Janet Malley and Abigail Stewart of the University of Michigan) at the National Council for Research on Women Conference in New York in June 2004. Her presentation on research in the ADVANCE institutions was entitled "The Role of Research in Institutional Change: Evidence from ADVANCE Institutions".
- Four S&E department chairs (of Biochemistry, Chemical Engineering, Molecular Biology & Microbiology, and Physics) will participate in the University of Washington's ADVANCE Chairs' Leadership Workshop in July 2005.
- Diana Bilimoria and Susan Perry will participate in the Academy of Management Conference in Honolulu, Hawaii in August 2005. They will be making presentations on:
  - Bilimoria, Diana (Chair). August 2005. Applying Theory to University Transformation: Advancing Women Faculty in Science and Engineering, Showcase Symposium. Other symposium participants are from Georgia Tech, Hunter College, University of New Mexico, and Utah State.
  - Bilimoria, Diana & Perry, Susan. August 2005. Transforming the Faculty Mindset, symposium paper.
  - Bilimoria, Diana. August 2005. The Academic Glass Ceiling: Women Faculty in Science and Engineering, symposium paper.

Other Dissemination:

Provost John Anderson presented the ACES Program to the 10 Universities meeting in June, 2005. The group consists of the Provost of ten universities, (Rochester, CMU, Vanderbilt, Dartmouth, John Hopkins, Duke, Northwestern, Washington University and MIT). Case was perceived to be advanced in the initiation of policies and practices related to the advancement of women.

C. PUBLICATIONS AND REPORTS

Research publications and reports

In the second quarter, ACES launched the program website which is located at www.case.edu/admin/aces. The website includes information on current ACES activities, search committee web tools, and ACES presentations and reports. We are in the process of redesigning the website to make it more interactive and securing forms to be submitted online.

Lynn Singer, PI, prepared a presentation entitled "Assessing and Improving the Progress of Women Faculty at Case" and presented it to the Deans and Chairs in the Fall 2003. Amanda Shaffer is currently revising that presentation to utilize it for general presentations to all S&E departments for Year 2. Another presentation focusing on the new search committee guidelines is also under development and will be utilized in Year 2.

Flyers and handouts have been created for all programming and events. ACES created a Spring newsletter which details all of our initiatives under the ADVANCE grant. We are currently developing a magazine which will include our activities and findings for Year 1. ACES has created two call for proposal flyers and we are in the process of creating a faculty brochure on diversifying searches.

Evaluation of ADVANCE ACES Program
Case Western Reserve University
Cleveland, Ohio

Year Two Report

2004 – 2005

The purpose of this year's report is to summarize ongoing evaluation of the impact of intervention/transformational activities. A mixed methods approach including qualitative and quantitative data is utilized in the Phase 2 evaluation. The various components of this evaluation are described in more detail below.

Baseline Data

Data Sources

Data for assessing institutional transformation are established through multiple sources for all S&E departments. Sources of quantitative faculty data include the Provost's Office, Institutional Research, Human Resources, S&E department chairs and administrators. Institutional Research and Human Resources datasets include information about salary, years in rank, dates of hire, gender, ethnicity, tenure rates, hiring, and attrition. In addition to these resources, all S&E departments were individually contacted in Phase 1 and the department chair or administrator was asked to complete a structured survey for all their department's faculty members. The purpose of this survey was to collect supplemental data not available in personnel records, and we will report findings from this survey regarding faculty work load in this report. The data from the online university-wide survey climate survey of faculty last year has been analyzed and will also appear in this report. Based on focus group findings from last year, a new round of focus groups was conducted on the topic of graduate student/faculty relationships. The details of that study are presented in the qualitative section of this report.

Quantitative Data

Descriptive Statistics (as of June 05):

Women Faculty
(A. # and % of women in S&E departments)

S&E Departments*	Full-Time	Part-Time/Adjunct	Total
Female	98 (22%)	9 (33%)	107 (22%)
Male	354 (78%)	18 (67%)	372 (78%)
Total	**452**	**27**	**479**

University	Full-Time	Part-Time/Adjunct	Total
Female	509 (34%)	127 (48%)	636 (36%)
Male	983 (66%)	139 (52%)	1122 (64%)
Total	**1492**	**266**	**1758**

Source: Institutional Research (for S&E) and Human Resources (for University)
*S&E refers to the 31 NSF-fundable Science and Engineering departments as defined in the grant.

The above tables show that the percentage of full-time women faculty is 22% in the S&E departments, less than in the university as a whole (34%). This percentage of women faculty is slightly higher than 20% from last year's report. The percentage of S&E women who are part-time faculty is 33%, also less than for the whole university (48%). As compared with overall university percentages, women are under-utilized in both full-time and part-time positions in S&E departments when compared to the university as a whole. However, women are overrepresented in the part-time ranks for both the university and S&E departments, when compared with their numbers in the full-time ranks. University numbers vary this year compared to last due to a shift in record-keeping systems at Case.

Below is the gender distribution of full and part time faculty broken down by department. Deans are not included in the faculty numbers for this and future tables.

S&E Faculty	Department	Full-Time		Part-Time/ Adjunct	
School		**F**	**M**	**F**	**M**
Arts & Sciences	**Anthropology**	5	5	3	3
	Astronomy	1	2	0	1
	Biology	6	14	0	0
	Chemistry	3	17	0	0
	Geological Sciences	1	7	0	3
	Mathematics	2	14	0	1
	Physics	2	19	0	1
	Political Science	2	5	1	0
	Psychology	4	8	5	2
	Sociology	4	5	0	0
	Statistics	3	3	0	0
Total		**33**	**99**	**9**	**11**
Engineering	**Biomedical Engineering**	4	15	0	0
	Chemical Engineering	1	11	0	1
	Civil Engineering	1	8	0	2
	Electrical Engineering & Computer Science	1	29	0	1
	Macromolecular Science	3	10	0	0

	Materials Science & Engineering	0	11	0	0
	Mechanical and Aerospace Engineering	2	14	0	1
Total		**12**	**98**	**0**	**5**
Medicine	**Anatomy**	5	11	0	1
	Biochemistry	4	27	0	0
	Genetics	9	11	0	0
	Molecular Biology & Microbiology	4	7	0	0
	Neurosciences	3	14	0	0
	Pharmacology	7	8	0	0
	Physiology & Biophysics	5	26	0	0
	RNA	2	4	0	0
Total		**39**	**108**	**0**	**1**
Management	**Economics**	3	10	0	0
	Information Systems	2	6	0	1
	Operations Research	1	8	0	0
	Organizational Behavior	4	7	0	0
	MAPS	4	15	0	0
Total		**14**	**46**	**0**	**1**

Source: Institutional Research

The remaining data presented below primarily pertain to full-time Science and Engineering faculty members.

ADVANCE Objectives

Equitable Faculty Recruitment Patterns

Faculty Hired by Rank and Gender for AY 2004-2005

Faculty Hires	**S&E Departments**		**Other University Depts.**		**Total**	
	F	**M**	**F**	**M**	**F**	**M**
Sr. Instructor	0	0	6	12	6	12
Instructor	1	3	8	12	9	15
Assistant Professor	5	7	33	41	38	48
Associate Professor	2	1	5	23	7	24
Professor	0	1	3	29	3	30
Total	**8 (40%)**	**12 (60%)**	**55 (32%)**	**117 (68%)**	**63 (33%)**	**129 (67%)**

Source: Office of the Provost

10% (20 out of 192) of all new university hires are Science and Engineering faculty. Of these hires, 40% are women, and 60% are men, which is a higher percentage of women than the

current proportion in these departments (22%), and higher than the hiring rates of women university-wide (33%), a shift from last year when S&E women hires were at 37% and university-wide hires of women were at 40%.

Rank Information for AY 2004-2005
(D. Years in rank by gender)

S&E Average Years in Rank		F	M
Arts & Sciences	**Instructor**	**5.00**	**6.5**
	Range	1-12	2-11
	Assistant Professor	**3.17**	**2.14**
	Range	0-8	0-5
	Associate Professor	**6.80**	**6.75**
	Range	0-12	0-24
	Professor	**7.31**	**14.42**
	Range	0-20	0-38
Engineering	**Instructor**	**0**	**0**
	Range	0	0
	Assistant Professor	**2.00**	**2.27**
	Range	1-4	0-6
	Associate Professor	**2.67**	**9.76**
	Range	0-8	0-27
	Professor	**17.33**	**14.83**
	Range	12-21	0-44
Management	**Instructor**	**0**	**0**
	Range	0	0
	Assistant Professor	**3.00**	**2.63**
	Range	0-5	1-4
	Associate Professor	**7.80**	**7.31**
	Range	5-10	0-20
	Professor	**2**	**8.59**
	Range	2	1-34
Medicine	**Instructor**	**5.20**	**7.25**
	Range	2-9	0-23
	Assistant Professor	**3.06**	**2.90**
	Range	0-10	0-12
	Associate Professor	**2.56**	**8.89**
	Range	1-5	0-39
	Professor	**8.33**	**10.29**
		0-33	0-36

Source: Institutional Research – Human Resources

This year, women are showing a slightly higher average number of years spent in the assistant and associate ranks in Arts & Sciences, the professor rank in Engineering, the assistant and associate ranks in Management, and the assistant ranks in Medicine. This is slightly different than last year, when all average number of years in ranks in all cases were higher for men.

Tenure Status AY 2004-2005
(B. # and % of women in tenure-track positions by rank and department)

S&E Tenure-track Faculty	Department	Assistant		Associate		Professor	
School		**F**	**M**	**F**	**M**	**F**	**M**
Arts & Sciences	**Anthropology**	0	1	1	1	4	3
	Astronomy	0	0	1	1	0	1
	Biology	4	2	0	3	0	8
	Chemistry	2	3	0	2	1	11
	Geological Sciences	1	2	0	2	0	3
	Mathematics	0	1	0	1	2	11
	Physics	1	0	0	3	1	16
	Political Science	2	1	0	1	0	3
	Psychology	1	2	2	1	1	5
	Sociology	0	1	1	1	2	3
	Statistics	1	1	0	0	2	2
Total		**12 (46 %)**	**14 (54%)**	**5 (24%)**	**16 (76%)**	**13 (16%)**	**66 (84%)**
Engineering	**Biomedical Engineering**	2	5	2	4	0	6
	Chemical Engineering	1	1	0	0	0	11
	Civil Engineering	1	0	0	3	0	5
	Electrical Engineering & Computer Science	0	7	0	12	1	10
	Macromolecular Science	1	1	0	3	2	6
	Materials Science & Engineering	0	0	0	3	0	8
	Mechanical & Aerospace Engineering	1	1	1	1	0	12
Total		**6 (29 %)**	**15 (71%)**	**3 (10%)**	**26 (90%)**	**3 (5%)**	**58 (95%)**

Management	**Economics**	1	3	1	3	1	4
	Information Systems	1	2	1	1	0	3
	Operations Research	1	0	0	5	0	3
	Organizational Behavior	1	1	3	1	0	5
	MAPS	4	2	0	6	0	7
Total		**8 (50 %)**	**8 (50%)**	**5 (24%)**	**16 (76%)**	**1 (4%)**	**22 (96%)**
Medicine	**Anatomy**	1	5	1	3	1	1
	Biochemistry	2	5	0	4	1	11
	Genetics	2	3	1	3	2	4
	Molecular Biology & Microbiology	1	3	1	1	1	2
	Neurosciences	1	2	1	3	1	7
	Pharmacology	2	2	1	2	2	3
	Physiology & Biophysics	0	5	1	6	1	10
	RNA	1	0	1	2	0	1
Total		**10 (29 %)**	**25 (71%)**	**7 (23%)**	**24 (77%)**	**9 (19%)**	**39 (81%)**
Overall 2004-2005		**36 (37 %)**	**62 (63%)**	**20 (20%)**	**82 (80%)**	**26 (12%)**	**185 (88%)**
Overall 2003-2004		**30 (33 %)**	**61 (67%)**	**20 (19%)**	**84 (81%)**	**22 (11%)**	**181 (89%)**

Source: Institutional Research – Human Resources

Based on a faculty ratio of 22% women and 78% men in Science and Engineering departments, women are overrepresented at the Assistant Professor rank (37%), slightly under the appropriate proportion at Associate Professor level (20%), and underrepresented in the Professor rank (12%). The School of Management has the fewest full professors who are women (only 4%), and Medical School departments have the most (19% of their full professors). The School of Management has the most overrepresentation at the Assistant Professor rank of women (50%). Overall, there are more women at each tenure-track rank than last year, as indicated in the above table.

Tenure-track Status AY 2004-2005
(F. # and % of women in non-tenure-track positions – teaching and research)

S&E Tenure-track Status	Tenured	In Tenure Track	Total (Tenured + In Tenure Track)	Non-Tenure Track
Female	50	32	82 (20%)	16 (41%)
Male	279	49	328 (80%)	23 (59%)

Total	**329**	**81**	**410**	**39**

Source: Institutional Research – Human Resources

Of the 98 full-time women faculty in S&E, 84% (82 out of 98) are in tenured or tenure-track positions and 16% (16 out of 98) are in non-tenure track, whereas 94% (328 out of 351) of full-time men are in tenured or tenure-track positions, and 6% (23 out of 351) are in non-tenure track. Women are overrepresented in non-tenure track full-time S&E positions, making up 41% of them, compared to their 20% prevalence in the full time faculty positions as a whole.

Promotion and Tenure Information for AY 2004-2005
(C. Tenure promotion outcome by gender)

Tenure Awards	S&E Departments	Other University Depts.	Total
Female	4 (36%)	10 (32%)	14 (33%)
Male	7 (64%)	21 (68%)	28 (67%)
Total	**11**	**31**	**42**

Source: Office of the Provost

Tenure Denials	S&E Departments	Other University Depts.	Total
Female	0	0	0
Male	2	0	2
Total	**2**	**0**	**2**

Source: Office of the Provost

Across the whole university, a total of 14 women (32%) and 30 men (68%) were considered for tenure. Of these 44 faculty members, there were 42 successful candidacies for tenure, 28 men (67% of all tenure awards), and 14 women (33% of all tenure awards). Of all candidacies, 93% of men who were up for tenure were awarded it (28 out of 30), whereas 100% of women up for tenure were awarded it (14 out of 14). For S&E departments, 4 women faculty (31%) and 9 male faculty (69%) were up for tenure. In S&E Departments, 36% of tenure awards were women, and 64% were men. Of S&E faculty, 100% of women who were up for tenure received it, and 78% of men.

Promoted to Full Professor	S&E Departments	Other University Depts.	Total Tenure-Track
Female	2 (33%)	2 tenure track (+3 non-tenure track)	4 (31%)
Male	4 (67%)	5 tenure track (+ 6 non-tenure track)	9 (69%)
Total	**6**	**7 tenure track (+ 9 non-tenure track)**	**13**

Source: Office of the Provost

Denied Promotion to Full Professor	S&E Departments	Other University Depts.	Total Tenure-Track
Female	1	0	1
Male	0	1 (+1 non-tenure track)	1
Total	**1**	**1** **(+1 non-tenure track)**	**2**

Source: Office of the Provost

As promised in last year's report, we have added denials to promotion to Full Professor to this report, so that the promotion rates can be interpreted considering the number of faculty eligible for promotion. Data were available for non-tenure track faculty who were promoted to full professor. Since these instances are special cases of exclusively medical school faculty (often clinical professors) we will only consider tenure track faculty when examining ratios of promotion.

Of all 15 tenure-track faculty reviewed for promotion to full professor, 5 were women (33%) and 10 were men (67%). One female faculty member (20% of all women reviewed) and one male faculty member (10% of all men reviewed) were denied promotion. For S&E faculty, 3 women (43% of S&E reviewed) and 4 men (57% of S&E reviewed) were considered for promotion to full professor. All men in S&E departments who were reviewed for promotion were promoted, whereas 2 of the 3 women were promoted (67%).

Attrition Statistics AY 2004-2005
(E. Time at institution and attrition by gender)

Attrition*	University	Average Yrs at Institution	S&E Departments	Average Yrs at Institution
Female	9 (29%)	8.78	3 (15%)	7.67
Male	22 (71%)	21.64	17 (85%)	22.65
Total	**31**		**20**	

Source: Office of Equal Opportunity and Diversity, Institutional Research
*These data do not include the School of Medicine, who have not reported faculty departures for AY 2004-2005.

University Departure 05 *	N	Female	Male
Retired	12	2 (22%)	10 (46%)
Resign	19	7 (78%)	12 (55%)
Total	31	9	22
Instructor	**1**		**1**
Assistant Professor	**6**	**2**	**4**
Associate Professor	**10**	**4**	**6**
Professor	**14**	**1**	**13**
Total	**31**	**7**	**24**
Average Yrs at Current Rank	**12.03**	**6.56**	**14.27**
Average Yrs at Institution	**17.90**	**8.78**	**21.64**

Source: Office of Equal Opportunity and Diversity

For the university as a whole, 9 female faculty and 22 male faculty left the university. Men constituted a larger percentage (71%) of faculty leaving the university than did women (29%) at a ratio smaller than their presence in the faculty (34%), and this holds true for women in S&E as well, who make up 15% of departures when compared to their ratio of 22% in the faculty. The average years at institution were much lower for women, as they more often resigned than retired (only 22% of women who left retired, compared to 46% of men). Calculating percentages based on persons at risk for inclusion in the numerator reveals a slightly lower rate of attrition for women in S&E (3/98 = 3%) than for men (17/351=5%), a reversal from last year when the rate of S&E women departures was 2.25% and for men it was 2%.

Greater Representation of Women in Leadership Positions

The data for endowed chairs, promotion and tenure committee participation, and administrative positions have been combined into a leadership table that appears below.

S&E Leadership	Named Chair	P&T Committee	Administrative Position
Female	9 (14%)	11 (23%)	3 (7%)
Male	54 (86%)	37 (77%)	39 (93%)
Total	**63**	**48**	**42***

Source: Office of the Provost, Institutional Research – Human Resources, and individual deans' offices
* Institutional Research was unable to complete collection of these data before the report deadline.

Endowed Chairs/Professorships
(H. # and % of women S&E faculty in named chairs)

14% (9 out of 63) of named chairs are women, compared with 86% (54 out of 63) of chairs who are men.

Participation in Promotion and Tenure Committees
(I. # and % of women S&E faculty on promotion and tenure committees)

23% (11 out of 48) of school P&T committee members are women, and 77% (37 out of 48) are men.

Administrative Positions
(G. # of women scientists and engineers in administrative positions)

7% of administrative positions are held by women, whereas 93% (39 out of 42) are held by men. While this is a smaller percentage of women in administration than last year, this could be a result of the incomplete data on administrative positions.

Equitable Allocation of Resources

Compensation AY 2004-2005
(J. Salary of S&E faculty by gender, controlling for dept. rank, and years in rank)

Since salary information is held confidential in our private university, and often the number of women in a department is small (i.e., 1 or 2), by reporting this indicator (with appropriate controls) we may inadvertently reveal the salary paid to a female faculty member. Thus we have chosen to report this information for now by school only.

Salary, standardized to a 9 month scale

S&E Salary		F	M
Arts & Sciences	**Instructor**	$48,818.28	$52,217.22
	Assistant Professor	$57,860.72	$54,268.91
	Associate Professor	$63,082.56	$67,527.48
	Professor	$92,244.30	$94,434.97
Engineering	**Instructor**	N.A.	N.A.
	Assistant Professor	$74,591.00	$72,901.67
	Associate Professor	$83,406.67	$87,949.33

	Professor	$109,706.67	$108,146.26
Management	**Instructor**	N.A.	N.A.
	Assistant Professor	$100,424.51	$95,304.00
	Associate Professor	$104,266.01	$105,977.00
	Professor	*	$138,287.10
Medicine	**Instructor**	$39,410.35	$45,541.40
	Assistant Professor	$51,595.28	$56,315.35
	Associate Professor	$72,394.30	$66,742.67
	Professor	$87,964.54	$109,518.96
All Schools	**Instructor**	$42,938.33	$49,657.40
	Assistant Professor	$65,475.31	$65,849.50
	Associate Professor	$79,023.25	$79,001.99
	Professor	$93,612.64	$107,148.59
Combined Ranks		$74,231.29	$90,495.72

Source: Institutional Research – Human Resources
* N=1, so this number was removed to ensure confidentiality.

Salaries for women assistant professors were higher than their male counterparts in each school except Medicine (although they make more at the associate level in this school). At higher ranks, women typically had lower salaries, with the exception of the School of Engineering.

Salary has increased for most faculty at various levels, in comparison with that of last year. In terms of combined ranks, the salary gap between men and women is $16.264.43 ($90,495.72-$74,231.29), which is very close to the $16,728.80 gap in year 2003-2004 ($87,844.82-$71,116.02).

Space Allocation
(K. Space allocation of S&E faculty by gender, with additional controls such as dept., etc., baseline and year 5)

This was reported in our Year 1 report (baseline) and will again be reported in Year 5.

(L. Start-up packages of newly hired S&E faculty by gender, with additional controls such as field/dept., rank, etc.)

The initial start-up package study for AY 2003-2004 has been completed and is attached (see Appendix 1). Start-up letters for subsequent years will be collected. Due to the small number of offers that are made each year, the start-up letters will be analyzed in aggregate for the Year 5 evaluation report.

Start-Up Offer Report

Introduction:
Initial resources have a long-term impact on the success of new faculty in launching productive research and teaching careers. This report summarizes findings from Year 1 of a 5-year study of initial resources provided to new faculty. These data are obtained from 49 offer letters to incoming faculty of ACES departments, collected over 18 months (February 2003 – August 2004). The Provost released only those letters describing offers that were accepted.

Methods:
With an overall population size of 49, and further reduction when examining sub groups (i.e., schools), statistical analyses such as correlations did not generate significance. As the population size increases in years 2-5, such an analysis will become more meaningful. We consulted with Georgia Tech, New Mexico State University, the University of Washington, and the University of Wisconsin about their analysis and reporting procedures. For Year 1 data, we have employed descriptive statistics, the same methodology as the University of Wisconsin, the University of Washington, and New Mexico State University. In addition to descriptive statistics, the content and language of the letters was considered. Findings from both the quantitative and qualitative analyses are presented in this summary report.

Findings:
Data collected suggests that tenure track positions are offered to more men than to women. Fewer women were offered tenure track positions (67% vs. 76% of men). These data indicate a fairly equitable allocation of resources at the junior level across financial data items such as base salary, base start-up amounts, and combined total packages. At the junior level, women (N=12) received comparable base annual salaries as their male counterparts (N=27). Women's mean salary ranged from 93-106% that of the men's mean salaries, across schools. However, at the senior level, women are offered fewer resources across the same data items. At the senior level, women (N=3) appeared to earn less than senior men (N=7). Women's mean base annual salary was 54-68% that of the men's mean salary.

At the junior level, women (N=12) received comparable base start-up packages to their male junior counterparts (N=27). Women's mean start-up packages ranged from 102-152% that of their men's start-up packages. At the senior level, women's mean start-up packages (N=3) ranged from 24-102% of the senior men's mean start-up packages (N=7).

Junior women (N=12) received a mean combined total offer ranges from 101-138% that of the junior men's total package (N=27), with an overall average of 119% of the men's combined total offer. Senior women (N=3) received a mean combined total offer ranging from 26-98% that of men's mean combined total offers, with an overall average of 68% that of the men's total offers. Across ranks, incoming female faculty received a mean combined total offer that was 78% that offered to incoming male faculty.

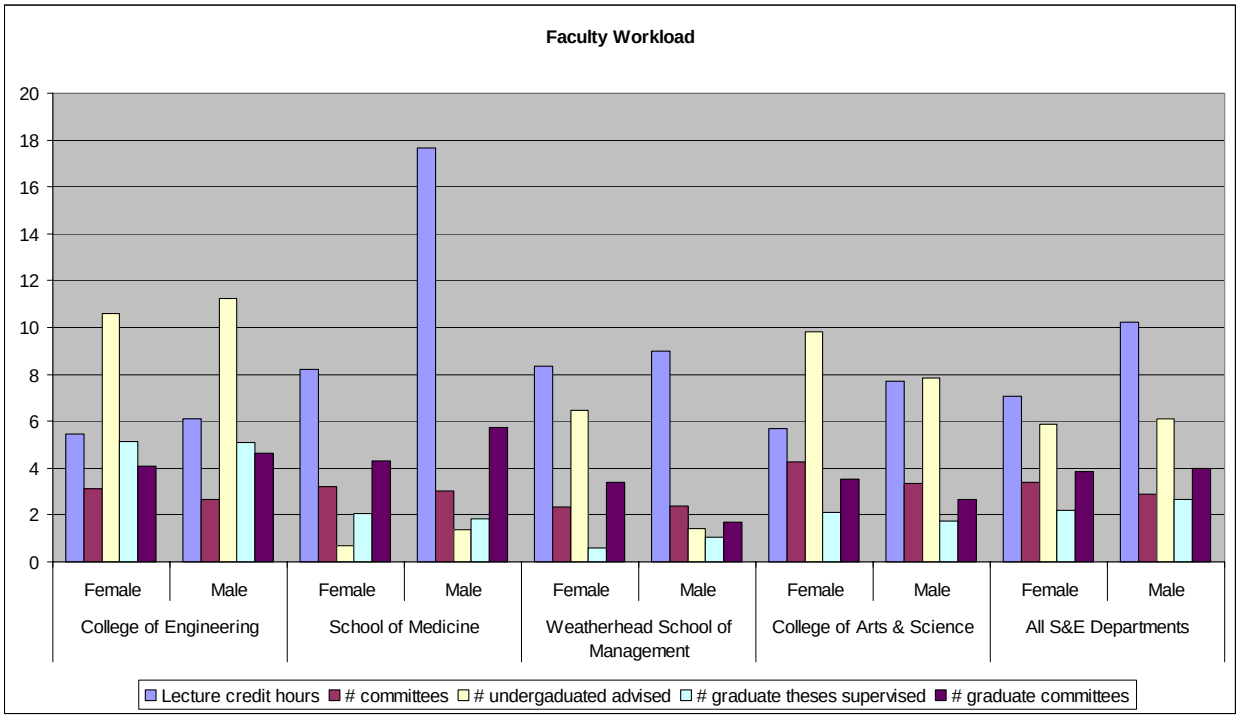
In addition to descriptive statistical analyses of these data, and tracking of non-financial resources (such as teaching releases and graduate assistants), an analysis of the language of the offer letters was conducted. Among the 49 letters, two distinct types of letters are immediately obvious: those that are a standardized format and those which are personalized to the faculty candidate. Implications for analysis of data collected in years 2-5 are provided.

Conclusions:

In conclusion, due to small Ns, the findings should be taken as points to track for future data collection and analysis (see Appendix 1 for more details).

Workload Measures

Additional measures of workload were included in the Chairs' Questionnaire administered last year. While these figures are for Academic Year 2003-2004, the data analyses were not completed in time to include with last year's report. Therefore, presented in the figures below are workload results from the Chairs' Survey.



The analysis of faculty workloads by school/college indicates a few differences between male and female faculty members. For the S&E sample as a whole, women (7.06) teach fewer lecture hours than men (10.23, $p < .05$, $t = -2.31$). Two schools in particular have significant differences by gender for lecture hours taught. In the sample of the School of Medicine, there

is a statistically significant difference in the average number of lecture credit hours between men (17.66) and women (8.21, $p < .05$, $t = - 2.55$). For the College of Arts and Sciences, there is also a significant difference in mean lecture credit hours between men (7.73) and women (5.70, $p < .05$, $t = - 1.97$). Women faculty, on average, serve on approximately the same (or slightly more) committees on average than do their male colleagues. Women faculty generally advise the same number of undergraduate students as male faculty do, except in the Weatherhead School of Management and the College of Arts and Sciences, where they advise more undergraduate students. Women and men appear to supervise the same number of graduate theses on average across all schools/colleges. Women faculty serve on more graduate theses than men faculty in two schools (Weatherhead School of Management and the College of Arts and Sciences), and serve on fewer graduate committees than men in one school (School of Medicine).

Qualitative Data

Neurosciences Department Case Study

The case study on-site in the Neurosciences department has been completed, as a component of the ACES project. This department has a history of strong participation and advancement of women faculty. The final report of this study is attached (See Appendix 2)

A Good Place to Do Science: An Exploratory Case Study of an Academic Science Department

Purpose
We studied an academic science work environment that has been conducive to the advancement of female and male scientists to identify factors that have facilitated cooperation, high quality science, and inclusion.

Methods
We conducted this study using several qualitative methods including document & archival research, direct observation, and 29 interviews of departmental members (faculty, staff, post-docs, and doctoral students).

Findings
The basis of the cooperative, inclusive productive aspects of this department's culture appears to be a set of values and beliefs about scientists and the goals of science that are reflected in the types of interactions that occur within the department. Most scientists in the Science Department valued doing high quality science and valued doing science in an interactive way. Three widely held beliefs included:

- Good science is the pursuit of meaningful, significant advancements of knowledge.
- Scientists achieve good science through interactions that provide and generate resources.
- Anyone can do high quality science if they can learn quickly, are well trained, can communicate their ideas, are creative and willing to work hard.

Constructive interactions support processes that foster cooperation and produce high quality science and inclusion. We list them here in increasing order of complexity, trust level required, and work impact:

- *Collegial Interactions* – extending respectful, civil and congenial behaviors towards others

- *Tacit Learning Interactions* – information sharing and modeling behaviors that convey work norms, processes, practices, and other undocumented knowledge about work.
- *Relational Interactions* – taking personal interest in others, expressing concern and caring for others emotionally and in support of their work
- *Generative Interactions* – Interactions, through which important resources are provided, received and or generated between individuals and for the group.

Participative departmental activities initiated or explicitly supported by the chair, facilitated constructive interactions:

- Team teaching with participation across faculty ranks.
- A variety of department social events, some of which occur after hours and others, which are family friendly.
- Participative faculty meetings in which information important to all faculty members is shared and the opportunity for decision-making input is provided.
- Participative faculty recruiting through which all faculty members have input into the selection of new faculty. Broad support for the new faculty member is established through this activity.
- Regular applicable research presentations and seminars that stimulate ideas and provide feedback and modeling of approaches to research and effective presentation of ideas.

Department wide learning and inclusion processes stimulated and supported wide influence in decision-making, engagement, learning about one another, and disseminating, comparing and creating a shared understanding of the external environmental factors surrounding the department. These processes also play an important role in embedding norms, behaviors, values, and beliefs into the culture of the department. These processes included:

- Transparent decision-making
- Engagement of faculty across ranks
- Dissemination of information important to work
- Creation and or sharing of resources important to work
- An open faculty selection process

Cooperative leadership practices of the chairs facilitated the development of the culture of the department. Most of these practices were also evident among faculty.

- Supporting the creation and advancement of good science, regardless of who is developing it.
- Seeking input from all affected in decision-making
- Promoting meaningful opportunities for interaction
- Treating everyone fairly and equitability
- Using the role of chair in service of the scientific community within the department

<u>Conclusions</u>

This study identifies conditions and factors that facilitate the development of a cooperative inclusive and productive work culture. The foundation of such a culture is values and beliefs that support high quality science, interaction and outcome focused criteria for who can do science. These values and beliefs foster constructive interactions and participation in a range of department activities. Several of these activities provide the context for constructive interactions. Leadership practices influence the creation of some department level activities and or provide sponsorship of others. The chair may initiate these practices, but support and ongoing leadership can come from the faculty. Leadership practices are also important facilitators of department learning and inclusion processes. With the context provided by activities and behaviors derived from constructive interactions, department learning, and

inclusion processes support norms, practices and processes supportive of a cooperative, inclusive, productive department culture. Overtime, these processes embed values and beliefs held by a majority of department members as shared values and beliefs of the department, which sustain the overall culture creating process.

Faculty-Student Relationship Focus Groups

Purpose

The purpose of conducting focus group and individual interviews was two fold. First, it sought to establish baseline qualitative data about the relationship between graduate students and their advisors, and the impact of this choice on their future success in 31 test departments for the NSF ADVANCE program. The second aim of these interviews is to extend and verify whether conditions observed in 2000 and 2004 by Case Resource Equity Committee (REC) still exist.

Method

We conducted 6 focus groups of students as well as faculty – the international students (2 males, 3 females), domestic students (4 males, 7 females), tenured women (6 participants), pre-tenure women (9 participants), tenured men (13 participants) and pre-tenure men (6 participants). We conducted additional individual interviews of international students (3 interviews) and tenured women (5 interviews) since the participation in those groups was low.

Findings

Findings from the focus group and individual interviews contained the following trends in perception, across the student sample and male and female faculty samples.

1. Changing view on graduate education

   Most of the faculty held the view that graduate education was for those who are passionate about the subject and who were ready to work hard. They expect the same work ethic from the students. The international students have similar work ethic which makes them attractive employees in the labs. However, the language and cultural differences and stereotypes often bring out misunderstandings and interpersonal differences that become irreconcilable. Some domestic students join graduate school with no particular idea of what they want to do. This results in mismatch of expectations of the faculty and the students and therefore conflicts.

2. Proportional rarity of women faculty is an issue at Case.

   Gender may not be an issue in the departments where the proportion of females in the faculty and students is higher. There were departments (especially with a fewer number of females and females in lower ranks) where female faculty felt discriminatory behavior. They felt that the students learned their behavior from that of their male colleagues who thought less of females and stated that publicly.

3. Nationality factor (Culture difference)

   There were stereotypes on the part of the faculty as well as students about each other which might have exacerbated the misunderstandings. Faculty said that some Asian students held the view that female faculty would not be good to work with as they have family concerns. Some Asian students were described as rigid and stubborn. But some of the students admitted that their unfamiliarity with the new culture and education system made adaptation difficult. Some were shy of approaching faculty and felt that faculty had no time for them. The communication barrier due to language skills and cultural differences are high and often

became insurmountable. Some faculty thought that international students were a burden and some had decided that they would not take post docs from certain countries.

The focus group and interview protocol is attached (See Appendix 3)

Other Data Collected and Analyses

Climate Survey Analysis

The climate survey was administered in Spring of 04, the report (see Appendix 4) was completed in Fall of 04 and the report was disseminated to the university community on the university accreditation website in Spring of 05. Additionally, a model based on some of the climate survey items is presented in a paper that is currently under review for the Special Issue on Science and Technology, Journal of Technology Transfer, entitled "How Do Female and Male Faculty Members Construct Job Satisfaction? The Roles of Perceived Institutional Leadership and Mentoring and their Mediating Processes".

The findings of the climate survey indicated in particular, that women faculty, in comparison with their male colleagues (all statistically significant differences):

- Feel less supported and valued in their school/college or department
- Perceive that gender, race, and family obligations make a difference in how faculty members are treated
- Experience a greater sense of pressure and restrictions
- Report lower ratings of their academic unit head's leadership, and lower ratings of their provision of resources and supports
- Experience more mentoring from outside their primary units
- Perceive that compensation and non-research supports are less equitably distributed
- Perceive that compensation, office and lab space, teaching requirements, and clerical support are allocated with less transparency
- Are less satisfied with their overall community and job experience at Case.

Recommendations are provided (at the departmental, school, and university levels) to improve the overall climate and community experience for faculty members at Case (See Appendix 4).

Exit Interview Pilot

The exit interview was developed through careful review of the Case Climate and Accreditation Survey, the NSF indicators for ADVANCE, and the already developed survey instruments from New Mexico State University, Kansas State University, and Virginia Polytechnic Institute State University. The Case Faculty Exit Interview questions focus on three areas, 1) Reasons for Accepting the Position at Case, 2) Rating Your Experience at Case, and 3) Reasons for Leaving your Position at Case.

An exit interview pilot survey was sent to all faculty who had been terminated, resigned, or retired between June of 2000 and October of 2004 (See Appendix 5). The decision was made to conduct a pilot survey initially to help refine the instrument, and to have the survey administered by an outside firm. 340 paper surveys were mailed (236 of these also received an e-mail version),

112 of which were expired addresses. An additional 159 people received an e-mail-only version. The total number of responses to the survey was 50. 59% of the respondents had fewer than 10 years of service at Case. Women comprised 48% (N=24) of the sample, and men were 52% (N=26) of the sample.

Department/School Ratings

Faculty members who have been at Case for 40 years and longer (and therefore probably retirees) rate their department and school significantly more highly than other groups. School of Medicine faculty rate their department, school and work area/office/lab significantly lower than other faculty. Case faculty with 10-19 years of service are least satisfied with their work area.

General Experience, Supervision and Colleagues, Compensation

While women do not significantly differ in ratings of general experience at Case, they rate supervision and colleagues significantly lower than men do. Men and women did not significantly differ on ratings of compensation (although women's ratings were lower). For this measure, faculty who had been at Case for 1-9 years rated their compensation much more favorably on average, whereas those in the next category, 10-19 years, rated their compensation significantly lower than other groups.

Reasons for Initially Accepting a Position and Reasons for Leaving the University

The percentages of those who rated an item either as a moderate or strong influence on their decision are listed below. The Ns under each group represent the total number of participants who gave any response to the item at all

Given the low Ns for these items in the pilot phase, results should be approached with caution.

Reason for	**Accepting offer**		**Leaving**	
	M	**F**	**M**	**F**
Atmosphere of campus community	50% (N=16)	30% (N=17)	21% (N=14)	11% (N=19)
Reputation of department	74% (N=19)	33% (N=19)	--	--
Reputation of university	80% (N=20)	76% (N=21)	--	--
Chair/colleagues (accepting – "reputation of")	67% (N=21)	53% (N=19)	45% (N=18)	45% (N=20)
Teaching/advising load	7% (N=15)	39% (N=18)	7% (N=14)	0% (N=17)
Opportunity for research	--	--	20% (N=15)	12% (N=17)
Opportunity for advancement	84% (N=19)	55% (N=22)	56% (N=16)	43% (N=19)
Research support (leaving - "amount of")	37% (N=16)	37% (N=22)	32% (N=16)	28% (N=18)
Lab conditions	25% (N=11)	20% (N=20)	8% (N=13)	18% (N=17)
Start-up package (leaving – "fulfillment")	43% (N=14)	18% (N=17)	0% (N=15)	6% (N=16)
Salary	19% (N=16)	37% (N=19)	45% (N=15)	55% (N=20)
Child care options	7% (N=14)	12% (N=17)	7% (N=14)	0% (N=18)
Flexible tenure clock	--	--	7% (N=15)	0% (N=16)
Tenure process (transparency, fairness, etc.)	--	--	26% (N=15)	28% (N=18)
Wish to work at home	--	--	0% (N=14)	12% (N=1

				7)
Desire to leave academia	--	--	0% (N=14)	17% (N=18)
Lack of mentoring	--	--	43% (N=14)	37% (N=19)

Given the low Ns for these items in the pilot phase, results should be approached with caution.

ACES Interventions

Individual Data Questionnaires

Pre and post data questionnaires were administered to participants in Phase 1 and pre-intervention questionnaires

Women Faculty Receiving Coaching in Phase 2 - Demographics

S&E Women Coaching Participants – Demographics	N			Average Yrs. Current Rank	Average Yrs. Institution
	Tenured	Tenure-track	Non Tenure-track		
Instructor	0	0	1	2	2
Assistant Prof.	4	8	1	3.54	6
Associate Prof.	2	2	0	3.25	9
Professor	8	0	0	6.88	19.50

Source: Institutional Research

Department Level Executive Coaching Evaluation

To determine the effectiveness of the executive coaching intervention, mid-term evaluations have been conducted with women faculty on completion of their third (out of 6) coaching session. A similar evaluation was conducted for chairs on the completion of their sixth (out of 12) coaching session. The main constructs being evaluated are a coach's assistance in providing insights into career and performance issues, creating a career/leadership development plan, and utilization of an effective style and approach. Open ended questions were also asked seeking descriptions of the overall coaching experience.

A summary of responses to the coaching evaluations appears as Appendix 6.

This evaluation has been expanded to include the Phase 2 Departments.

Research and Evaluation Plans for Year Three

(1) 10 departments worked with during January – December 2005:

Administration of post-intervention evaluations for all interventions as a group (comparisons with baseline data for women faculty and chairs) – January 2006

Administration of end-intervention evaluation of coaching (women faculty and chairs) – January-February 2006

(2) 10 departments worked with during January-December 2006

Administration of baseline (pre-interventions) data collection instrument (women faculty and chairs) – December 2005

Administration of mid-term evaluations of coaching intervention (women faculty, chairs, deans, provosts) - July-August 2006

Administration of post-intervention evaluations for all interventions as a group (comparisons with baseline data for women faculty and chairs) – January 2007

Administration of end-intervention evaluation of coaching (women faculty, chairs, deans, provosts) – January-February 2007

(3) Other evaluations:

Evaluations of specific ACES activities (e.g., Provost's retreat, networking seminars, women faculty luncheons) - As occurring

(4) Start-up Packages (Analysis of Offer Letters) - Fall 2006
Like last year, we will review and analyze the start-up packages/offer letters of all incoming faculty by rank and gender.

(5) Salary Analysis – Fall 2006/Spring 2007
Obtaining salary data has been difficult due to time constraints on HR and Institutional Research staff on account of the recent migration of all Case HR databases to the PeopleSoft system. We anticipate receiving historical data from the Office of Institutional Research once these difficulties have been sorted out.

We will be assessing salary equity, which will involve a multivariate analysis of possible gender bias in current rank and in faculty salaries. The methodological approached outlined in Paychecks: A Guide to Conducting Salary-Equity Studies for Higher Education Faculty (2nd edition, 2002) developed by the American Association of University Professors will be employed for this purpose. The Paychecks protocol recommends two separate analyses: (1) a multiple regression analysis of salary data for the total population of faculty and (2) a categorical modeling or event history analysis of academic rank. Understanding potential gender bias in academic rank is necessary in interpreting the results of salary estimation equations that incorporate rank as a predictor variable. As the authors emphasize, if gender differences in both current rank and time to promotion are the result of discrimination, including rank in equations predicting salary can underestimate the extent of bias. Using the Paychecks methodology will
enhance the comparability of results at Case with those of comparable institutions.
During Year III of the Advance Award, there will be a focus on replicating the analyses outlined in the Paychecks guide, including the list of recommended variables and addressing distributional and other complexities the authors raise. On the basis of these initial results, of the insights drawn from the qualitative data analysis, and of suggestions from published research and reports from other ADVANCE institutions, we will also begin developing a causal model of salary determination of faculty at CWRU. This hypothesized causal model will guide continued quantitative data collection and analysis in subsequent years. The ultimate goal of this study is to estimate the coefficients in our elaborated model using structural-equation modeling techniques.

(6) Survival Analysis – Fall 2006/Spring 2007

Analysis of the survival rate of faculty members will also be undertaken. This longitudinal analysis (over a 10 year period) utilizes data about the presence/absence of each faculty member, their rank, and gender. It will allow us to draw conclusions about whether women are disproportionately leaving the system or being disproportionately held in rank compared with men.

(7) Exit Interviews – Spring 2006

It is anticipated that the 2005/2006 exit surveys will be conducted beginning in August of 2005 and will include a random selection of in-person interviews as well. We are seeking to implement and institutionalize this exit survey on an annual basis.

The information will be used by the Office of Equal Opportunity and Diversity to identify areas for improvement and trends in attrition. It has also been suggested by a fellow ADVANCE colleague that a repository for exit questions be created that ADVANCE institutions can use to develop their own instruments. This would include a certain number of agreed upon "common" questions for the 19 institutions.

(8) Climate Interviews – Spring 2006. We originally planned to have interviews with second year women and minority faculty this year, conducted by the Faculty Diversity Officer. The purpose of these informal interviews is to identify the challenges that new women and minority faculty face, and to develop ways for those challenges to be addressed. The goal of the undertaking is two-fold: reducing the attrition rates and actively monitoring and improving the climate for women faculty and faculty of color. Staffing constraints have led to these interviews being postponed. We are currently in the process of developing a strategy for conducting these interviews in the upcoming year.

(9) Chairs' Survey – Last year's report stated that we would conduct the Chairs' Survey of each S&E department again this year. After a careful examination of last year's data, however, it was determined that collecting data from individual departments leads to numerous inconsistencies and variations in the way these numbers are reported. Future strategies may include gatherings these data from other sources, including from deans' offices at the various schools.

A listing of ACES current and upcoming research projects is appended (see Appendix 7) that summarizes our research plans (studies, publications, and presentations) for the next year.

Appendix 1

NSF ADVANCE ACES
Start-Up Offer Report: Year 1

ACES Evaluation Team:
Diana Bilimoria, Organizational Behavior
Patricia Higgins, Nursing
Eleanor Stoller, Sociology
Cyrus Taylor, Physics
Susan Perry, Organizational Behavior
Xiang fen Liang, Organizational Behavior
Linda Robson, Organizational Behavior
Simy Joy, Organizational Behavior

Introduction.

Initial resources have a long-term impact on the success of new faculty in launching productive research and teaching careers. This report summarizes findings from Year 1 of a 5-year study of initial resources provided to new faculty. These data are obtained from 49 offer letters to incoming faculty of ACES departments, collected over 18 months.

Data collected suggests that tenure track positions are offered to more men than to women. These data indicate a fairly equitable allocation of resources at the junior level across financial data items such as base salary, base start-up amounts, and combined total packages. However, at the senior level, women are offered fewer resources across the same data items.

In addition to descriptive statistical analyses of these data, and tracking of non-financial resources (such as teaching releases and graduate assistants), an analysis of the language of the offer letters was conducted. Among the 49 letters, two distinct types of letters are immediately obvious: those that are a standardized format and those which are personalized to the faculty candidate. Implications for analysis of data collected in years 2-5 are provided.

Background.

Previous research indicates that women faculty, particularly at research institutions, receive smaller start-up packages than men, placing women at a competitive disadvantage to their male colleagues. Valian (1999) argues that even small differences compound over time, widening the gap in resources between women and men, in a process social scientists describe as "cumulative disadvantage."

Details of start-up packages reflect individual negotiations during contract negotiation, as well as differences in research specialty, department, or school (management center). As Valian (1999) suggests, this lack of uniformity among start-up packages and unclear procedures for

resource allocation at the time of hire generate both differences among newly hired faculty and perceptions of unfairness among newly hired faculty.

Because faculty needs for resources at the time of hire vary across fields and can vary even within disciplines (experimental versus theoretical physics), those studying start-up packages must acknowledge this complexity, namely the challenges in creating an even field for comparison. Although we recognize that incorporating all of these disciplinary and individual idiosyncrasies in our analysis is a challenge, we believe a study of the multiple dimensions of resource allocation is a key component in balancing the playing field for both male and female faculty members.

Methods.

a. Data collection. This dataset includes 49 offer letters from the 18 ACES departments who were hiring new faculty February 2003 through August 2004. All four schools participating in the ACES program are represented by our population (A&S, WSOM, SOM, and CSE). In accordance with the NSF ADVANCE project guidelines and institutional review board approval (IRB#20010114), offer letters were obtained from the Provost's Office In accordance with the NSF ADVANCE project guidelines and institutional review board approval (IRB#20010114) and only those letters describing offers that were accepted were analyzed.

Letters received by the ACES research team had not been de-identified, so the research team undertook a range of activities to maintain confidentiality. Original letters were copied with names and addresses blacked out, but with gender noted on each copy. Because the letters contain sensitive information, such as faculty names, salary information, start-up package amounts, and the other details of the individual's offer, each letter was assigned an identification number and have been organized according to this number.

Further attempts to protect faculty identity include not listing the specific departments included in the Year 1 population, but rather grouping faculty members by college. Moreover, descriptive information and findings will be reported only in aggregate form, such as by college, gender, or 2 rank groups. Faculty members are grouped into two rank categories: junior faculty (instructors and assistant professors) and senior faculty (associate and full professors).

Letters included in our analysis cover an 18 month time period, spanning February 2003 to August 2004. The majority of our faculty population began their positions during this time period. A few faculty members, due to circumstances of their move or prior position, started at the University in the 2004-2005 academic year.

b. Data analysis: Data analysis was carried out in three phases: initial examination and study of offer letters; identification of qualitative and quantitative data items; and analysis. Each phase involved research team discussions concerned with sense making, framing the context of the data, and finding representation and links among the data.

In Phase 1 we each independently reviewed the letters, identifying any items arguably relevant to resource equity. This process was partially informed, but not limited by, the range of perspectives on which resources were most valuable to a research or teaching agenda, and the research team's knowledge of hiring practices and procedures at the department, school, and University levels. Phase 1 included conversations among the research team, noting both similarities and differences in the content and language of the letters. Specifically, differences in the content of the letters were immediately apparent and correlated with whether the offer letter was authored by the department chair or the school dean. Further discussion of these differences is included in the discussion and recommendation section of this report.

Given the idiosyncratic nature of faculty start-up packages (Rousseau, 2001) these conversations were essential in identifying the particular resources which are most important to academic career success, such as base salary, start-up package amount, teaching releases, or funded research assistants. This process aided the second phase of determining data items.

In the second phase our focus shifted from a qualitative study of the language of the letters to "mining" the letters for their quantitative data as it pertained to resources offered to the faculty candidate. Phase 2 involved decision making discussions among the researchers about whether and how data items should be included in the analysis. These conversations clarified the meaning of an item, the wording of the description of the letters and the relevance of specific content to resource equity, and finally, the links between each new data items and those previously identified.

An electronic database was created to store and analyze the de-identified data. Factors recorded from the offer letters included noting the presence or absence of resources, and when applicable the amount offered. Examples include, but are not limited to: whether a teaching release is offered and if so for how long; the number of graduate assistants offered by the department and for how long; moving expenses offered; contract length; or discussion of lab or office space.

The third phase involved data analysis. With an overall population size of 49, and further reduction when examining sub groups (i.e., schools), statistical analyses such as correlations did not generate significance. As the population size increases in years 2-5, such an analysis will become more meaningful. We consulted with Georgia Tech, New Mexico State University, the University of Washington, and the University of Wisconsin about their analysis and reporting procedures. For Year 1 data, we have employed descriptive statistics, the same methodology as the University of Wisconsin, the University of Washington, and New Mexico State University. Additional analysis was conducted of the language and content of the letters.

Findings:

Our findings are presented in aggregate, grouping the population by gender, school, and rank groups. Our population is clustered into 2 rank groups: junior faculty (instructors and assistant professors) and senior faculty (associate professors and full professors). Year 1 data is presented in 5 sections, which are summarized here, with more detail provided in the 5 sections.

1. *Population hired:* reported by gender, rank, and school and provides percentages of population offered tenure-track positions (see Table 1).
   - Fewer women offered tenure track positions (67% vs. 76% of men).
   - Women comprise 1/3 of the overall population, 1/3 of junior faculty, 1/3 of senior faculty.

2. *Base institutional salary:* summer salary is not included (see Table 2).
   - At the junior level, women (N=12) receive comparable base annual salaries as their male counterparts (N=27). Women's mean salary ranges from 93-106% that of the men's mean salaries, across schools.
   - At the senior level, women (N=3) appear to earn less than senior men (N=7). Women's mean base annual salary is 54-68% that of the men's mean salary.

3. *Base start-up amount:* this is the generic start-up amount specified in the start up letter. This amount does not include base institutional salary, summer salary, or any *additional* funds specified as travel, equipment, research personnel, signing bonus, or funds associated with named professorships. Ranges of start-up amounts are presented in this table, yet not all faculty were offered such funds. This is depicted in the table by (*) and a range such as $0 – 250,000 (see Table 3).

- At the junior level, women (N-12) receive comparable base start-up packages to their male junior counterparts (N=27). Women's mean start-up packages range from 102-152% that of their men's start-up packages.
- At the senior level, women's mean start-up packages (N=3) range from 24-102% of the senior men's mean start-up packages (N=7).

4. *Combined total offer:* calculates all funding mentioned in letter, to include base institutional salary, summer salary (as calculated by months of contract and annual salary), the base start-up amount, and additional funds (see Table 4).
   - Junior women (N=12) receive a mean combined total offer ranges from 101-138% that of the junior men's total package (N=27), with an overall average of 119% of the men's combined total offer.
   - Senior women (N=3) receive a mean combined total offer ranging from 26-98% that of men's mean combined total offers, with an overall average of 68% that of the men's total offers.
   - Across ranks, incoming female faculty received a mean combined total offer that is 78% that offered to incoming male faculty.

5. *Language differences:* an analysis of the language of the offer letters was conducted. Among the 49 letters, two distinct types of letters emerged: standardized letters and personalized letters.
   - Standardized letters are authored by school deans, are generally limited to one page, and include details pertaining to base institutional salary, start-up amount, and perfunctory communication of hiring policies, such moving expenses and required completion of citizenship forms.
   - Personalized letters, authored by department chairs (copying in school deans) are generally 2 or more pages in length. These letters contain the requisite financial and hiring policy information of base salary, start-up amounts, and necessary documents needed by HR. Where the personalized letters differ from standardized offer letters is through the inclusion of additional information and an overall encouraging tone. Typical to personalized offer letters are statements about the department culture, potential research collaborations for the new faculty member, description of mentoring relationships in the department, and expectations of the new faculty member.

1. Population Hired:

Table 1 presents descriptive information for our population (N=49). Women comprise 31% of our total cases (N=15) and men represent 69% (N=34). The dataset is divided into two comprehensive groups: junior and senior faculty.

a. Junior faculty: Instructors and assistant professors make up the junior faculty rank group. Junior faculty are 80% (N=39) of our total dataset. Instructors comprise 23% of the junior ranks (N=9) and assistant professors are 77% (N=30). Women make up 31% of the junior

faculty and 44% of the instructors. Of the 9 instructors hired, 56% (N=5) are male and 89% (N=8) are new faculty in the School of Medicine. The remaining instructor is a new faculty member in A&S.

b. Senior faculty: Senior faculty make up 20% of our dataset (N=10). This rank group is comprised of associate professors (N=5) and full professors (N=5). Women make up 30% (N=3) of the senior faculty and men account for the remaining 70% (N=7). Two of the senior women are associate professors and 1 comes to Case as a full professor. Seventy percent (N=7) of the senior faculty are men, 3 of which are associate professors, 4 are full professors.

c. School: Looking at rank by college and gender, junior women comprise 75% (N=3) of the incoming Arts and Sciences faculty, 11% (N=1)of the engineering faculty, and 57% (N=8) of the incoming faculty at the medical school. No junior women were hired in the school of management.

At the senior level, women represent 67% (N=2)of incoming engineering faculty and are equal with senior men (1:1) hired by the medical school. No senior women were hired in Arts and Sciences or the School of Management.

d. Tenure-track position: Table 1 also presents information on whether hired faculty received tenure-track positions. With the exception of the School of Medicine, tenure-track positions in the ACES departments are associated with greater job security and overall access to resources. Valian (1999) describes having tenure in a college or university as being the equivalent to being a partner in a law firm and points out that for a person holding a Ph.D., being in a non-tenure-track position is a "professional dead end."

For junior faculty, offers of tenure-track positions differ by gender only in the College of Arts and Sciences. Within this college, one hundred percent of junior men were offered tenure-track jobs (N=4) compared to 67% (N=2)of the incoming women. Across both men and women, the Schools of Medicine offered tenure track positions to half of the junior hires (4 women and 7 men) while the School of Engineering extended offered 100% (1 woman and 9 men) tenure track positions.

At the senior level tenure-track positions were offered to 50% of the male faculty (N=1) candidates in Arts and Sciences. No senior women were hired in A&S during this period. Among the engineering departments, 100% (N=2) of the senior women hired and 67% (N=2) of the

senior men hired were offered tenure-track jobs. In management, 100% (N=1) of senior men were hired into tenure-track jobs (no women were hired) and 100% of the male (N=1) and female (N=1) faculty hired in the School of Medicine are in the tenure track.

Table 1. Population Hired
ACES Departments (2/2003 – 8/2004)

JUNIOR FACULTY: Instructors & Assistant Profs.

	Hired			**Tenure Track Positions Offered**			
School	Women	Men	% Women	Women	Men	% Tenure Track Women	% Tenure Track Men
Arts & Sciences	3	4	43%	2	4	67%	100%
Engineering	1	9	10%	1	9	100%	100%
Management	0	0	N/A	0	0	N/A	N/A
Medical	8	14	36%	4	7	50%	50%

SENIOR FACULTY: Associate & Full Profs.

	Hired			**Tenure Track Positions Offered**			
School	Women	Men	% Women	Women	Men	% Tenure Track Women	% Tenure Track Men
Arts & Sciences	0	2	0	0	1	N/A	50%
Engineering	2	3	40%	2	2	100%	67%
Management	0	1	0	0	1	N/A	100%
Medical	1	1	100%	1	1	100%	100%
TOTAL (N=49)	**15**	**34**	**31%**	**10**	**26**	**67%**	**76%**

2. Base Annual Salary:

Table 2 provides base annual salary information. Summer salary is not calculated here, but is included later in section 4 of this report. For the base starting salaries at the junior level, for both mean and median figures, men and women faculty are earning comparable salaries. This does not hold true however at the senior level.

Senior women's mean salaries are 54-68% to that of their male counterparts and median salaries range from 54 to 71% of the men's salaries, with the School of Medicine exhibiting the greatest difference (women's staring salaries are 54% of men's starting salaries, on average).

Table 2. Base Institutional Salary
ACES Departments (2/2003 – 8/2004)

JUNIOR FACULTY: Instructors & Assistant Profs.

	Women				Men					
School	N	Mean	Median	Range	N	Mean	Median	Range	Women's Mean as a % of Men's Mean	Women's Median as a % of Men's Median
Arts &Sciences	3	$52,750	$55,000	$43,300-55,000	4	$50,100	$51,700	$42,000-53,400	106%	106%
Engineering	1	$71,000	$71,000	$71,000	9	$76,028	$77,000	$72,000-79,000	93%	92%
Management	0	N/A	N/A	N/A	0	N/A	N/A	N/A	N/A	N/A
Medical	8	$66,540	$65,000	$50,000-105,000	14	$65,983	$70,000	$30,000-120,000	101%	93%

SENIOR FACULTY: Associate & Full Profs.

	Women				Men					
School	N	Mean	Median	Range	N	Mean	Median	Range	Women's Mean as a % of Men's Mean	Women's Median as a % of Men's Median
Arts &Sciences	0	N/A	N/A	N/A	2	$78,250	$78,250	74.5-82	N/A	N/A
Engineering	2	$74,250	$74,250	$74,000-74,500	3	$109,000	$105,000	$95,000-127,000	68%	71%

Management	0	N/A	N/A	N/A	1	$180,000	$180,000	$180,000	N/A	N/A
Medical	1	$95,000	$95,000	$95,000	1	$175,000	$175,000	$175,000	54%	54%
TOTAL (N=49)	**15**				**34**					

3. Base Start-Up Amount:

Table 3 features base start-up amounts offered, which are intended to aide the new faculty member in initiating their research agendas. The base start-up funds presented here do not include additional funds offered to some faculty, which are often designated as travel, equipment, or additional discretionary funds. Presentation of combined totals, calculating base and summer salaries, start-up amounts, and additional resources will be provided later in this report.

Table 3 presents mean, median and the range of amounts by gender, rank, and school. Additionally, comparisons are made for mean and median amounts between men and women for each school and rank. In interpreting these data, it is important to remember that these descriptive statistics are based on relatively small numbers.

Due to the differences existing within and between schools, start-up package amounts differ tremendously. For example, within the College of Arts and Sciences we are comparing start-up amounts from departments like anthropology or sociology, with relatively simple start-up requirements, to those of departments like chemistry or physics, in which faculty often require expensive equipment and supplies to initiate research programs. Additionally, start-up offer comparison between Arts and Sciences and the School of Engineering will show an even greater divergence. For this reason Table 3 includes the ranges of start-up package amounts, the median amounts, and the mean amounts.

As with starting salaries, start-up package amounts at the junior level are fairly comparable for men and women. Variance exists when looking at the mean versus median amounts due to the ranges of packages offered within schools. For example, in Arts and Sciences, junior women were offered a mean start-up package representing 113% that of what their male colleagues were offered. Median start-up offers to women were 75% of the amount offered to men.

In the School of Engineering mean offer amounts for women were 152% that of men. Median start-up offers for women were 150% of the packages offered to male engineers.

At the junior level, the School of Medicine follows suit. Women's mean start-up packages are 102% that of the men hired in the same time period. Median amounts have women receiving start-up packages 802% that of their male counterparts. In this case, it is noteworthy to remember the differences in start-up needs existing between disciplines. Additionally, 8 of the 24 faculty members hired by the School of Medicine were hired as clinical / research instructors, who are not offered start-up packages.

As with starting salaries, larger differences exist at the senior levels. In Year 1, senior women were only hired in the School of Engineering and the School of Medicine. The mean start-up amount offered women in engineering was 106% that offered to men and median start-up packages were 88% that offered to men.

In the School of Medicine the mean and median start-up amounts are the same, with the female faculty being offered 24% of that offered to her male counterpart.

Table 3. Base Start-Up Amount
ACES Departments (2/2003-8/2004)

JUNIOR START-UP PACKAGES: Instructors & Assistant Profs.

	Women				**Men**					
School	N	Mean	Median	Range	N	Mean	Median	Range	Women's Mean as a % Of Men's Mean	Women's Median as a % Of Men's Median
Arts &Sciences	3	$270,704	$185,444	$0-$626,667*	4	$239,331	$248,778	$14,167-$445,600	113%	75%
Engineering	1	$389,444	$389,444	$389,444	9	$256,840		$104,944-$550,000	152%	150%
Management	0	N/A	N/A	N/A	0	N/A	N/A	N/A	N/A	N/A
Medical	8	$199,063	$106,250	$0-$575,000*	14	$195,821	$13,250	$0-$-650,000*	102%	802%

SENIOR START-UP PACKAGES: Associate & Full Profs.

	Women				**Men**					
School	N	Mean	Median	Range	N	Mean	Median	Range	Women's Mean as a % Of Men's Mean	Women's Median as a % Of Men's Median
Arts &Sciences	0	N/A	N/A	N/A	2	$104,690	$104,690	$100,000-$109,380	N/A	N/A
Engineering	2	$449,861	$449,861	$350,389-$549,333	3	$ 424,926	$510,000	$228,333-$536,444	106%	88%

Management	0	N/A	N/A	N/A	1	$51,500	$51,500	$51,500	N/A	N/A
Medical	1	$550,000	$550,000	$550,000	1	$2,300,000	$2,300,000	$2,300,000	24%	24%

4. Combined Total Package:

Table 4 presents the combined amount of resources offered to faculty hired in Year 1. Items included in this calculation are base salary, start-up package amount, months of summer salary, as well as any additional funding offered to the candidate (such as money for equipment, travel, research support, or other general discretionary accounts). Summer salary was calculated by multiplying the faculty member's one month salary (i.e., total annual salary divided by the number of months in their contract- 9 or 12 months) by the number of summer months and number of years summer salary was offered.

Two resources which were not included in the combined total offer package were teaching releases and graduate student / research assistants. We found that neither teaching releases nor graduate student packages are not calculated by uniform or universal algorithms. A great degree of variance exists across university, school, and department levels as to what percent of annual salary equates with a course release or the cost to the department or university of funding a graduate assistant. These issues will be discussed further in the following section of this report.

Table 4: Combined Total Offer
ACES Departments (Feb 2003- Aug 2004)

	Junior Combined Total Offer							
	Women			**Men**				
School	N	Mean	Median	N	Mean	Median	Women's Mean as a % of Men's Mean	Women's Median as a % of Men's Median
Arts &Sciences	3	$161,727	$120,222	4	$144,716	$150,239	112%	80%
Engineering	1	$230,222	$230,222	9	$166,434	$168,084	138%	137%
Management	0	N/A	N/A	0	N/A	N/A	N/A	N/A
Medical	8	$132,802	$85,625	14	$130,902	$41,625	101%	206%

Overall Means		**$174,917**			**$147,351**		**119**%	
		Senior Combined Total Offer						
		Women			**Men**			
School	N	Mean	Median	N	Mean	Median	Women's Mean as a % of Men's Mean	Women's Median as a % of Men's Median
Arts &Sciences	0	N/A	N/A	2	$91,470	$91,470	N/A	N/A
Engineering	2	$262,056	$262,056	3	$266,963	$307,500	98%	85%
Management	0	N/A	N/A	1	$115,750	$115,750	N/A	N/A
Medical	1	$322,500	$322,500	1	$1,237,500	$1,237,500	26%	26%
		$292,278			$427,921		68%	
Overall Means		**$256,845**			**$328,726**		**78**%	

5. *Language of the Offer Letter:*

In addition to statistical analyses of these data, an analysis of the language of the offer letters was conducted. Among the 49 letters, two distinct types of letters are immediately obvious: standardized letters and personalized letters.

Standardized letters are authored by school deans, are generally limited to one page, and include details pertaining to base institutional salary, start-up amount, and perfunctory communication of hiring policies, such moving expenses and required completion of citizenship forms.

Personalized letters, authored by department chairs (copying in school deans) are generally 2 or more pages in length. These letters contain the requisite financial and hiring policy information of base salary, start-up amounts, and necessary documents needed by HR. Where the personalized letters differ from standardized offer letters is through the inclusion of additional information and an overall encouraging tone. Typical to personalized offer letters are statements about the department culture, potential research collaborations for the new faculty member, description of mentoring relationships in the department, and expectations of the new faculty member.

Discussion.

Universities have seen progress in gender equity, especially over the last two decades (Kennelly et al, 1999). As we see in the Year 1 cohort of start-up analysis, male and female junior faculty enter the university with similar salaries. Nevertheless, women are more likely than men to be hired into non-tenure track or part-time positions, from which career advancement is slower. Previous research has identified a number of explanations for the empirical finding that, over the course of the academic career, women receive smaller raises in salary than men and are under-represented at senior and administrative levels (Valian, 1998; NSF 1999). The analysis reported here represents a first step in identifying and transforming a barrier to career advancement that emerges early in women's academic career.

Even small inequities compound over time, contributing to growing gaps between the professional success of men and women in the academy (Valian, 1999). This is especially the case with start-up packages, which are negotiated prior to employment either facilitate or constrain the faculty member's ability to launch a successful program of research once they arrive on campus. Subtle but influential differences exist across levels of analysis, to include the individual faculty candidate, the discipline and specific area of study, and the department or management center.

As we discuss below, negotiating on an individual basis with inadequate information about available resources and university policies can disadvantage women, who often have fewer negotiating skills (Babcock & Laschever, 2003). Resulting inequities parallel the concern with "side deals" highlighted in our analyses of focus group data generated by CWRU faculty (REF to appropriate report). In the remainder of this report, we identify a range of factors influencing variation in start-up packages, factors which will be addressed in Years 2 through 5. We distinguish among factors at the levels of the faculty member, the department, and the university.

The Faculty Member: The amount a new faculty member receives in their start up packages relies on the individual's negotiation skills. Specific to academia, and other facets of the knowledge economy, candidates for faculty positions are negotiating employment contracts based on the human capital they bring (knowledge, skills, abilities) (Rousseau & Rivero, 2003). This human capital perspective implies that start-up packages are largely unique to the individual.

Until the last two decades, women earned about 60% of what their male cohorts earned. Although this gender gap has narrowed in recent years to approximately 80% as many women have entered traditionally male occupations, the wage gap remains significant (Craver, 2004).

Factors associated with the differences remaining in pay include a reluctance of women to believe that they deserve more and the hesitancy of females to use their bargaining skills to obtain greater salary increases (Craver, 2004; Babcock & Leschaver, 2003).

The process of individual negotiation, like that employed in the academic labor market, means that these packages are also influenced by the candidate's willingness and ability to effectively negotiate for resources (Rousseau, 2001, Babcock & Laschever, 2003). Rousseau (2001) describes this type of negotiation as "idiosyncratic," meaning that workers have power to negotiate terms of employment more in line with their own personal abilities and preferences, should they negotiate at all. At Case, most hiring and contract negotiations commence once an offer has been extended to a faculty candidate and it is clear the candidate is interested in a position at Case. Indeed, the committee has been informed that contract letters are rarely written until verbal agreement on the conditions of employment has been reached.

Women's abilities and willingness to negotiate is critical to a successful career path in academia. However, previous research has documented that a major hurdle facing women in the academic job market is their limited experience with and willingness to engage in negotiation. Babcock and Laschever (2003) found men to be 4 times more likely to initiate negotiation than women and women uneasy around negotiation 2 ½ times more often than men. With less experience and desire to negotiate and tendency to have lower expectations of contract terms such as salary, teaching releases, and other resources, academic women are more likely to receive smaller start-up packages than men, limiting their research effort, and thus their career paths (Kennelly et al, 1999).

The Discipline: Further variation exists between and within disciplines. Within schools, like the College of Arts and Sciences, little similarity can be found when contrasting departments in terms of start-up and research needs such as supplies, equipment, or research personnel (e.g., political science vs. chemistry). Even within disciplines, tremendous differences can exist between applied and theoretical research streams (e.g., physics).

The University: The university, independent of field or faculty negotiation skill, lacks uniformity in hiring procedures and practices. For example, the allocation of resources such as research assistants or protected time for research by obtaining a teaching release are negotiated between the individual faculty member and their department chair or school dean. As a result, the dollar amount or even the percentage of salary replacement required for a course release is

not uniform across schools or even within departments. For example, the salary coverage required for a course release can vary from 10 to 20 percent within the same department, and course releases can be granted for some administrative responsibilities but not others, with the metric for these decisions unclear. Calculating a monetary value for graduate students revealed similar diversity due to differences across and within departments and schools in determining percent of tuition covered, stipend amount, or number of hours worked by graduate research assistants to be assigned to faculty projects.

Taking in the findings of this initial report, Year 1 data suggest that tenure track positions are offered to more men than they are to women. These data indicate a fairly equitable allocation of resources at the junior level across the financial data items included in our analysis: base salary; base start-up amounts; and combined total packages. However, at the senior level, women are offered fewer resources across these data items.

In terms of language or tone differences, the personalized letters come from departments that have elsewhere been characterized as successful. Of course correlation does not mean causation, but is a potentially helpful artifact of success that could be used in future research.

The findings of this report will be tracked in Years 2-5, establishing whether these patterns of resource allocation exist more broadly, or if this snapshot is unique to the cases included in Year 1. Before waiting for a trend to emerge however, it is vital that school deans and department chairs are kept aware of the goals and initiatives of ACES and aware of their visibility as participants in this change effort.

Data presented here compliment findings of the Resource Equity Committee (REC) focus group interviews conducted in 2001 and 2004, especially the perception among some respondents that women faculty are disadvantaged both at the point of hiring and over the course of their careers.

Limited to addressing resource issues at time of hire, the data presented here challenge this perception for women faculty entering at the junior level but support the notion for women coming to Case at the senior level. If the cases depicted in the Year 1 dataset are indicative of consistent trends, disadvantage *is* being initiated for senior women at the time of hire.

Academic start-up offers are idiosyncratic and thus challenging to analyze. Some data items which we know to be important indicators of resources, such as a teaching release or research assistants, and the impact of faculty member negotiation skills proved difficulty to quantify. Such complexities highlight the differences in formal and informal channels of

resource allocation on campus and do influence issues of equity across the faculty career. It is critical that both channels are addressed.

References.

Babcock, Linda, and Sara Laschever. *Women Don't Ask: Negotiation and the Gender Divide*. Princeton, NJ: Princeton University Press, (2003).

Bailyn, L. (1993). *Breaking the mold: Women, men and time in the new corporate world.* New York: Free Press.

Craver, C. (2004). If women don't ask: Implications for bargaining encounters, the equal pay act, and title VII. *Michigan Law Review, 102*(6): 1104-1130.

Ely, R. J., & Meyerson, D. E. (2000). Theories of gender in organizations: A new approach to organizational analysis and change. *Research in Organizational Behaviour, 22,* 103-151.

Kennelly, I., Misra, J., Karides, M. (1999). The historical context of gender, race, and class in the academic labor market. *Race, Gender, & Class, 6*(3): 125-133.

McCall, C. (2004). Negotiation has become a survival skill for women. *Management Today, January*: 27-35.

National Science Foundation (1999). Characteristics of doctoral students and engineers in the United States: 1997, NSF 00-308, Project Officer, Kelly H. Kang, Arlington, VA: NSF.

Rousseau, D. (2001). Idiosyncratic deals: Flexibility versus fairness. *Organizational Dynamics, 29*: 260-273.

Rousseau, D. & Rivero, A. (2003) Democracy, a way of organizing in a knowledge economy *Journal of Management Inquiry;* Jun 2003; 12, 2; 115-135.

Valian, V. (1998) Running in place. *The Sciences, 38,* pp. 18-23.

_____ (1999). *Why so slow? The advancement of women.* Cambridge, MA: The MIT Press.

_____ (2004). Beyond Gender Schemas: Improving the Advancement of Women in Academia. *NWSA Journal, 16*(1): 207-224.

Appendix 2

A Good Place to Do Science: An Exploratory Case Study of an Academic Science Department

Diana Bilimoria and C. Greer Jordan
Department of Organizational Behavior
Weatherhead School of Management
Case Western Reserve University
Cleveland, OH 44106-7235
(216) 368-2115
diana.bilimoria@case.edu
greer-jordan@case.edu

A Good Place to Do Science: An Exploratory Case Study of an Academic Science Department

Executive Summary

Purpose
We studied an academic science work environment that has been conducive to the advancement of female and male scientists to identify factors that have facilitated cooperation, high quality science, and inclusion.

Methods
We conducted this study using several qualitative methods including document & archival research, direct observation, and 29 interviews of departmental members (faculty, staff, post-docs, and doctoral students).

Findings
The basis of the cooperative, inclusive productive aspects of this department's culture appears to be a set of values and beliefs about scientists and the goals of science that are reflected in the types of interactions that occur within the department. Most scientists in the Science Department valued doing high quality science and valued doing science in an interactive way. Three widely held beliefs included:

1. Good science is the pursuit of meaningful, significant advancements of knowledge.
2. Scientists achieve good science through interactions that provide and generate resources.
3. Anyone can do high quality science if they can learn quickly, are well trained, can communicate their ideas, are creative and willing to work hard.

Constructive interactions support processes that foster cooperation and produce high quality science and inclusion. We list them here in increasing order of complexity, trust level required, and work impact:

- Collegial Interactions – extending respectful, civil and congenial behaviors towards others
- Tacit Learning Interactions – information sharing and modeling behaviors that convey work norms, processes, practices, and other undocumented knowledge about work.
- Relational Interactions – taking personal interest in others, expressing concern and caring for others emotionally and in support of their work
- Generative Interactions – Interactions, through which important resources are provided, received and or generated between individuals and for the group.

Participative departmental activities initiated or explicitly supported by the chair, facilitated constructive interactions:

- Team teaching with participation across faculty ranks.
- A variety of department social events, some of which occur after hours and others, which are family friendly.
- Participative faculty meetings in which information important to all faculty members is shared and the opportunity for decision-making input is provided.

- Participative faculty recruiting through which all faculty members have input into the selection of new faculty. Broad support for the new faculty member is established through this activity.
- Regular applicable research presentations and seminars that stimulate ideas and provide feedback and modeling of approaches to research and effective presentation of ideas.

Department wide learning and inclusion processes stimulated and supported wide influence in decision-making, engagement, learning about one another, and disseminating, comparing and creating a shared understanding of the external environmental factors surrounding the department. These processes also play an important role in embedding norms, behaviors, values, and beliefs into the culture of the department. These processes included:

- Transparent decision-making
- Engagement of faculty across ranks
- Dissemination of information important to work
- Creation and or sharing of resources important to work
- An open faculty selection process

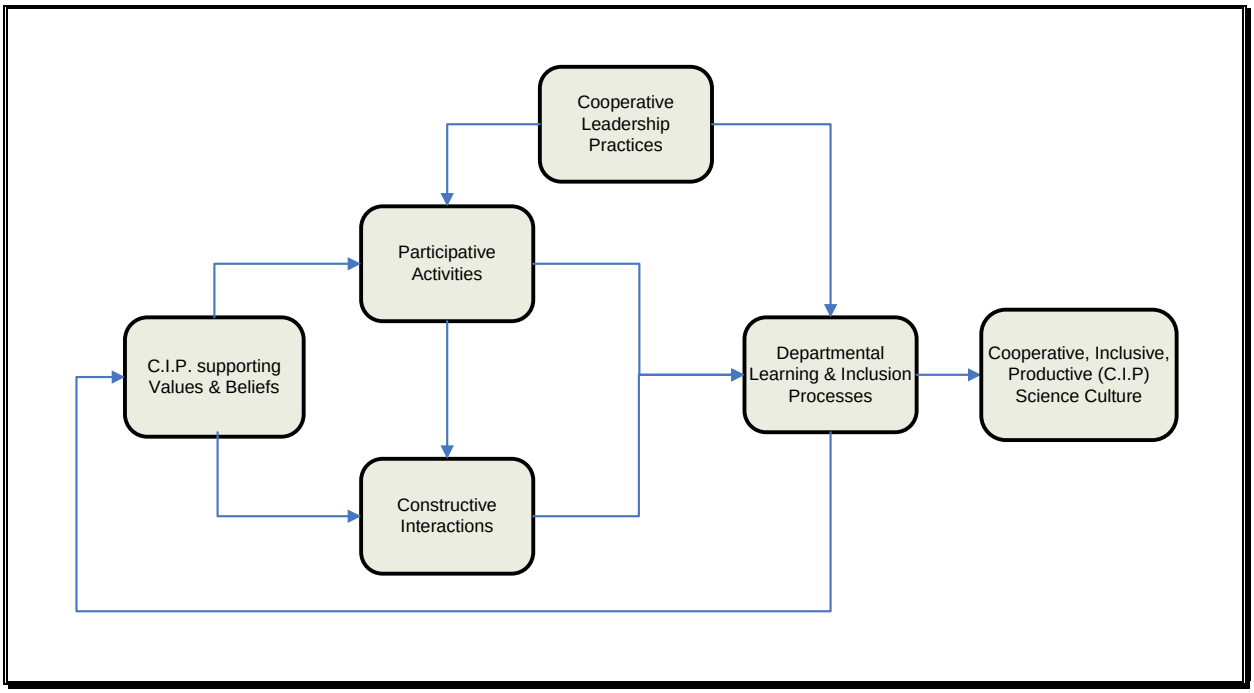
Cooperative leadership practices of the chairs facilitated the development of the culture of the department. Most of these practices were also evident among faculty.

- Supporting the creation and advancement of good science, regardless of who is developing it.
- Seeking input from all affected in decision-making
- Promoting meaningful opportunities for interaction
- Treating everyone fairly and equitability
- Using the role of chair in service of the scientific community within the department

Conclusions

This study identifies conditions and factors that facilitate the development of a cooperative inclusive and productive work culture. The foundation of such a culture is values and beliefs that support high quality science, inclusive, productive interactions and outcome focused criteria for whom can do science. These values and beliefs foster constructive interactions and participation in a range of department activities. Several of these activities provide the context for constructive interactions. Leadership practices influence the creation of some department level activities and or provide sponsorship of others. The chair may initiate these practices, but support and ongoing leadership can come from the faculty. Leadership practices are also important facilitators of department learning and inclusion processes. With the context provided by activities and behaviors derived from constructive interactions, department learning, and inclusion processes support norms, practices and processes supportive of a cooperative, inclusive, productive department culture. Over time, these processes embed values and beliefs held by a majority of department members as shared values and beliefs of the department, which sustain the overall culture creating process.

A Model of a Cooperative, Inclusive, Productive Academic Culture


Cooperative Leadership Practices
Participative Activities
C.I.P. supporting Values & Beliefs
Departmental Learning & Inclusion Processes
Cooperative, Inclusive, Productive (C.I.P) Science Culture
Constructive Interactions

PURPOSE OF THE STUDY

This case study of a science department at a Tier 1 research institution is a component of the NSF ADVANCE program with the objective of institutional transformation that will effect tangible change for women in science and engineering. The proposed case study description from the NSF ACES (Academic Careers in Engineering and Science) grant proposal document is as follows:

"[Conduct] a case study examination of the [Science Department][1] as an example of a department with a history of strong participation and advancement of women faculty. The goal will be to identify the departmental conditions that foster full participation of women at all academic ranks. The Science Department is nationally ranked in the 7th percentile. It has 19 faculty, 5 of whom are women, 2 at the full professor level. The female department chair was recently elected to the National Academy of Sciences. Although the department has no defined policies in this area, it provides an excellent case study site for examining the working environment conducive to the advancement of women faculty and students."

Our research questions were:

- How does a work environment, conducive to the advancement of women at all levels, work?
- How do people interact with each other in such an environment?
- What do people do to create inclusion, productivity, and high quality science?
- What cultural processes and practices operate in this academic science environment?

METHODS

We conducted this study using several qualitative methods after obtaining IRB approval.

Document & Archival Research

We collected basic information about the department such as the department structure, activities, and formal policies and processes from the university's archive, the schools' website, and documents provided to me by department members. We also obtained published copies of faculty members' bios and published department rank data.

Direct Observation

Observation allows the researcher to collect data on relevant behaviors or environmental conditions (Patton, 2002; Yin, 2003). We observed several department-wide presentations, two candidate job talks, a student's dissertation defense, and post-defense celebration gathering. We also observed a faculty meeting at which faculty members discussed a candidate for a tenured faculty position. We visited all the primary faculty labs at different times of the day and week in order to understand the work setting and routines. See direct observation guide in Appendix 1

[1] We will refer to the department studied as the "Science Department" in this report.

Interviews

We conducted semi-structured, one-on-one interviews (Knight, 2002), of about 1 hour in length, with all of the primary faculty and a willing sample of active secondary faculty, doctorial students, post-docs and staff. The focus of these interviews was participants' personal experience within the work environment, their perceptions of the environment and the impact of this environment on their work and careers in science. See the sample interview guide in Appendix 1.

Data Collection and Analysis

Following Yin (2003), we bounded the sampling frame of this case by department membership or direct affiliation. We conducted interviews with all 16 primary faculty members, three of whom were women. We interviewed four secondary faculty members based on willing participants from among the seven who had an active role in the department. "Active" secondary faculty members were those faculty members who were training students from the department, were involved in teaching, supported recruiting and attended department presentations. However, secondary faculty members were not directly involved in department decision-making. The secondary faculty participants consisted of two women at the associate rank and two men, one at the associate rank and the other at assistant rank. We audio recorded and transcribed all but four of the interviews. Four participants did not want to be audio recorded, so we took written notes doing their interviews.

Of the administrative staff and laboratory staff within the department, we interviewed three staff members. They provided their observations about how the department operated and observations of faculty behavior and interactions. We also interviewed six students and post-docs.

The interviewer took notes after each interview regarding ideas, emerging concepts and open questions. These notes guided framing of the open-ended questions in subsequent interviews. These notes also guided the initial coding of a subset of transcribed interviews into topic areas, ideas and examples or "analytic categories" (Knight, 2002). Next, we analyzed the remaining interviews to elaborate concepts and confirm or test emerging concepts or relationships. We used the direct observation data and archival data to provide examples of concepts and identify relationships. Finally, we provided all quotes used as examples of concepts to participants for review and comment. This practice increased the accuracy of the participants' comments and ideas and provided confirmation of the link between examples and concepts.

BACKGROUND – CASE STUDY SETTING

The focus of this case study was a basic science research department at a Tier 1 research university in the United States. The Science Department was about 15 years old at the time of the study. The department formed in the late 1980's during a time when an unprecedented number of women were entering the science programs and the science workforce. The women's movement had made its mark on U.S. culture. Thus, for the first time in U.S. history, women were becoming visible in fields that had been dominated by men. Amid these societal changes, the Science Department developed in response to the emergence of a fast growing area of scientific inquiry.

There have been two chairs of the Science Department over the course of its history, both female. The Science Department achieved top program and NIH funding rankings among departments in its field during the tenure of the first chair. It maintained its high rankings as it continued to grow in size under the second chair. (Annual Report, 2000)

The department was ranked above average in terms of number of women faculty and number of female students (Department Presentation, 2004). Two women faculty members joined the department at tenure ranks. One woman has advanced from assistant (junior) to associate rank. Of eight faculty members who joined the department as junior faculty, including one woman, only one male did not advance to tenure. Women comprise about 56% of the students in the graduate program, which awards masters or PhD degrees. The department attracts top students as indicated by higher than average student GRE scores for the field. (Department Presentation, 2004)

FINDINGS

Values and Beliefs which Support Cooperation and Inclusion

Members of the Science Department professed and acted consistently with several values and beliefs that appear to support cooperative and inclusive behaviors.

The two core values mentioned consistently are high quality science and interaction. Department members often stated that doing good science or high quality science was the main goal of their work.

> "I cared more about just doing good science and I figured if I was able to do good science I'd probably get tenure, so the main goal was to do good science, and I figured everything else would flow from that." (male associate professor)

Departmental members also valued a work environment rich in high quality peers who were willing to contribute to the pool of available resources to do science. For most department members, a scientist is not a "lone wolf", "in his or her own world competing with the outside world to get a paper published or get more money" (female associate professor). Interaction is important to creating the resource rich environment that enables member to produce high quality science.

> "You know, I think the environment is really important throughout one's entire career, especially these days where it takes many different methodologies to complete a research project. For example, there are certain methodologies that I don't know how to do, but my research would benefit from it. If I'm in an environment where that methodology is not available, I'm out of luck. But if I have a strong environment that's relevant to my research, I may be able to go to go down the hall and ask someone to help me interpret data or help me to use a method that I don't know how to use, to help advance my research." (male associate professor)

> "I think he or she has to be an interactive person to make the group better. You know they can't just sit in their labs and be great scientists and never talk to other people. It is good scientists that participate in group activities that have a broader impact on the

> department and university, because they transmit their ideas to students, post-docs, and other faculty members in the department." (female associate professor)

In the Science Department, women were included in social networks that support the work of scientists. Every female professor recounted multiple stories of networking with men or men mentioned cases of networking with women in their stories. This, indicated that a range of scientific resources, from knowledge and ideas to research and cross-lab collaboration were available to women and men. The founding members of the department valued cooperation and high quality science.

Thus, most scientists in the Science Department valued doing high quality science and valued doing science in an interactive way.

In addition to shared values, the interviews with members of the Science Department point to three widely held beliefs.

4. Good science is the pursuit of meaningful, significant advancements of knowledge.
5. Scientists achieve good science through interactions that provide and generate resources.
6. Anyone can do high quality science if they can learn quickly, are well trained, can present their ideas, are creative and willing to work hard.

Constructive Interactions

We identified four types of interactions that appeared to support the development and maintenance of a cooperative, collegial work environment. Regardless of gender, tenure, rank, or nationality, participants reported a variety of supportive, useful, and/or instructional interactions with peers, post-docs, and students. These interactions led to positive feelings about faculty peers and/or advanced people's work in some way. We used the term "constructive interactions" to identify the interactions related to these positive experiences. Constructive interactions are interactions (both emotional and task related) that facilitate doing high quality science in a cooperative work environment.

Constructive interactions involve exchanges of resources starting with what Isabelle Bouty termed "common resources". Common resources include information on published papers, general scientific/technical information, or "non committing services" such as the giving of names or addresses of other contacts. They require little effort to provide and are a very small part of what a person can offer another. Exchange of common resources may mark the beginning of interactions leading to the exchange of "strategic resources". Strategic resources consist of tools, techniques, samples, specimens or personal services that directly assist a scientist in advancing his or her work. Both common and strategic resources are instrumental in nature. They facilitate or directly support work outcomes (Bouty, 2┼ 00).

However, other interactions in the department occurred around another key resource, emotional support. Emotional support consists of "counseling, friendship, and role modeling (Kram, 1988), that helps participants develop self-esteem and professional identity (Thomas, 1993 p. 170)" (Gersick, Bartunek, & Dutton, 2000, p. 1028). These interactions are "characterized by minimal hierarchy, ease and freedom to be one's offstage self, and mutuality" (Gersick et al., 2000, p.

1037) These interactions make work more enjoyable and the environment more congenial. These interactions also build strong ties between colleagues (Gersick et al., 2000).

Faculty members exchanged both instrumental and emotional resources, through constructive interactions. We will describe the four types of constructive interactions in the following sections.

Collegial Interactions

Collegial interactions are congenial, social civilities that occur between scientific peers in formal or informal settings. These interactions indirectly relate to work outcomes. In the Science Department, collegial interactions included polite exchanges of greetings and courtesies, providing general information or "common resources" and or getting-to-know-you type conversations that could lead to instrumental and emotional exchanges. These interactions took place during day-to-day encounters in passing, and at social venues such as before academic presentations or faculty meetings. They also occurred at scheduled social events such as the department's beer hour or the department picnic. Faculty mentioned their initial experience of the collegial interactions during their early visits to the department.

> "There was no one that had some sort of negative agenda going on, and people were friendly. People were collegial." (male associate professor)

Generally, collegial interactions are introductory interactions that form the basis for more complex and productive interactions. They also maintain connections between departmental members, who may not otherwise have a need to interact. Both men and women in the department reported these social interactions. We also observed such interactions at department meetings and events. A female student observed:

> "I kind of got the feeling that people here at least spoke to each other as opposed to being locked up in their labs all day and not getting along or having time to socialize."

Tacit Learning Interactions

Tacit learning interactions occur around formal work roles and activities associated with faculty obligations. These reported interactions include formal mentoring of junior faculty to the extent that it occurs, serving on student committees, and activities that are a part of the graduate program such as teaching, advising, and weekly scientific presentations. Tacit learning interactions provide important opportunities for faculty to observe and learn from each other. Faculty in the Science Department modeled and reinforced cooperative norms and behavior through these interactions. This was particularly important for junior faculty since there was little formal ongoing mentoring that occurs in the department. The participation of faculty in tacit learning interactions across ranks also distributes the department's teaching workload, which is important to junior scientists trying to establish their labs.

Participants also reported that the way people went about these interactions made the required tasks more pleasant. One male professor noted that even as a small group of faculty wrestled with a difficult workload obligation, they maintained open and honest communication about the situation, concern about the welfare of all involved, and awareness of the potential impact on the department as a whole.

Relational Interactions

Relational interactions are interactions that help form, maintain, or strengthen professional and or personal relationships. These interactions consist of taking interest in others, providing care and providing emotional support in the context of professional or personal friendship or colleagueship.

> "He [A male full professor] genuinely sounded interested in his research, which is usually the case, but he was also interested in what I had to say. And, he asked me how I felt about the idea of coming to work in the lab. I thought he seemed very interested in me and how I was, not just telling me what the lab is about, and finding out about my resume. He was just very upbeat, and overall just gave me the sense that it was a happy lab. You can tell, if you're paying attention, if somebody's really got a happy lab going on." (female staff researcher)

> "But this environment is so much more like family than it is like work-mates who you don't talk to or care about or see much outside of the work space." (female post-doc)

There are several faculty members, both male and female, who came into the Science Department with prior knowledge of or established relationships with faculty in the department. However, other faculty members, for whom relational interactions began in the department, initiated relational interactions around shared, similar, or related research interests. Such relational interactions appeared to be an outgrowth of collegial and tacit learning interactions.

We gathered reports and observations of several events of emotional support. We observed at a meeting as faculty members offered condolences to a colleague about a research setback. The other was a story around support as a group of faculty grappled with a difficult administrative situation.

> "It's been interesting to me that many of the faculty have come up to me and said, "I'm really sorry this is a situation and if we can help, let us know". That's community." (male full professor)

A male faculty member, who at the time was junior faculty member, reported how the encouragement of a more senior professor in the department sustained him through rejection of his first grant. A female faculty member reported how the interest of more senior faculty in her ideas and their willingness to share their ideas made the department a stimulating, enjoyable environment for her.

Several faculty members perceived that, as a whole, people were interested in each other's success in doing good science. Several faculty provided examples of celebrations that highlighted the separate accomplishments of a male and a female peer.

Men reported personal informal relational interactions that occurred after hours over beer. These informal personal talks are reportedly open to all faculty members. However, only men reported attending these gatherings. Women did not report attending these meetings nor did they report feelings of exclusion from any informal gatherings.

The majority of reported relational interactions, for both men and women, consisted of informal, sometimes lengthy conversations about science. Most female faculty and two male faculty

members reported relational interactions, involving discussions of work-life balance, with students and or post-docs, in the context of mentoring relationships.

Social, role, and relational interactions support more complex, riskier, and high yielding interactions that we will discuss in the next section.

Generative Interactions

Generative interactions are the most overtly interdependent and complex of all interactions. These interactions fill the pool of resources available within the group. Generative interactions may start with a one-way provision of resources in response to a request from a peer. However, as people respond to receiving a resource by providing a different resource to the giver, responding generously to others, or joining together to secure resources for the group, more resources become available to the department. The more resources are shared and passed along, the more resource rich the environment, thus the term generative.

Generative interactions appeared to occur in the Science Department as part of ongoing relationships within groups. They require trust that a peer will not use these resources to directly compete with or "scoop" each other. A male associate professor reported that this kind of competition was "not a factor" within the Science Department.

While most reported generative interactions were directly related to work outcomes, two faculty members, one male and one female, retold the "ladder story" that exemplified the relational and productive nature of generative interactions:

> "So when I came here, when I interviewed here – a professor told me a story of the department's ladder. It turns out, that three or four of the faculty got together and bought an extension ladder for cleaning their gutters. And every fall they'd drive it around to their different homes and help each other do their gutters." (male associate professor)

The message that he took away from this story was that we have our separate labs, but in this department, we gather and share resources that support the success of everyone's lab. He reported this was a very different orientation to department life than he had experienced in graduate school.

Faculty members provided many other examples of generative interactions. One reported example was between a female faculty member, who was an assistant professor at the time, and a senior male faculty member. A mutual question about a particular organism led an exchange of a specimen and knowledge, which supported the male professor's research and lead to a funded stream of research for the female professor and subsequent employment of a graduate student from the male professor's lab. In another example, a female full professor requested and received technical and material assistance from a male associate professor. She then provided him with useful data from her use of the resources he provided her. In a third example, three junior faculty members cooperatively secured a shared equipment grant necessary to replace a vital but outdated piece of equipment which provided a resource to the entire department. There were also several examples of cross-lab research exchanges that stimulated ideas across research areas and provided a forum for student and post-doc development.

Faculty members talked about how important this access to resources was to their scientific work, as exemplified by this statement:

> "Here in the Department, everybody is working on completely different projects and topics. I think where we try to help each other is with the techniques. So if I see somebody is doing, let's say [name of a technique] and I can't do this. I go to him, and I try to learn it there. There are a lot of techniques in the Department, which are available, (and) that you could use and gather. That's what a Department is for." (male assistant professor)

Other types of generative interactions involved steering funding opportunities to other labs, and helping peers, even those in other departments, to obtain funding. One female professor referred to these activities as "looking out for each other". Being "looked out for" appears to promote a kind of reciprocity in the receiver that encourages her or him to pass along resources to others who are seen as part of the Science Department community. Since these interactions generate new capacities and capacities for work and people do not limit sharing of these resources to a single individual or group, the resources available to all department members grow.

Some scientists had also come to believe that going it alone was a bad idea competitively. They actively supported interactions that maintained the autonomy of labs while leveraging different resources available across labs to create new resources. Some faculty members viewed these interdependent interactions as central to survival and success in the increasingly competitive environment of science.

> "The thing that makes the department different from being 16 independent entities is that there's interaction and there can be guidance. There can be support between these self-contained laboratories. To some degree, that's forced by the system, because you have to have other faculty involved with training your students. Usually you have other faculty involved in teaching courses… and there are more and more cases. I think the better the department is, the more cases there are of faculty working together on things that benefit the department but not necessarily an individual faculty member exclusively." (male associate professor)

> "Also, right now, the way the NIH is funding things, I think it becomes more important to have these cross interactions. They're [NIH] really pushing these interactions. It's going to be hard for any lab to survive for a long period of time all by itself, without interacting with other labs, because no lab can do every technique or has expertise in all areas of a particular field. It just doesn't work anymore…. They're going to have to find their interactions among their colleagues. (female full professor)

Many faculty members recognize that these generative interactions are important to providing the knowledge and resources needed to compete with larger labs, while still maintaining their own laboratories and pursuing their unique ideas.

The congenial environment of this department depends on the first three types of interactions we have presented here. However, generative interactions specifically help advance a scientist's work and career. These generative interactions increase the knowledge, resources, and capabilities of scientists across labs, and even across departments. While it is possible to develop these interactions outside of the university, like many scientists do, when they occur in a department or within an institution, the efficiency of interactions is improved (walking down the hall vs. phone calls, emails,

and papers sent across country), and the capabilities of that department are improved as a whole.

Over the years, both chairs of the Science Department, with the support of faculty, introduced several department level activities appear that appear to promote constructive interactions. We will discuss these activities in the following section.

Participative Departmental Activities

Several types of department activities were conducted in the Science Department. Departmental activities provided the context for constructive interactions. These activities also supported ways of doing work and running the department that promoted inclusion of the entire faculty. All activities required the support, involvement, and leadership from the faculty. Some activities were also open to and supported by students, post-docs, and staff. We will discuss these activities in more detail in this section.

Team Teaching across Faculty Ranks

Team teaching of courses within the graduate program has been part of department practice since the days of the first chair. A senior faculty member provided leadership of this activity. Various faculty members, across ranks, participated in teaching parts of the graduate program.

> "So I give some of the lectures in the course [graduate level science course], but I also organize everything like the exams and the handouts and grading, etc. Quite a few people in the Department cooperate. About six different people give lectures that have to be coordinated. It's a very positive experience. People are very willing to do it and they meet deadlines that I set for them and do their best. And the students seem to like the course." (male full professor)

Advantages of this approach mentioned by faculty included:

- A manageable teaching load for all faculty
- A lower load for junior faculty, thus giving them time to devote to lab start up
- Opportunities for junior faculty to learn from more senior faculty
- Opportunities to interact with faculty that one might not normally interact with

A junior faculty member discussed the advantages of team teaching as follows:

> "Doing the teaching, I found to be quite a lot of fun, because it was a team-taught course. So I actually interacted with people that I wouldn't normally have interacted with. Getting an insight into what they do every day was interesting. I hadn't had that perspective before…It was just good to actually talk to them in a setting that was more of a work environment, rather than necessarily say a social environment because sometimes you discuss things that are more work related if it's a teaching environment. Where if it tends to be a social environment, then you don't always find out as much about the work they're doing at that time." (male assistant professor)

Since the department does not provide ongoing formal mentoring of junior faculty, these built-in interactions like team-teaching provide an important means of informal socialization and development of junior faculty.

Department Level Social Events

As the department has grown, the opportunities for spontaneous, informal social exchanges have diminished. The current chair initiated department wide activities to afford faculty, students and post-docs opportunities to interact outside of their labs. Faculty members have supported these initiatives by participating in and rotating the leadership of activities. These activities include a weekly beer hour, which is sort of a "science happy hour". Beer hour rotates between labs, the faculty, and students. Rotating beer hour between laboratories gives each lab visibility and enables different labs to put their own twist on the event. For example, one laboratory used a chili theme thus focusing the event more on tasty food. Thus, all of the laboratories are involved. The chair also introduced a department picnic and retreat. The picnic in particular provides a more family friendly context for interactions. These events provide opportunities for a range of constructive interactions between faculty members, students, post-docs, and staff.

Participative Faculty Meetings

The current chair used faculty meetings to keep faculty informed and engaged in decisions that could affect their work. The participative style of the chair, the interpersonal skills of the faculty, and mutual respect demonstrated by all participants kept these meetings constructive and on task. We noted that participants took the time to elicit and consider multiple views and information in decision-making. A faculty member later commented on a meeting we observed as follows:

> "But you have to have the respect for each other. When you get that, then you listen to what other people say in the meeting...You may not agree with them because you realize they're looking at something in a different way than you would look at it, but you can't just say, "Well, that doesn't count." Or "That's not important." (female full professor)

Participative Faculty Recruiting

Group recruiting of new faculty members was an activity initiated by the current chair. All faculty members participated in this process as interviewers, hosts, evaluators of presentations, and decision makers (or advisors if they were secondary faculty or had had minimal contact with the candidate due to schedule conflicts). This process not only gave faculty the opportunity to provide feedback on the candidate, but also encouraged faculty to think as a group about how this person fit into the department, what the candidate could contribute, what the candidate's developmental needs were, and whether department members were able and willing to help that person develop as a scientist.

We observed a seminar, "chalk talk", and faculty meeting surrounding one candidate for a junior faculty position in the department. We noted that a significant portion of the discussion about a candidate was about both fit with the department, in terms of the person's research direction, and his or her ability to interact with others. Faculty looked at the strengths and weakness of the candidate's science. Strengths were areas that the candidate could leverage into funded research and capabilities the candidate could provide to departmental peers. Faculty assessed weakness in terms of likelihood that people in the department were willing and able to help the candidate develop as a faculty member and if the candidate might be receptive to that help. A faculty member referred to the same meeting as follows:

> "You could listen to the conversation and you could see people were thinking about how this person would contribute. This was particularly true in the meeting that you were sitting in on. But also, "We have to mentor them". So, are they [the candidate] in a

> position where they can be well mentored? Or are they so far back that the faculty will be spending a lot of time, too much time, doing the mentoring? You want to see that, if you put in the mentoring, it's really going to pay off. So I think everybody sees how the whole thing affects him or her." (female full professor)

The result of this process was a candidate people felt good about, which provides the new person with a cache of social credit needed to weather any initial setbacks that may be part of the new faculty experience.

> "And that's why I think the recruiting as a group is important because you want to bring in people that everybody feels good about." (female full professor)

Feeling good about a person promoted interest in that person's success and encouraged acts of inclusion.

> "But I think the strength of the department is that it's got a large group of faculty that has been involved in hiring the people. [These faculty] are now invested in many people in the department because they played key roles in their recruitment. And so we're trying to work on ways, through the infrastructure of the department, to expand the circle. To have people more interconnected with other labs, so we're trying to find ways to have the labs that aren't involved in this central cluster of faculty be more involved in having them on students committees, having them on exams. Try and reduce the ability of people to be really isolated." (male associate professor)

Regular Meaningful Seminars and Presentations

Many faculty members mentioned the importance of department seminars and presentations in stimulating ideas, helping them to fashion their own projects and making contact with peers with mutual interests. Two students also indicated that the interactive, interesting, and well-attended research seminars attracted them to the department. The faculty emphasized the importance of these seminars for the development of young scientists by making the sessions mandatory for graduate students. Faculty, both primary and secondary, attended the sessions we observed. The room was abuzz with conversation among faculty before the presentation. Faculty members were responsive to the presenters. Some faculty nodded their heads in response to the speaker. Others asked questions that helped the presenter clarify points or consider new angles or ideas about the research. Afterward, some faculty lingered, talking with peers and students. Thus, seminars and presentations were an important means for constructive interactions.

Departmental Learning and Inclusion Processes

Department wide learning and inclusion processes stimulated and supported wide influence in decision-making, engagement, learning about one another, and disseminating, comparing and creating a shared understanding of the external environmental factors surrounding the department. These processes also play an important role in embedding norms, behaviors, values, and beliefs into the culture of the department.

Transparent Decision Making Processes

All faculty members had the opportunity to be a part of important decision-making processes. The faculty meetings and, in particular, participation of the entire faculty in recruiting, were the means to transparency. These activities removed the mystery around important questions, such

as who was involved in the selection of a new faculty member or how a newcomer fit into the department. Also important was that a single individual or sub-group (e.g., senior professors, professors of certain status or standing in the field, or by age or gender sub-group) did not monopolize decision-making power. Thus, transparency was an important tool for creating inclusion.

> "So in general, for the recruiting, I think that everybody knew their input counted. In the end, we did go the way that the group decided for all the positions." (female full professor)

> "So there aren't any politics, and nobody's being forced to do things. People are genuinely interested in teaching or are certainly interested in the job search. And so it's sort of a team effort, which makes it rewarding. I think that there is not very much of a hierarchy in the Department, between the junior faculty and the senior faculty. And, to some extent, the students feel like they're part of the process. So people feel empowered. People's opinions are asked and they receive feedback." (male full professor)

Engagement of Faculty across Ranks

Faculty engagement in a variety of activities from team-teaching to the department picnic demonstrated their desire and ability to interact. This reduced the chances for isolation, and increased the chances of finding opportunities to generate and share new resources. Furthermore, by cross rank sharing in the activities of recruiting and teaching, the academic workload of the department was more evenly distributed. This non-hierarchical distribution of the service and teaching responsibilities appeared to have a status-leveling effect within the department. Joint recruiting also distributed decision-making power and responsibility throughout the department.

Dissemination of Information Important to Work.

Faculty meetings, team teaching and high quality research seminars and presentations provide department members with the knowledge and information they need to advance their work. These activities support the department level process of dissemination of relevant information, which is strategic resource.

> If you had questions, you could go talk to one another very freely. You could ask people for advice, people that were more senior to me. I found it be very harmonious and productive in a cooperative environment." (male associate professor)

Creation and or Sharing of Resources

In the Science Department, people reported access to role models for approaches to the work, peers they could generate ideas with, and access to important new techniques and methods being available for the asking. Faculty described their peers as "friendly", non-competitive and the department as having "no slackers".

The cooperative environment of this department was not a gender-specific goal. Most faculty members regarded a cooperative environment as a valuable and highly effective way of doing science.

> "You know, I think the environment is really important throughout one's entire career, especially these days where it takes different expertise, methodologies to complete a research project. For example, there are certain methodologies that I don't know how to do, but my research would benefit from it. If I'm in an environment where that methodology is not available, I'm out of luck. But if I have a strong environment that's relevant to my research, I may be able to go to go down the hall and ask someone to help me interpret data or help me to use a method that I don't know how to use, to help advance my research." (male associate professor)

Overall, participant's characterized relations in the department as "cooperative", "supportive", and "smooth".

> "So I would say the one thing that's very clear in this Department, as opposed to some places where I've been, is that people get along with each other and that makes everything a lot easier." (male full professor)

The Open Faculty Selection Process

The faculty selection process did not always involve significant faculty participation. The first chair exercised wide leeway in recruiting new faculty. Many faculty members, both primary and secondary, recall being invited to join the department by the first chair. Several participants recall that the chair's main criteria, aside from high quality science, was "no prima donnas" or jerks (several faculty both male and female). Several faculty members reported that they continue to use this criterion in selection of new faculty. In discussing this criterion, some faculty acknowledged that it is not fool proof. While six males and one female did advance to tenure, one male did not advance due to reported "style" differences (anonymous informants). The second chair opened up the selection process from the recruiting dinners and meetings to the decision-making discussion about the candidate. A strategic directive to diversify the research areas and techniques within the department (Department Annual Report, 2002) guided the open process. Everyone has the opportunity for input. Both male and female faculty, recruiters, and recruits, who discussed the open process, expressed satisfaction with the outcomes. While still not foolproof, and subject to a final decision by the chair, the process does serve to provide a means of influencing the direction of the department, securing peers who support, and or complement, the work and norms of the department.

Cooperative Leadership Practices

Leadership also played a key role in the development and maintenance of the department's culture. The current and past chairs employed very different leadership styles, but both shared the goal of a high quality, cooperative science department. First, both chairs supported a workplace environment of people energized by the work itself – the advancement of science. They valued good science, regardless of the gender, nationality, or age of the scientist. Next, faculty perceived both chairs to be fair, equitable, and supportive of the advancement of science regardless of whose lab produced it. Several faculty members, both male and female, noted the fairness and forthrightness of the current chair. No one reported either chair as having favorites or supporting cliques. Both chairs sought the thoughts and opinions of the faculty before making decisions. When the department was small, the first chair did so by talking to faculty one-on-

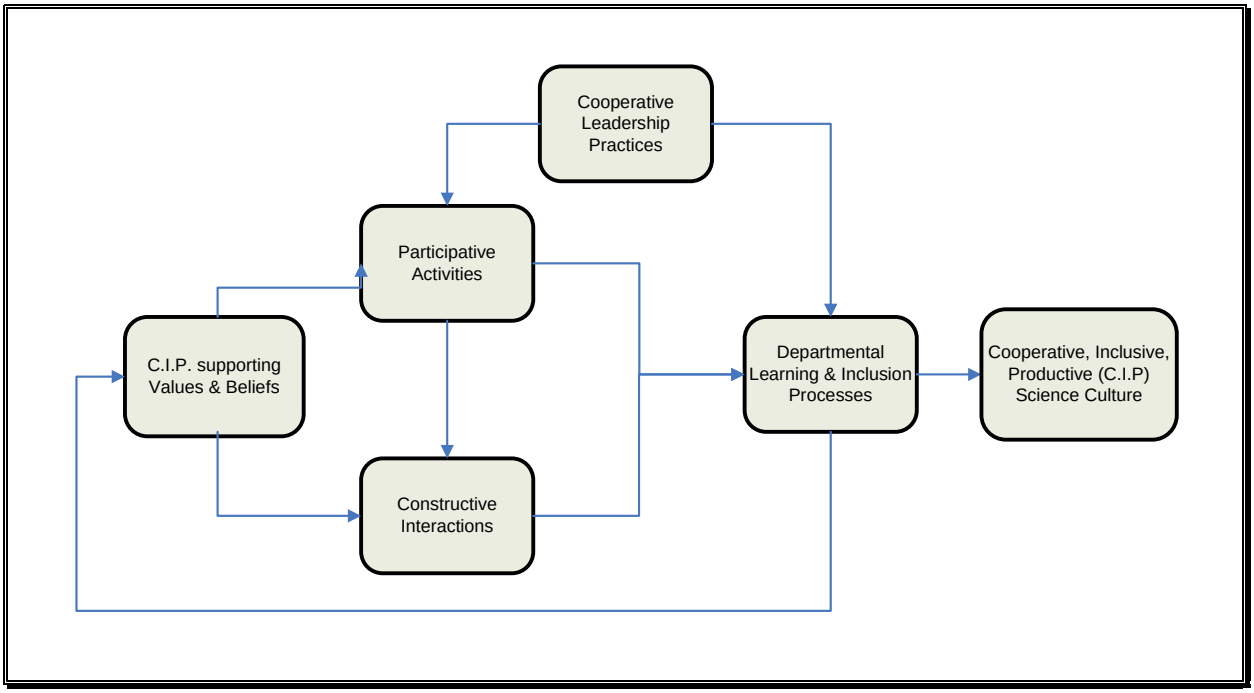
one. The second chair employed more group-level activities. Both provided the faculty with a sense that a wide range of opinions mattered, not just the desires of the chair or a privileged subgroup. Both chairs created opportunities for faculty members to engage meaningfully across ranks, through the various activities that we have described in this report. Neither chair treated the department as an extension of her self or her own work by monopolizing resources and recognition for their own ends. They did not use their status to demand unwarranted resources, authorship, or access. Instead, they created and shared resources to support others' labs, particularly those of junior faculty, both among primary and secondary faculty. Participants cited many instances of the chairs securing funding for new faculty, including one story of the current chair allowing a junior faculty member primary authorship of work that the chair's lab had supported. Thus, both chairs viewed their role in terms of doing a service to the department and advancement of a scientific community, not as a reward to leverage.

CONCLUSIONS

(Etzkowitz et al., 2000) conducted a study to determine the characteristics of graduate departments that showed the most and least improvement in recruitment and retention of women and conferring of the Ph.D. degree. The study employed 1974-1990 statistical data from the National Research Council. They found that the vast majority of science and engineering departments reflected "negative attitudes towards women in science". These departments they termed: "instrumental". They also found a few departments with a: "collegial and cooperative atmosphere that provides the safety to take the risks necessary for innovative work and the collaborations necessary for networking" (Etzkowitz et al., 2000, p. 181). They termed these departments "relational". A characteristic of relational departments was their attractiveness to "a number of tenured women faculty who had struggled for recognition and status in prestigious graduate schools and post doctoral programs that were highly competitive and hierarchal" (Etzkowitz et al., 2000). Other researchers have also suggested that cooperative or collaborative departments are better environments for the development and advancement of women scientists (Etzkowitz et al., 2000; Rosser, 1999; Sonnert & Holton, 1995). The findings of the present study support the findings of prior research. In addition, we identified specific interactions, activities, processes, and practices that facilitate the development of a cooperative science culture within a department. Such an environment can be appealing and advantageous to both female and male scientists.

The Figure below represents our conceptual modeling of the relationship between the major constructs that emerged from the data.

Figure 1 **A Model of a Cooperative, Inclusive, Productive Academic Culture**



The foundation of a cooperative, inclusive productive academic culture is values and beliefs that support high quality science, interaction between scientists and outcome focused criteria relating to who can do science. These values and beliefs foster constructive interactions and participation in a range of department activities.

The most readily observable factor in the development of the culture was constructive interactions between faculty, staff, and students. This day-to-day contact helped department members build social connections and trust that supported engagement in more complex giving and exchanges of strategic resources. Constructive interactions ranged from collegial departmental interactions to generative interactions that gave rise to synergistic connections. We found evidence of constructive interactions across dimensions of diversity like academic rank, sex, age, and nationality. This indicates wide spread inclusion of scientists in these interactions, which are important to work and career advancement (Bouty, 2000; Gersick et al., 2000; Zuckerman, Cole, & Bruer, 1991).

It is through constructive interactions that departmental members contributed and received valued resources to and from colleagues in the work environment. For most faculty, giving, receiving and, for an active subgroup, generating these resources through interactions were viewed as essential to their work, their identity and their feelings of engagement in science.

The number and frequency of departmental activities was also readily observable. Several of these activities provide the context for constructive interactions. Some of these events were social in nature, which helped to establish and maintain relationships. Other activities directly supported the work and transmission of tacit knowledge to new members.

The constructive interactions as they occurred in the context of departmental activities, created the ground for departmental learning and inclusion processes. These processes promoted networks of relationships and access to influence in decision-making. Pelled, Ledford, and Mohrman defined inclusion as " the degree to which an employee is accepted and treated as an insider by others in a work system" (Pelled, Ledford, & Mohrman, 1999, p. 1014). They then identified three indicators of workplace inclusion: decision-making influence, access to sensitive information, and job security (Pelled et al., 1999, p. 1015). The departmental processes we identified from this case appeared to provide members with influence and access to information that supported their work and or advancement to tenure. We viewed the department's success rate at advancing junior faculty to associate faculty rank, seven out of eight, including one woman, as indicative of high job security. The transparency of decision-making processes, participative decision and information dissemination processes and the resulting stake of faculty in the success of others, supported inclusion into existing social networks in the department as well. In other research studies, women have reported feeling excluded from informal relational interactions. They perceive that men share important information and make important decisions during such interactions. Thus, women perceived their influence in decision-making and access to information to be diminished (Etzkowitz et al., 2000). In the Science Department, there are open channels of communication through inclusive processes like transparent decision-making. Thus, members have access to alternative means of information and influence. This may explain why women in the Science Department did not indicate feelings of exclusion or lack of influence due to gender. Last, departmental learning and inclusion processes also serve to create and embed norms, practices, and processes supportive of a cooperative, inclusive, productive department culture.

Finally, the leadership practices of the two chairs appear to play a key role in promoting and supporting department wide activities, and processes into the culture as norms, rituals, and shared values. The first chair promoted the idea of a "strong department" by recruiting high quality scientists interested in working in a cooperative, collegial environment. The second chair added activities like faculty meetings and wider scale social gatherings that enhanced workplace inclusion in a growing department. With a core of scientists who valued a cooperative environment in place, the team recruiting activity, initiated by the second chair, became the means to continue to bring in scientists with similar goals and values who were willing to contribute to the resources of the work environment.

One male faculty member noted that science chairs, in some institutions, have the reputation of treating the department as an extension of their own labs and using their power to advance their own work or reputations. In contrast, both chairs used the role of chair in service to the department and the surrounding scientific community within the institution. Both chairs were active in establishment and or advancement of junior faculty. Both supported activities that helped the work of all scientists. Both championed high quality science. While the establishment of a cooperative culture certainly required support of the faculty, leadership has a special role in establishing what is important, modeling, allocating resources and bringing in new members in ways that establish the department culture (Schein, 1992). Faculty also exercised cooperative leadership practices, both in their own labs and in assuming leadership of department wide activities. Thus, distribution of leadership appears to be important to sustaining activities and processes important to the work environment of a department.

Academic departments often produce high quality science in competitive, isolating, and male-dominated work environments. However, the academic science department studied for this report demonstrated that scientists could achieve high quality science in a cooperative, inclusive,

and interactive environment that facilitates the advancement of all scientists, regardless of gender. In the words of a male associate professor, the cooperative science culture made the Science Department simply “a good place to do science”.

REFERENCES

Annual Report. 2000. Department Annual Report: University Archives.

Annual Report. 2002. Department Annual Report: University Archives.

Bouty, I. 2000. Interpersonal and interaction influences on informal resource exchanges between R&D researchers across organizational boundaries. ***Academy of Management Journal***, 43(1): 50-65.

Department Presentation. 2004. Annual survey: Association of Science Departments and Programs.

Etzkowitz, H., Kemelgor, C., & Uzzi, B. 2000. ***Athena unbound: the advancement of women in science and technology***. Cambridge, U.K. ; New York: Cambridge University Press.

Gersick, C., Bartunek, J., & Dutton, J. 2000. Learning from academia: The importance of relationships in professional life. ***Academy of Management Journal***, 43(6): 1026-1044.

Knight, P. T. 2002. ***Small-scale research : pragmatic inquiry in social science and the caring professions***. London ; Thousand Oaks, CA: SAGE.

Patton, M. Q. 2002. ***Qualitative Research & Evaluation Methods*** (3 ed.). Thousand Oaks: Sage Publications.

Pelled, L. H., Ledford, G. E., & Mohrman, S. A. 1999. Demographic dissimilarity and workplace inclusion. ***Journal of Management Studies***, 36(7): 1013-1031.

Rosser, S. V. 1999. Different Laboratory/Work Climates: Impacts on Women in the Workplace. ***NY Academy of Science***, 869(1): 95-101.

Schein, E. H. 1992. ***Organizational culture and leadership*** (2 ed.). San Francisco: Jossey-Bass.

Sonnert, G., & Holton, G. J. 1995. ***Who succeeds in science? : the gender dimension***. New Brunswick N. J.: Rutgers University Press.

Thomas, D. A. 1993. The dynamics of managing racial diversity in developmental relationships. ***Administrative Science Quarterly***(38): 169-194.

Yin, R. K. 2003. ***Case study research: design and methods*** (3rd ed.). Thousand Oaks: Sage.

Zuckerman, H., Cole, J. R., & Bruer, J. T. 1991. ***The outer circle***. New Haven: Yale University Press.

APPENDIX 1
Observation Guide

Questions to guide observations of researcher during direct observation activities

Physical Space & Equipment

- What is the overall physical space of the department like and where are its members located?
- What are the workspaces like (Labs, offices, meeting areas?)
- What are the differences and similarities in workspaces? (Labs and offices)

The Work in the Department

- What is the work of this department and its members?
- Where do people typically spend their day?
- What kinds of work and ways of working appear to be rewarded or acknowledged in the department?
- What is the purpose of this department? What seems to be important based on what people send their time doing?

Work Norms

- When do people work?
- What are norms about group and one on one time?
- What dynamics occur around equipment? (Access, how much to use it, who uses it?)

Interpersonal Interactions

- Are people working with each other or individually?
- What kind of work requires interaction?
- What interactions are occurring here? (tasks, relational, informational)
- How and when do people interact with and or respond to each other? Who participates? Who doesn't? How do people respond to non-participants?
- What are the styles of interaction?
- What kind of access to faculty do students and post-docs appear to have?

Groups

- What kinds of group meetings take place?
- Where do they take place?
- What are these meetings like?
- What is the purpose (information, idea generation, decision making)
- What kind of decisions made, and information conveyed.
- What is the structure (formal or informal agenda) and process (how is the meeting conducted?)?
- How are agreements reached or disagreements handled?

- What are the interactions in such meetings (norms about speaking, order of speaking, who speaks and who does not)?

Leadership

- How do people display and respond to leadership? (Chair, program heads, committee heads, student leaders (if any))
- Are women "followers" or "leaders" in this environment?

Climate

- What do classes, research presentations and other broader group gatherings feel like?
- What is the overall tone or emotional feel of the department under various circumstances?
- Do people look comfortable?
- Are there indications that people support each other?
- Does the environment feel non-threatening?
- What do you observe about competitiveness in this environment?
- What do you observe about hierarchy?

Integration and Socialization

- How are new members brought into the department? What are the criteria? How are they selected? How are they introduced and socialized?
- What is expected of a scientist in this department? What do people appear to expect of each other?
- What are the observable rituals or some habitual behaviors in this department?

Sample Interview Guide

(Review Informed Consent, answer any remaining questions, sign forms to formalize agreement to participate)

This interview consists of three questions about your experiences in the department and three open-ended questions about work-life and science. I will ask questions for clarification and detail and I will monitor the time. So here is the first question.

(1) What brought you to this department? (Secondary faculty: How did you become affiliated with this department?)

Prompts:
What appealed to you about this department before you joined?
How has your actual experience matched those observations or impressions?
For faculty here since department founding: How is the department the same now as it was when you joined? How is it different?

(2) Thinking back over the last 6 months to a year you have been in this department (or working with the department), can you tell me about a time that you felt positively engaged, happy or perhaps pleased with an activity that is part of your work.

Prompt:
This can be in research, teaching, service or department related administration.
Use adjective "satisfied" if participant does not relate to engaged, excited or interested

(3) Please tell me about a time that members of this department helped you develop as a scientist.

Probe:
What role did the chair play?

Clarification questions for questions 1-3 are:
What were the circumstances?
What was your role?
Who was involved? Not asking for names, just roles
What happened?
What was the outcome?
Aftermath, if any?

Closing probes:
In what ways do you feel you are valued or recognized?
For your work in this department?
As a person in this department?

(4) When have you had to make the choice between your career and other personal demands or important aspects of your life?

Prompts:
What can you tell me about the situation?
How was it resolved? (// phrasing: What was the outcome?)
What did you learn about your priorities through this experience?
What did you learn about the department through this experience?

Probes:

What kind or forms of support are readily available?
What kind or form of support were you offered from department members?
What kind or form of support did you request?

Note: An added question follows:

(5) What has been different about having women, married students or students of color in the department/lab vs. your experience in other departments/ labs (as a student or post-doc)?

Follow-up question:
Do you have a sense of how differences like gender, cultural or social background, or age have contributed to either the Science Department or the Institution?

Probe if needed:
What about gender or cultural background?

(6) To sum up: What is a "good scientist"?

Prompts:
Who is this person? (What characteristics?)
What are concrete things this person does to be good? Successful?
What kinds of skills and abilities does this person have?
What kinds of contributions does this person make?
What kinds of resources or support does this person need?
What is it like for you and others to be around (work with) this person?

Probe for detail on factors related to personal characteristics, lab management, mentoring, funding, and or training.

Appendix 3

Focus Group Questions – Faculty

We are interested in your experiences with working with grad students and we'd like to talk about a number of different aspects. We are particularly interested in aspects of the relationship between graduate students and their advisors, and the impact of this choice on their future success.

1. How do you think graduate students pick their advisors?

2. Are there differences in the way graduate students treat male and female faculty?

3. Are there differences in how they treat tenured and non-tenured faculty?

4. Are there differences in treatment based on a student's gender?

5. Are there differences based on a graduate student's national origin?

6. Are there consequences to these differences, if any?

    Do you think these consequences matter for your career? How and why?

    Do you think these consequences matter for the student's career? How and why?

7. When difficulties with grad students have arisen, what kinds of support have been available?

    Are there differences in how student situations are approached?

8. What are your suggestions for improving the situation?

Focus Group Questions – Students

We are interested in your experiences as graduate students and we'd like to talk about a number of different aspects. We are particularly interested in aspects of the relationship between graduate students and their advisors, and the impact of this choice on their future success.

1. How do you think graduate students pick their advisors?

2. Are there differences in the way graduate students treat male and female faculty?

3. Are there differences in how they treat tenured and non-tenured faculty?

4. Are there differences in treatment based on a student's gender?

5. Are there differences based on a graduate student's national origin?

6. Are there consequences for these differences, if any?

    Do you think these consequences matter for your career? How and why?
    Do you think these consequences matter for your advisor's career? How and why?

7. When difficulties between grad students and faculty have arisen, what kinds of support have been available?
    Are differences in how these situations are approached?

8. What are your suggestions for improving the situation?

Appendix 4

CASE

CASE WESTERN RESERVE UNIVERSITY

REPORT OF THE SUBCOMMITTEE ON FACULTY ENGAGEMENT, MOTIVATION, AND COMMITMENT

Prepared as part of the Self-Study supporting the application of

CASE WESTERN RESERVE UNIVERSITY

for continued accreditation

HIGHER LEARNING COMMISSION

NORTH CENTRAL ASSOCIATION OF COLLEGES AND SCHOOLS

September, 2004

TABLE OF CONTENTS

EXECUTIVE SUMMARY

In May 2004 an online, confidential survey on university climate and community was administered to faculty members of Case Western Reserve University (Case). The survey's purpose was to examine the quality of the university's academic community and its impact on the experience of being a faculty member at Case, and to assess factors that may be adversely affecting the recruitment and retention of highly qualified faculty members, especially women and underrepresented minorities. Questionnaire items pertained to faculty involvement in campus activities, faculty interactions and colleagueship, academic leadership, access to resources, and overall levels of satisfaction. The data obtained were primarily quantitative ratings, with one open-ended qualitative question at the end of the survey.

508 full-time faculty members responded to the survey. After dropping poor quality responses, and responses where school/college was not identified, a final sample of 240 responses (39%) were analyzed from all schools/colleges other than the School of Medicine, and 206 responses were analyzed from the School of Medicine (12%).

The main conclusions of the survey are:

(1) Overall, Case faculty:

- Are moderately involved in academic activities on campus, and are involved in extracurricular activities on campus to a low degree
- Perceive positive relationships with peers and administration
- Feel valued for their work and successes
- Experience moderate support for work-life integration
- Believe there is effective leadership in their primary units (school/college or department)
- Are moderately clear on allocations of resources, and perceive moderately fair distribution of resources
- Would prefer more effective mentoring
- Are generally satisfied with their experience of and engagement with Case

(2) Some Case faculty:

- Perceive that teaching and service are undervalued relative to research
- Perceive that resources, infrastructure and rewards are not commensurate with their overall contribution to Case
- Are disconnected from university-wide initiatives
- Suggest that Case needs to work on enhancing a community of inclusion

(3) In particular, women faculty, in comparison with their male colleagues:

- Feel less supported and valued in their school/college or department
- Perceive that gender, race, and family obligations make a difference in how faculty members are treated
- Experience a greater sense of pressure and restrictions
- Report lower ratings of their academic unit head's leadership, and lower ratings of their provision of resources and supports
- Experience more mentoring from outside their primary units
- Perceive that compensation and non-research supports are less equitably distributed
- Perceive that compensation, office and lab space, teaching requirements, and clerical support are allocated with less transparency
- Are less satisfied with their overall community and job experience at Case.

Recommendations:

Primary Unit (School/College or Department) Level:

1. Institute formal policies and provide adequate resources for enhanced leadership training of department chairs and school/college deans.
2. Improve the day-to-day academic experience of women faculty and junior faculty (instructors and assistant professors) within the primary unit by:
   a. Enhancing the quality of colleagueship and the overall experience of inclusion in the primary unit
   b. Paying attention to the allocation of academic assignments, resources, and supports by the primary unit head (chair or dean) to advance academic performance
   c. Improving work-life integration.
3. Improve mentoring and development of all faculty in the primary unit.
4. Improve transparency in school/college and departmental decision processes and in the implementation of existing faculty policies.

University Administration Level:

1. Work closely with the Faculty Senate to determine and institutionalize means for enhancing the campus-wide faculty community experience.
2. Increase support for and accountability of primary unit heads (deans and chairs) for leadership of a vibrant faculty community and creation of an inclusive academic culture.
3. Continue to publicize and adequately fund the work of the University Diversity Officer, emphasizing his/her role as facilitator for faculty inclusion and equity oversight in recruitment, employment, advancement, and other areas related to faculty duties.
4. Undertake similar efforts to survey staff and students about their experience of university community and climate.

INTRODUCTION

The Subcommittee on Faculty Engagement, Motivation, and Commitment was appointed in May 2003 by then-Provost Jim Wagner to undertake the following charge:

Charge to the Subcommittee

Perform a broad analysis of the level of faculty engagement, motivation, and commitment with respect to the full range of learning and discovery at Case Western Reserve University. Conduct a comprehensive and detailed survey (like the one used at Purdue University) to gather pertinent data. Identify issues that can be systematically addressed to strengthen faculty commitment and motivation and raise expectations for higher levels of engagement. Assess factors that may be adversely affecting the recruitment and retention of highly qualified faculty members, especially women and underrepresented minorities.

Subcommittee Process and Personnel

The subcommittee met eight times (5/29/03, 6/9/03, 9/8/03, 10/17/03, 10/31/03, 11/20/03, 2/4/04, 9/10/04).

Early in its course, the subcommittee decided to focus its attention on the evaluation of the university as a "community" for its faculty. Members stipulated that a strong community (and sense of community) was a positive attribute, to be nurtured and developed. The concept of community included relationships and positive identification: within a unit (say a department, division, or school); with members of other schools across the university; with administration (again local or central); with students; and, indeed, with the more symbolic notion of Case Western Reserve University itself. The community dimensions that the subcommittee members wished to evaluate included both academic and social elements, which encompassed a range of aspects, from actual physical venues and events (lectures, committee work, informal gathering places, sports events, entertainment events) to the quality of the academic climate; from the opportunities and resources available on campus for the effective conduct of the faculty role to levels of overall satisfaction.

The subcommittee decided to combine its efforts with those of the University's Resource Equity Committee (REC). Under the aegis of the NSF-funded ACES project (initiated to advance women faculty in science and engineering at Case), the REC also was charged to conduct a faculty survey addressing gender equity issues. A combined survey was thought to be more efficient and likely have a higher response rate than would two lengthy surveys.

One member of the subcommittee, Diana Bilimoria (Department of Organizational Behavior), took the lead role in developing the survey, organizing the analysis of the findings, and preparing this report. Susan Perry, Research Associate for the NSF-ACES project, performed most of the detailed analysis of the survey results.

The members of the subcommittee are Stuart Youngner (Bioethics), Claudia Coulton (MSASS), Randy Beer (EECS), Diana Bilimoria (Organizational Behavior), Cleve Gilmore (MSASS), Bill Leatherberry (Law), Andre Mickel (Endodontics), Dorothy Miller (Women's Center), Shirley Moore (Nursing), Mano Singham (UCITE), and Eric Youngstrom (Psychology). The subcommittee was staffed by Jean Gubbins from the Office of Institutional Research. The Resource Equity Committee's members are Diana Bilimoria (Organizational Behavior), Patricia Higgins (Nursing), Eleanor Stoller (Sociology), and Cyrus Taylor (Physics). The Resource Equity Committee is staffed by Susan Perry, Research Associate for the NSF-ACES project, and Linda Robson, doctoral student.

SURVEY METHODOLOGY

An online, confidential survey on university climate and community was administered in May 2004. The study's purpose was to examine the quality of the university's academic community and its impact on the experience of being a faculty member at Case. Specifically, the study aimed at examining faculty engagement, motivation, and commitment; access to academic resources; and other academic career development issues. Consistent with the charge provided to the subcommittee, an additional aim of the study was to undertake research that contributes to the development of an academic environment that increases the inclusion of women and minorities at all levels of faculty and academic leadership through illumination and transformation of institutional practices, policies, climate, and culture.

Questionnaire Construction

The Case questionnaire was modeled after several existing public-domain faculty climate surveys from Purdue University, University of Kansas, The Higher Education Research Institute Faculty Survey, University of Arizona School of Medicine's faculty advancement survey, and a climate survey from the University of Michigan's ADVANCE program.

Questionnaire items were also based in part on the results of the focus group investigation of Case faculty members conducted by the REC in Spring 2000. The focus groups yielded findings concerning faculty members' experiences and perceptions of the culture and academic resources at Case. As recommended in the REC's final report[1], these issues were included in the survey to quantitatively ascertain campus-wide perceptions of community, culture, academic resources, and gender equity in the Case community.

In order to further tailor the instrument, one of the subcommittee meetings served as a focus group in which subcommittee members had an open discussion of important aspects of community.

Finally, global satisfaction items were constructed, along with demographic questions about professional, tenure, and domestic status.

Confidentiality

The subcommittee received IRB approval for the conduct of the research in February 2004. Respondents were assured that all responses would be confidential. Individuals or individual departments would not be identified in the reporting of results. Only aggregate data were to be reported at the school/college level or by aggregation of the larger faculty groups (e.g., by rank or gender). Participants were asked to complete an online Informed Consent Statement prior to completing the survey.

1. The Resource Equity Comment final report may be obtained at http://www.case.edu/menu/president/resource.htm

As an incentive for survey completion, participants were told that they had the opportunity to enter a raffle for one of five $100 restaurant gift certificates. Providing an email address for this purpose was entirely voluntary, and was entered on a web page separate from the survey. Email address information was used only for awarding prizes and was subsequently erased.

Survey Sample

During exam week in early May 2004, an email invitation to complete the questionnaire was sent by Professor Donald L. Feke, Vice Provost for Planning and Assessment. Two follow-up emails were sent within the next 4 weeks, one by Vice Provost Feke, and the second by Provost John L. Anderson. The original email was emailed to all full- and part-time faculty, for a total of 3,699. This total was made up of 2,233 full-time faculty (at least a 51% appointment) and 1,466 part time faculty.

579 faculty members completed the survey. Of these 579 faculty members, 508 were full-time and 71 were part-time. Due to the low response rates of part-time faculty, all part-time faculty responses were dropped from the analysis. Thus the results presented in this report pertain only to the university's full-time faculty.

Response Rates by School/College (N=508):

University Full-time Faculty	Sample	University Population	Response Rate
MSASS	19	28	68%
Nursing	24	53	45%
Law	13	44	30%
A&S	122	221	55%
Engineering	47	115	41%
Medicine	217	1729	13%
Dentistry	8	66	12%
Management	26	85	31%
Prefer not to answer	27		
No response	5		

Rank and Gender Response Demographics (N=508):

Rank and gender distribution information is provided below, comparing the university's population of full-time faculty with the sample respondents.

University Full-time Faculty	University Population	Sample
Professor	29%	35%
Associate Prof.	22%	27%
Assistant Prof.	37%	26%
Instructor	9%	7%
Lecturer	2%	2%
Visiting	2%	2%
Research Prof.	0%	0%
Female	31%	40%
Male	69%	60%

These response statistics show an over-sampling of full professors, associate professors, and female faculty members, and an under-sampling of assistant professors and male faculty members.

Response Quality

Response Quality: out of 155 survey items (Q1-Q11)		
Very good	> 95% complete	447 (88%)
Good	92 – 94.9% complete	26 (5%)
Poor	< 92% complete	35 (7%)

Surveys were rated for response quality, based on the number of non-demographic items completed. Per standard survey methodology, and after discussion with external statistical experts, surveys that were less than 92% complete were considered "poor" in quality since the missing data could bias the construct creation process. A total of 35 poor responses were dropped from all analyses, leaving 473 surveys for further analysis.

The poor responses received by each school/college, and dropped from further analyses, were: MSASS (3), Nursing (3), Law (0), College of Arts and Sciences (7), Engineering (2), Medicine (11), Dentistry (1), Management (3), and Prefer not to answer or didn't answer (5).

Of the final sample of 473, the following is the breakdown by school/college, rank, and gender:

- 16 respondents were from Mandel School of Applied Social Sciences, 21 from School of Nursing, 13 from School of Law, 115 from College of Arts & Sciences, 45 from Case School of Engineering, 206 from School of Medicine, 7 from School of Dental Medicine, and 23 from School of Management. Three omitted the item asking for their school or college, and 24 chose "prefer not to answer."
- The ranks of the respondents included 7 lecturers, 35 instructors, 122 assistant professors, 125 associate professors, 167 professors, 1 adjunct faculty, 8 visiting faculty, 1 research faculty, 1 "other," and 6 who did not respond to this item.
- 180 respondents were women and 284 men, with 9 not indicating their gender.
- Of respondents who gave both rank and gender, there were
  - § 26 female instructors, 9 male instructors
  - § 63 female assistant professors, 57 male assistant professors
  - § 52 female associate professors, 73 male associate professors
  - § 31 female professors, and 132 male professors.

For the purposes of the data analyses, the sample was divided into two parts – (1) faculty responses from all schools/colleges except the School of Medicine, and (2) responses from the School of Medicine faculty only. School of Medicine data were analyzed and reported separately for two reasons. First, the response rate from the School of Medicine was extremely low. Second, unlike the other schools/colleges, full-time faculty members in the School of Medicine do not necessarily teach or practice on campus. Despite the low response rate from the School of Dental Medicine, their responses were included in the analyses of all schools/colleges since their faculty members are generally located on campus. Thus for the purposes of this report, findings are reported separately for the School of Medicine and for All Schools/Colleges without the School of Medicine.

32 respondents were dropped from the school/college analyses since it was not clear to which school/college they belonged (i.e., they responded with "Prefer not to answer" or gave no response to this question).

After dropping poor responses and responses not indicating school/college, the final sample size for data analyses for all schools/colleges excluding the School of Medicine was 240. The total number of faculty members in these schools/colleges was 612, yielding a **final response rate of 39% for all schools/colleges except the School of Medicine.**

After dropping poor responses and responses not indicating school/college, the final sample for data analyses for the School of Medicine was 206. The total number of full-time faculty members in the School of Medicine was 1,729, yielding a **final response rate of 12% for the School of Medicine**.

Data Analyses

Survey data were analyzed using both quantitative and qualitative methods.

(a) *Quantitative Analyses*

Descriptive statistics were generated for each item in the survey (see Appendix 1). Factor analyses were then conducted on the whole sample to obtain the underlying factor structure of survey items across all respondents. Appendix 1 also summarizes the listing of factors obtained per question, the survey items that constitute each factor, and the factor reliability (α) for each question. Subsequently, survey items were grouped together by factor and averaged for purposes of generating the graphical results.

Appendix 2 provides item averages by school/college. Appendix 3 presents item means by rank and gender for the whole sample.

Appendix 4 reports overall item means and standard deviations for all schools/colleges excluding the School of Medicine. Appendix 5 reports overall item means and standard deviations for the School of Medicine only.

For tests of significant differences, MANOVA tests were conducted as appropriate: significant differences among groups of faculty (by school/college, by rank, and by gender) are reported for all schools/colleges, and by rank and gender for the School of Medicine.

The quantitative analyses were performed by Susan Perry under the supervision of Diana Bilimoria and Claudia Coulton.

(b) *Qualitative Analyses*
At the end of the web-based survey instrument, respondents were offered the opportunity to share perspectives in a "free text" box, asking "Is there anything you'd like to tell the researchers?" Thirty one percent (31%, N=159) of the survey respondents, which includes faculty from the School of Medicine, provided qualitative (textual) comments, exhibiting a wide range of perspectives, from critical to appreciative.

Analysis of the qualitative data was conducted by members of the Resource Equity Committee (REC). The qualitative (textual) data were separated from the larger SPSS data files, organized into text format, and analyzed, using standard methods of content analysis. The procedure consisted of REC team members initially reading the comments individually, identifying distinct comments and keywords. The team then met to discuss the comments in depth, comparing themes, and categories. Areas of agreement as well as divergence among identified themes were discussed, explored, and resolved. It is noteworthy that the confidential nature of the online survey meant that it was impossible to request clarification or elaboration of submitted comments. Furthermore, data was stripped of identifying characteristics (i.e., name of department or colleagues) and some comments were edited to preserve the confidentiality of respondents; all edited comments were placed in brackets in the presentation of results.

CONCLUSIONS

Conclusions are presented below for: (1) Overall Conclusions, (2) Quantitative Findings, and (3) Qualitative Findings.

Overall Conclusions

The results paint a comprehensive picture of the university's academic climate and community as follows.

(1) Overall, Case faculty:

- Are generally satisfied with their experience of and engagement with Case
- Are moderately involved in academic campus activities, and are involved in extracurricular activities on campus to a low degree
- Perceive positive relationships with peers and administration
- Feel valued for their work and successes
- Experience moderate support for work-life integration
- Believe there is effective leadership in their primary units (school/college or department)
- Are moderately clear on allocations of resources, and perceive moderately fair distribution of resources
- Would prefer more effective mentoring.

(2) Some Case faculty:

- Perceive that teaching and service are undervalued relative to research
- Perceive that resources, infrastructure and rewards are not commensurate with their overall contribution to Case
- Are disconnected from university-wide initiatives
- Suggest that Case needs to work on enhancing a community of inclusion.

(3) In particular, women faculty, in comparison with their male colleagues:

- Feel less supported and valued in their school/college or department
- Perceive that gender, race, and family obligations make a difference in how faculty members are treated
- Experience a greater sense of pressure and restrictions
- Report lower ratings of their academic unit head's leadership, and lower ratings of their provision of resources and supports
- Experience more mentoring from outside their primary units
- Perceive that compensation and non-research supports are less equitably distributed
- Perceive that compensation, office and lab space, teaching requirements, and clerical support are allocated with less transparency
- Are less satisfied with their overall community and job experience at Case.

Conclusions of the Quantitative Findings

All Schools except School of Medicine:

1. Faculty Engagement and Involvement:

- Survey response rates from all schools were moderate, ranging between 30% and 57%, except for the School of Dental Medicine, whose response rate (12%) was the lowest among all schools and colleges surveyed. Despite multiple assurances of confidentiality, many faculty respondents did not fully complete the demographic information section of the survey, choosing to complete only one (or two) of the three main demographic variables used in the analyses: school/college, rank, and gender.
- Overall, full-time faculty involvement in campus activities is low to moderate. This differs significantly by school/college. Participation in specific academic activities also varies by school/college.
- Participation in extracurricular activities on campus is low. Participation in academic activities is moderate. Appropriately, faculty participation in academic activities on campus is higher than participation in extracurricular activities. Higher participation in on-campus academic activities generally occurs at the full professor level. Lack of information or the inconvenience of an event is the primary reason for faculty non-participation. Campus safety concerns are rated by most faculty as a non-issue.

2. Quality of Relationships Across Campus:

- Overall, faculty members at Case perceive a lack of negative attitudes or comments among their peers or administrators regarding age, sex, race, or country of origin.
- Most faculty believe that moderately respectful relations exist among faculty and with administrators.

3. Quality of Colleagueship and Support in Primary Unit:

- Most faculty report feeling valued and included in their primary unit (department/school). However, female faculty members feel less valued and included in their primary unit in comparison to their male colleagues.
- While most faculty do not believe that gender, race, and family obligations make a difference in how a faculty member is treated within their primary unit, women faculty perceive that these dimensions do make a difference. Full professors are least likely to believe that these dimensions make a difference.

- As rank increases, the sense of pressure and restrictions experienced in the primary unit decreases. Female faculty members generally report experiencing pressure and restrictions more than do their male counterparts. Full professors report the least sense of pressure and restrictions.
- The quality of colleagueship and support within the primary unit as perceived by faculty differs on all factors by school/college.

4. Support for work-life integration:

- Faculty members experience moderate support for work-life integration.
- A third of the respondents either did not know what support was available or did not think it applied to them.
- Full professors experience the most support for work-life integration.

5. Effectiveness of Primary Unit Head (Chair/Dean):

- Faculty members believe that their primary unit head exercises effective academic leadership. However, female faculty report lower ratings, in comparison to their male colleagues, with respect to the demonstration of effective academic leadership by their primary unit head.
- Most faculty members believe that their primary unit head provides resources and supports for academic performance. However, women faculty report lower ratings on this factor than do male faculty.

6. Mentoring:

- Most faculty rate the mentoring they receive within and outside the primary unit to be poor.
- Mentoring received within and outside the primary unit varies by school/college.
- Female faculty members report receiving more mentoring from outside their primary units than their male colleagues do.
- Assistant professors report receiving the most mentoring from within the primary unit, in comparison with other levels.

7. Appropriateness of Resources to Advance Academic Work:

- Faculty members generally believe that the resources available are moderately appropriate to advance their academic work. This belief differs by school/college.
- A high proportion of faculty (more than a third) responded that they do not know whether funding of and technical support for research is appropriate to advance their academic performance.

8. Equitable Distribution of Resources:

- Faculty members generally perceive that resources are fairly distributed in comparison with others. This differs by rank, with instructors reporting the greatest perceptions of inequity in distribution of office and lab space, service assignments and consulting opportunities.
- A high proportion of faculty (ranging from 23% to 38% on the 3 factors) responded that they do not know if resources are distributed fairly in their primary units.
- Junior faculty and women faculty perceive that compensation and non-research supports are less equitably distributed than their senior and male colleagues perceive.

9. Transparency of Resource Allocation Processes:

- Faculty members generally report a moderately clear process for allocation of resources.
- A high proportion of faculty (ranging from 28% to 34% on the 2 factors) responded that they do not know if the resource allocation processes in their primary unit are transparent.
- Full professors are most likely to report transparency in the process of allocating compensation, space, teaching, and clerical

support. Female faculty perceive that these resources are allocated with less transparency than their male colleagues perceive.

10. Satisfaction:

- Most faculty members are satisfied with their overall experience of community and job satisfaction. Assistant and associate professors are the least satisfied on this dimension. Women faculty are less satisfied with their overall community and job experience than are men faculty.
- Faculty members are highly satisfied with their professional activities and success.
- Faculty members report low to moderate satisfaction with the mentoring they receive.

School of Medicine:

Conclusions from the School of Medicine results should be interpreted with caution due to severe sample size limitations.

1. Faculty Engagement and Involvement:

- Only 13% of the School of Medicine faculty responded to the survey. Despite multiple assurances of confidentiality, many faculty respondents did not fully complete the demographic information section of the survey, choosing to complete only one (or two) of the three main demographic variables used in the analyses: school/college, rank, and gender.
- Overall, full-time School of Medicine faculty involvement in campus activities is low. Involvement goes up with rank: instructors and assistant professors are the least likely to be involved overall. Campus safety is generally considered a non-issue.
- Participation in academic and extracurricular activities on campus by School of Medicine faculty is low. Higher participation in extracurricular activities generally occurs at the full professor level.
- Associate professors are most likely to indicate that the lack of information or inconvenience of an event, and campus safety and location factors, are the reasons for non-attendance at campus events.

2. Quality of Relationships Across Campus:

- Overall, School of Medicine faculty members perceive a lack of negative attitudes or comments among their peers or administrators regarding age, sex, race or country of origin.
- Most School of Medicine faculty believe that moderately respectful relations exist among faculty and with administrators.
- Moderately high proportions of School of Medicine faculty (ranging from 15% to 27%) responded that they do not know about the quality of relationships in the larger campus community.

3. Quality of Colleagueship and Support in Primary Unit:

- Most School of Medicine faculty report feeling valued and included in their primary unit (department/school). However, assistant professors and female faculty members feel less valued and included in their primary unit in comparison to their senior and male colleagues.
- While most School of Medicine faculty do not believe that gender, race, and family obligations make a difference in how a faculty member is treated within their primary unit, women faculty perceive that these dimensions do make a difference.
- As rank increases, the sense of pressure and restrictions experienced in the primary unit decreases. Assistant professors in the School of Medicine report the greatest sense of pressure and restrictions.

4. Support for Work-life Integration:

- Faculty members in the School of Medicine experience moderate support for work-life integration.
- A third of the respondents either did not know what support was available or did not think it applied to them.
- Female School of Medicine faculty members experience less support for work-life integration than do male faculty members.

5. Effectiveness of Primary Unit Head (Chair/Dean):

- Most School of Medicine faculty members believe that their primary unit head exercises effective academic leadership. However, female faculty report lower ratings, in comparison to their male colleagues, with respect to the demonstration of effective academic leadership by their primary unit head.
- Most School of Medicine faculty members believe that their primary unit head provides resources and supports for academic performance. However, women faculty report lower ratings on this factor than do male faculty.

6. Mentoring:

- Most School of Medicine faculty rate the mentoring they receive within and outside the primary unit to be low.
- Female faculty members report receiving more mentoring from outside their primary units in the School of Medicine than their male colleagues do.
- Instructors in the School of Medicine report receiving the most mentoring from within the primary unit, in comparison with other levels.

7. Appropriateness of Resources to Advance Academic Work:

- School of Medicine faculty members generally believe that the resources available are moderately appropriate to advance their academic work.
- A high proportion of faculty (ranging from 16% to 36% on the 3 factors) responded that they do not know whether resources available are appropriate to advance their academic performance.

8. Equitable Distribution of Resources:

- School of Medicine faculty members generally perceive that resources are fairly distributed in comparison with others. This differs by rank and gender, with assistant professors and women faculty reporting the greatest perceptions of inequity in distribution of office and lab space, service assignments and consulting opportunities. A high proportion of faculty (ranging from 35% to 40% on the 3 factors) responded that they do not know whether resources are fairly distributed in their primary unit.
- Women assistant professors in the School of Medicine perceive that funding of and technical support for research is less equitably distributed than their male colleagues perceive.

9. Transparency of Resource Allocation Processes:

- School of Medicine faculty members generally report a moderately transparent process for allocation of resources.
- A high proportion of faculty (ranging from 36% to 40% on the 2 factors) responded that they do not know whether the resource allocation processes in their primary unit are transparent.
- Assistant professors and women faculty in the School of Medicine are least likely to report transparency in the process of allocating compensation, space, teaching and clerical support.
- Assistant professors in the School of Medicine perceive that internal funding and support for research are allocated with less transparency than their senior colleagues perceive.

10. Satisfaction:

- Most School of Medicine faculty members are satisfied with their overall experience of community and job satisfaction. Assistant professors are the least satisfied on this dimension. Women faculty are less satisfied with their overall community and job experience than are men faculty.
- School of Medicine faculty members are moderately to highly satisfied with their professional activities and success. Assistant professors are lowest on this factor.
- School of Medicine faculty members report low to moderate satisfaction with the mentoring they receive.

Conclusions from the Qualitative Findings

Almost one third (31%) of the faculty respondents provided comments. Respondents used the free text box at the end of the questionnaire to emphasize their positive evaluation of Case, to elaborate or clarify the meaning of their quantitative responses, or to highlight concerns that they felt were overlooked in the questionnaire. Several themes were reflected at both the department and university levels.

Additionally, some respondents perceive teaching and service are undervalued relative to research. Conversely, a number of faculty researchers feel they are valued only for the income they generate for the university.

Some faculty described a sense of disconnect between themselves and university initiatives. Comments reflected perceptions of a one-way, top down system of communication.

Some faculty expressed concerns that the resources, infrastructure, and rewards are inadequate relative to their contribution. Some compare Case to other universities, whereas other respondents compare their situation to other units at Case.

In general, participants would like to see Case work at building and enhancing a community of inclusion, fostering greater intellectual and informal interaction among all colleagues. This involves recognition of diversity across multiple dimensions including academic discipline, gender, ethnicity, sexual orientation, physical ability, and/or family status.

RECOMMENDATIONS

The quantitative and qualitative data from this survey represent a range of faculty perspectives and depict a common interest in enhancing the climate at Case. Based on the results of this analysis, the Subcommittee on Faculty Engagement, Motivation, and Commitment and the Resource Equity Committee suggest the following actions to continue the process of development throughout the university environment.

Primary Unit (School/College or Department) Level:

1. Institute formal policies and provide adequate resources for enhanced leadership training of department chairs and school/college deans.
2. Improve the day-to-day academic experience of women faculty and junior faculty (instructors and assistant professors) within the primary unit by:
   a. Enhancing the quality of colleagueship and the overall experience of inclusion in the primary unit
   b. Paying attention to the allocation of academic assignments, resources, and supports by the primary unit head (chair or dean) to advance academic performance
   c. Improving work-life integration.
3. Improve mentoring and development of all faculty in the primary unit.
4. Improve transparency in school/college and departmental decision processes and in the implementation of existing faculty policies.

University Administration Level:

1. Work closely with the Faculty Senate to determine and institutionalize means for enhancing the campus-wide faculty community experience.
2. Increase support for and accountability of primary unit heads (deans and chairs) for leadership of a vibrant faculty community and creation of an inclusive academic culture.
3. Continue to publicize and adequately fund the work of the University Diversity Officer, emphasizing his/her role as facilitator for faculty inclusion and equity oversight in recruitment, employment, advancement, and other areas related to faculty duties.
4. Undertake similar efforts to survey staff and students about their experience of university community and climate.

RESULTS

Quantitative Findings

The first set of findings below represents:

1. The frequency distribution of the responses obtained for each factor from faculty in all schools/colleges except the School of Medicine. In each of these graphs, a line separates more negative responses from more positive responses.
2. The means for each factor obtained for (a) the whole sample, (b) by each school/ college except the School of Medicine, (c) by academic rank, and (d) by gender.

A second set of findings are reported for the School of Medicine faculty responses only. These consist of:

1. Frequency distributions by each factor, and
2. The means for each factor obtained for (a) the whole sample of School of Medicine faculty, (b) by academic rank, and (c) by gender.

Multivariate tests of significance (MANOVA) are reported for each factor according to the category investigated (by school/college, by rank, and by gender). Three approaches were taken in undertaking the MANOVA analyses. First, MANOVA analyses were run using only the case responses that were fully complete for all factors. This approach presented a challenge since there were many factors that had a large number of missing items (either due to a "don't know" response or because they had been left blank). Thus, there was a need to utilize other treatments of missing values. Second, to preserve sample size for the multivariate tests, a MANOVA with replaced missing values was undertaken, with the missing factor values being filled in by a series mean. Third, a MANOVA was conducted with the individual missing items (either due to a 5-don't know response or a blank response) being replaced by a series mean. The factors were then recalculated. For the purposes of this report, it was decided to report the MANOVA analyses using the third approach due to the high numbers of missing items and don't-knows in some questions that were generating extremely small Ns for the analyses. However, significant findings are reported below only for those factors where significant differences were obtained using the third approach and at least one of the other two approaches.

Overall statistics for the MANOVA analyses are presented below. These results indicate that the global F statistics are all significant, allowing us to proceed with the interpretation of individual factors.

School/college MANOVA

All Schools/Colleges except the School of Medicine, N=240.

Multivariate Tests(c) – no missing factors						
Effect		**Value**	**F**	**Hypothesis df**	**Error df**	**Sig.**
Q13_school_college	Pillai's Trace	1.363	2.308	162.000	1272.000	.000
	Wilks' Lambda	.205	2.343	162.000	1224.452	.000
	Hotelling's Trace	1.871	2.371	162.000	1232.000	.000
	Roy's Largest Root	.604	4.746(b)	27.000	212.000	.000

a Exact statistic
b The statistic is an upper bound on F that yields a lower bound on the significance level.
c Design: Intercept+Q13_school_college

Rank MANOVA

All Schools/Colleges except the School of Medicine, N=221

Multivariate Tests(c) – no missing items						
Effect		**Value**	**F**	**Hypothesis df**	**Error df**	**Sig.**
Q21_rank	Pillai's Trace	.700	2.177	81.000	579.000	.000
	Wilks' Lambda	.432	2.289	81.000	572.137	.000
	Hotelling's Trace	1.028	2.408	81.000	569.000	.000
	Roy's Largest Root	.678	4.849(b)	27.000	193.000	.000

a Exact statistic
b The statistic is an upper bound on F that yields a lower bound on the significance level.
c Design: Intercept+Q21_rank

School of Medicine only, N=203

Multivariate Tests(c) – no missing items						
Effect		**Value**	**F**	**Hypothesis df**	**Error df**	**Sig.**
Q21_rank	Pillai's Trace	.743	2.097	81.000	516.000	.000
	Wilks' Lambda	.412	2.168	81.000	509.329	.000
	Hotelling's Trace	1.076	2.241	81.000	506.000	.000
	Roy's Largest Root	.649	4.136(b)	27.000	172.000	.000

a Exact statistic
b The statistic is an upper bound on F that yields a lower bound on the significance level.
c Design: Intercept+Q21_rank

Gender MANOVA

All Schools/Colleges except the School of Medicine, N=237

Multivariate Tests(b) – no missing items						
Effect		**Value**	**F**	**Hypothesis df**	**Error df**	**Sig.**
Q24_gender	Pillai's Trace	.314	3.535(a)	27.000	209.000	.000
	Wilks' Lambda	.686	3.535(a)	27.000	209.000	.000
	Hotelling's Trace	.457	3.535(a)	27.000	209.000	.000
	Roy's Largest Root	.457	3.535(a)	27.000	209.000	.000

a Exact statistic
b Design: Intercept+Q24_gender

School of Medicine only, N=203

Multivariate Tests(b) – no missing items						
Effect		**Value**	**F**	**Hypothesis df**	**Error df**	**Sig.**
Q24_gender	Pillai's Trace	.393	4.130(a)	27.000	172.000	.000
	Wilks' Lambda	.607	4.130(a)	27.000	172.000	.000
	Hotelling's Trace	.648	4.130(a)	27.000	172.000	.000
	Roy's Largest Root	.648	4.130(a)	27.000	172.000	.000

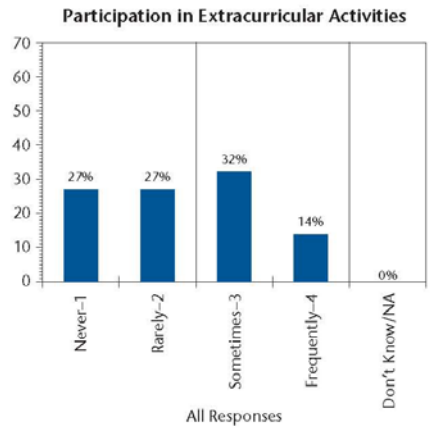
a Exact statistic
b Design: Intercept+Q24_gender

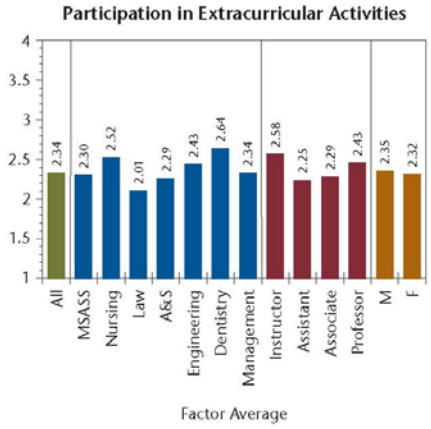
Below, the frequency distributions and means for the results are presented, together with the significant F values for the tests of individual factor differences (by school/college, by rank, and by gender).

FINDINGS FOR ALL SCHOOLS/COLLEGES EXCEPT THE SCHOOL OF MEDICINE (N=240)

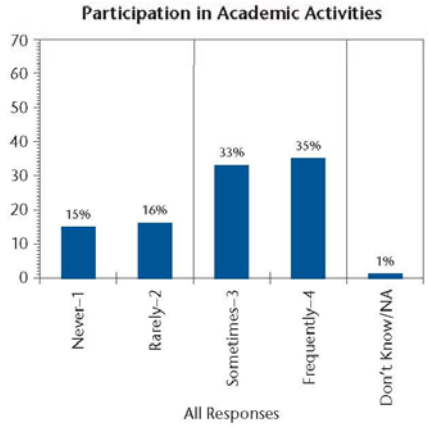
1. Participation in Activities on Campus or in University Circle (question 1)

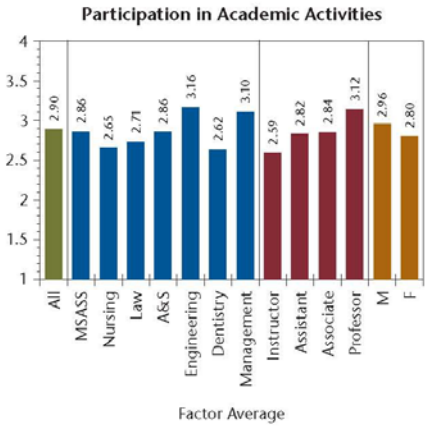
Factor 1: Participation in extracurricular activities





Factor 2: Participation in academic activities

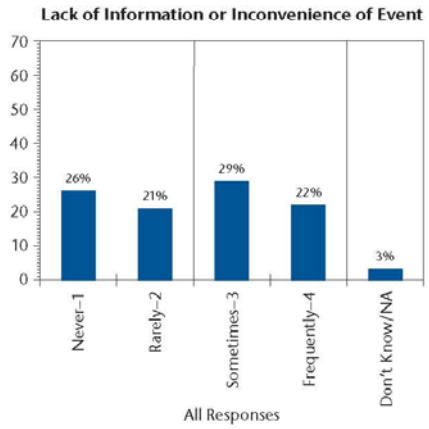


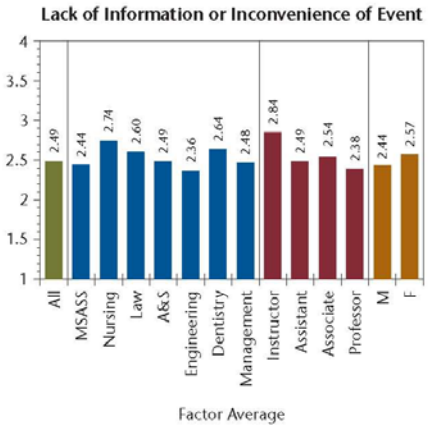


Multivariate tests reveal significant differences on this factor due to: • School/College ($p<.05$) • Rank ($p<.001$)

2. Reasons for Not Attending an Event on Campus or in University Circle (question 2)

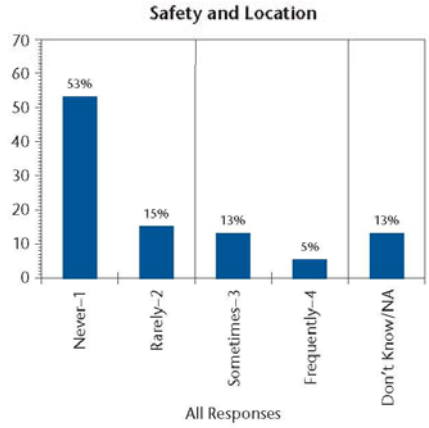
Factor 1: Lack of information or inconvenience of event

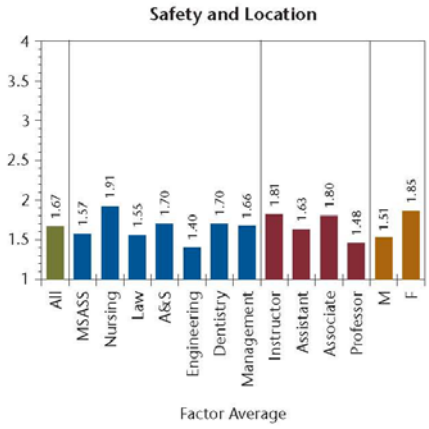




Multivariate tests reveal significant differences on this factor due to: • Rank ($p<.01$)

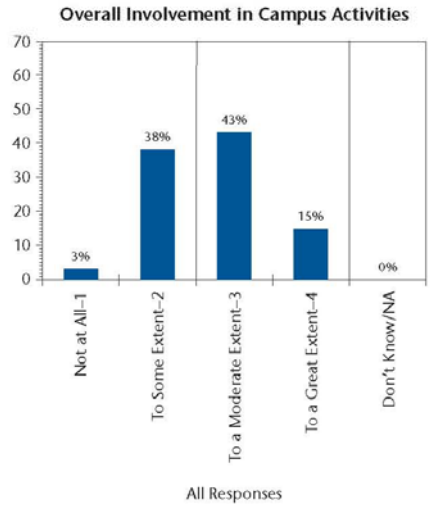
Factor 2: Safety and Location

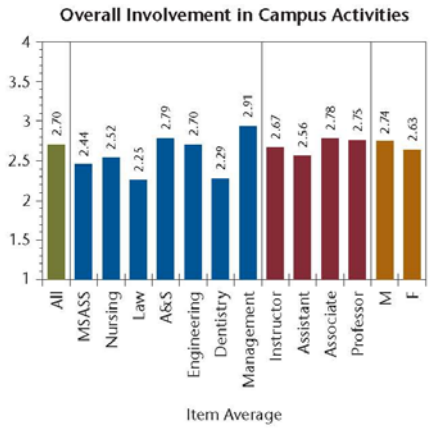




Multivariate tests reveal significant differences on this factor due to: • Gender ($p<.01$)

3: Overall Involvement in Campus Activities (question 3)

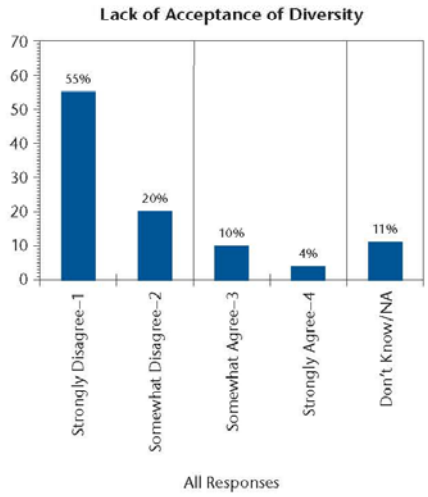


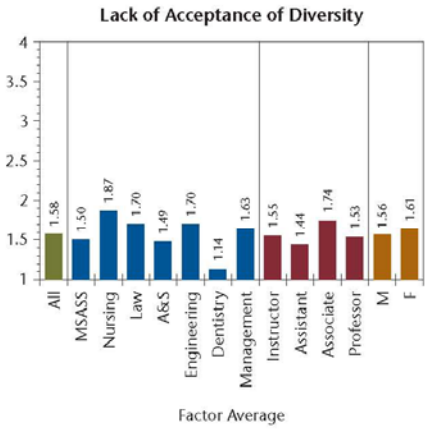


Multivariate tests reveal significant differences on this factor due to: • School/College ($p<.05$)

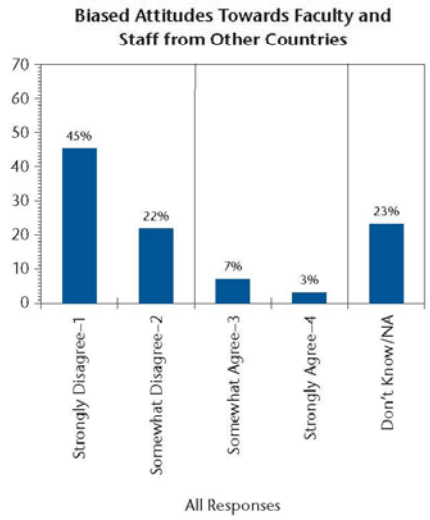
4. Quality of Relationships Within the Campus Community (question 7)

Factor 1: Lack of Acceptance of Diversity

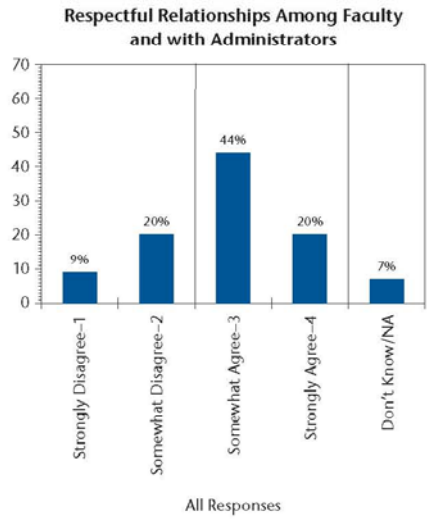


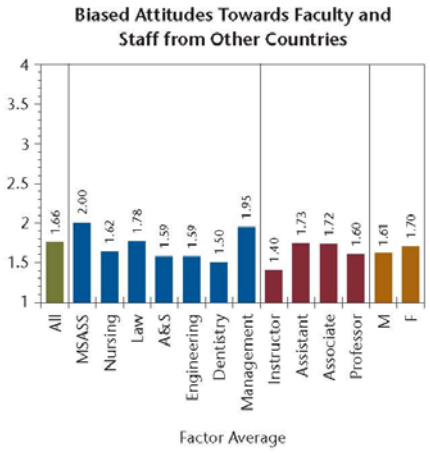


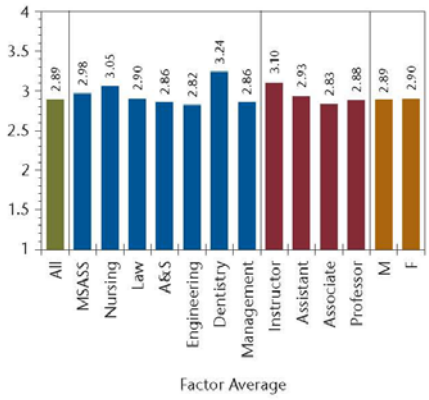
Factor 2: Biased Attitudes toward Faculty and Staff from Other Countries



Factor 3: Respectful Relationships Among Faculty and With Administrators

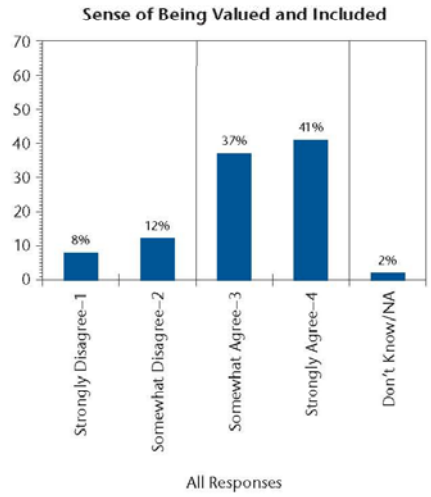




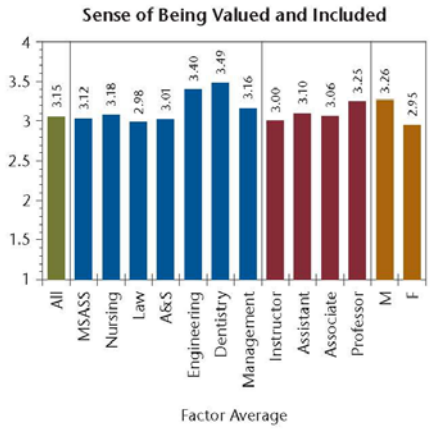


5. Quality of Colleagueship and Support in Primary Unit (question 4)

Factor 1: Sense of Being Valued and Included



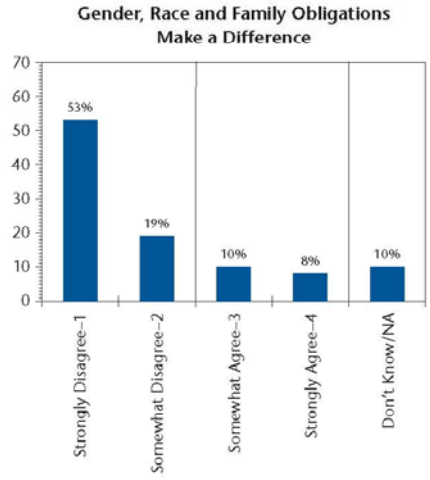
All Responses



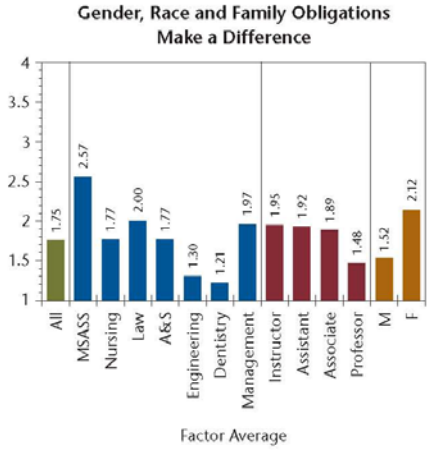
Factor Average

Multivariate tests reveal significant differences on this factor due to: • School/College ($p<.05$) • Gender ($p<.001$)

Factor 2: Gender, Race, and Family Obligations Make a Difference



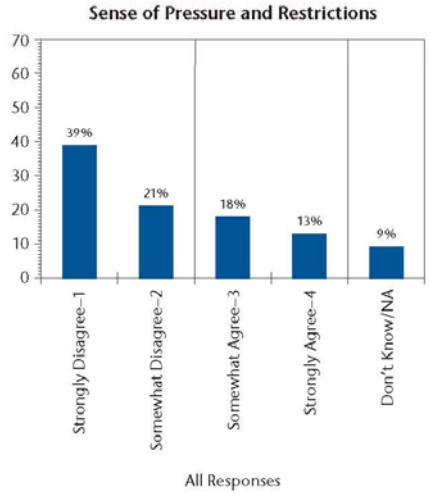
All Responses

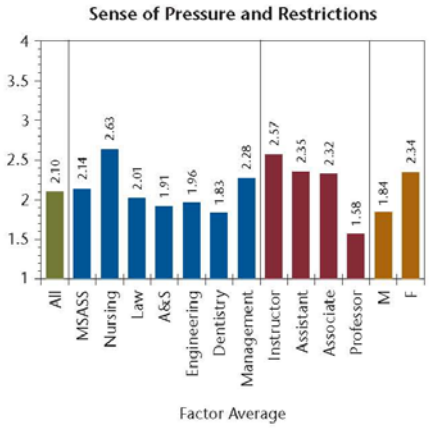


Factor Average

Multivariate tests reveal significant differences on this factor due to: • School/College ($p<.001$) • Rank ($p<.001$) • Gender ($p<.001$)

Factor 3: Sense of Pressure and Restrictions

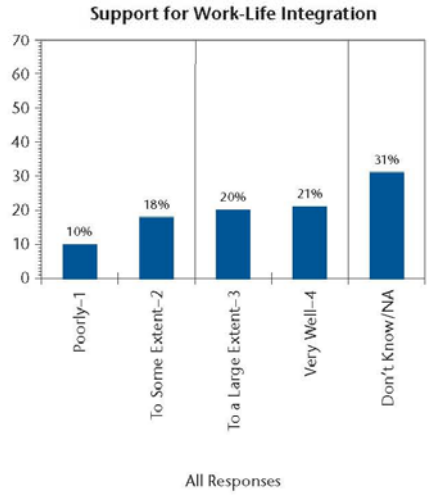


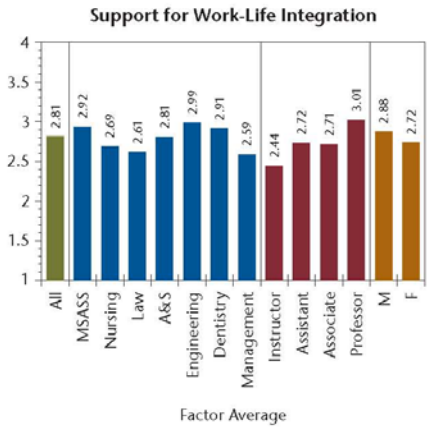


Multivariate tests reveal significant differences on this factor due to: • School (p<.05) • Rank (p<.001) • Gender (p<.001)

6. Support for Work-Life Integration (question 5)

Factor 1: Support for Work-Life Integration

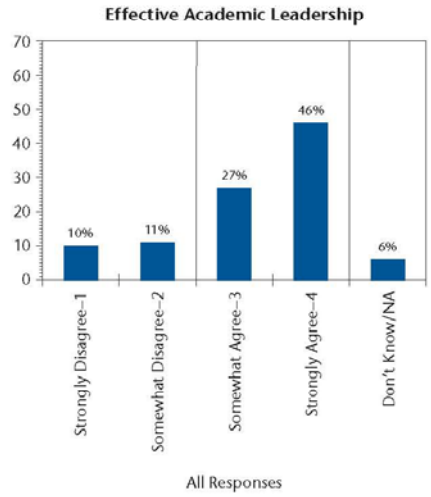




Multivariate tests reveal significant differences on this factor due to: • Rank (p<.01)

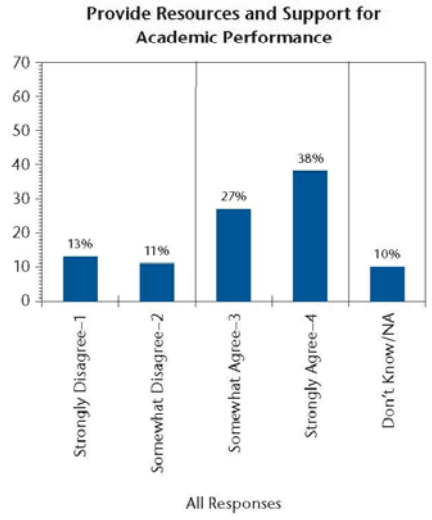
7. Effectiveness of Primary Unit Head (Chair/ Dean) (question 6)

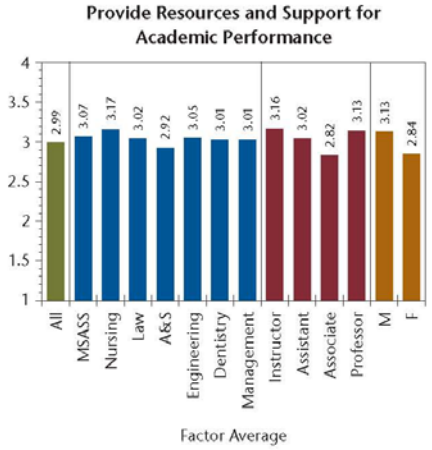
Factor 1: Effective Academic Leadership



Multivariate tests reveal significant differences on this factor due to: • Gender ($p<.01$)

Factor 2: Provides Resources and Support for Academic Performance

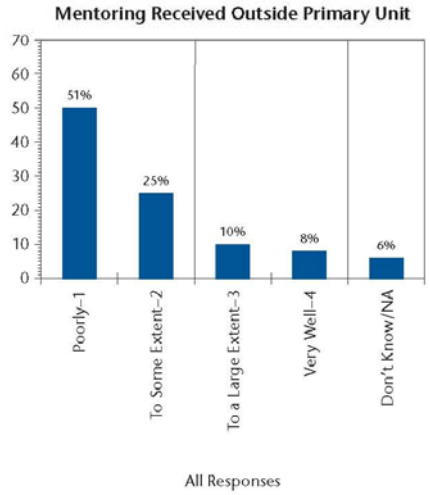




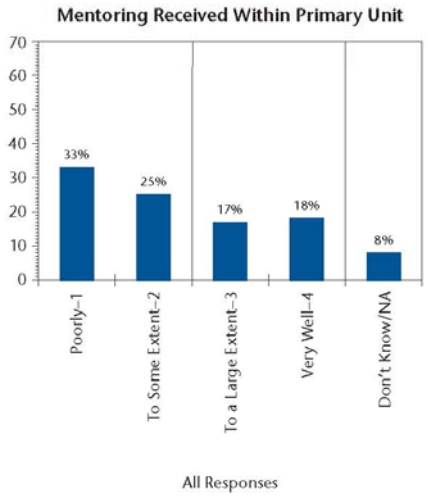
Multivariate tests reveal significant differences on this factor due to: • Gender ($p<.05$)

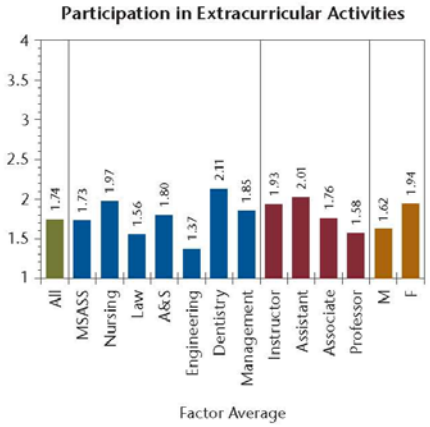
8. Mentoring Received (question 9)

Factor 1: Mentoring Received Outside Primary Unit

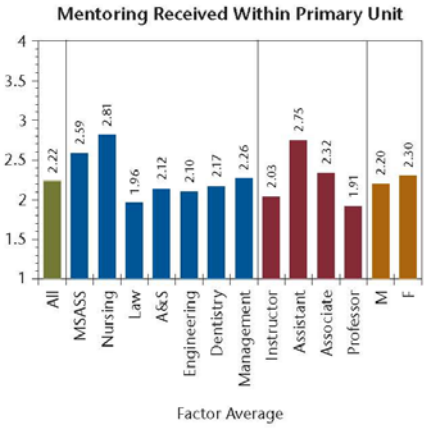


Factor 2: Mentoring Received Within Primary Unit





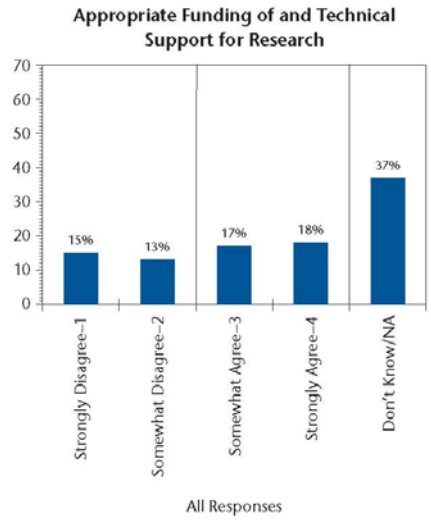
Multivariate tests reveal significant differences on this factor due to: • School/College (p<.05) • Rank (p<.01) • Gender (p<.001)

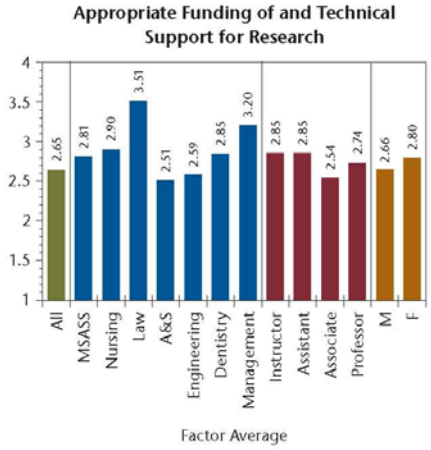


Multivariate tests reveal significant differences on this factor due to: • School/College (p<.05) • Rank (p<.001)

9. Appropriateness of Resources to Advance Academic Work (question 10A)

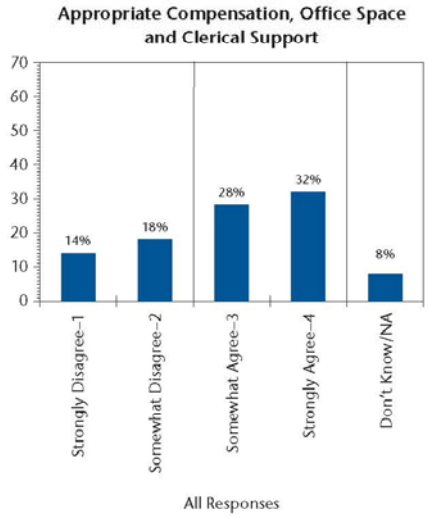
Factor 1: Appropriate Funding of and Technical Support for Research

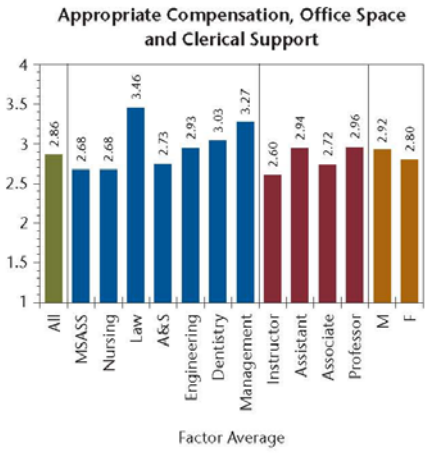




Multivariate tests reveal significant differences on this factor due to: • School/College (p<.001)

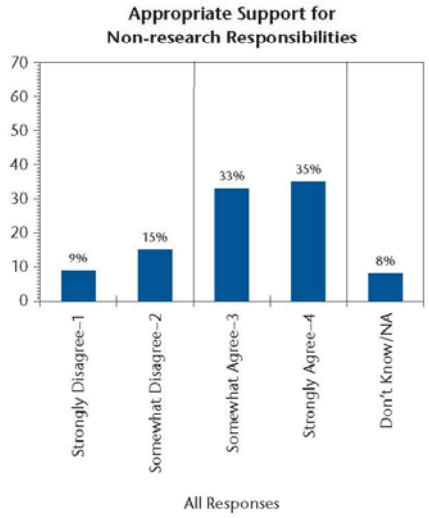
Factor 2: Appropriate Compensation, Office Space, and Clerical Support

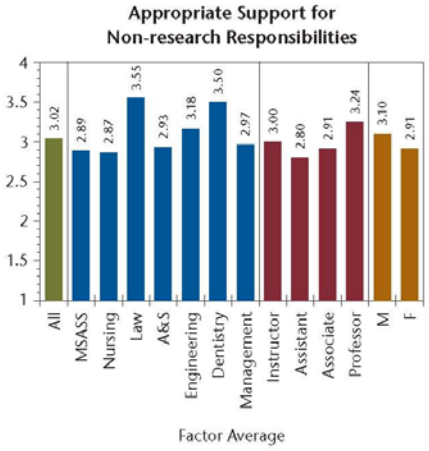




Multivariate tests reveal significant differences on this factor due to: • School/College (p<.001)

Factor 3: Appropriate Support for Non-research Responsibilities

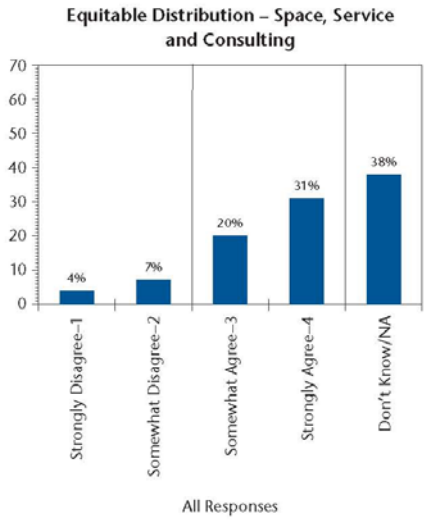


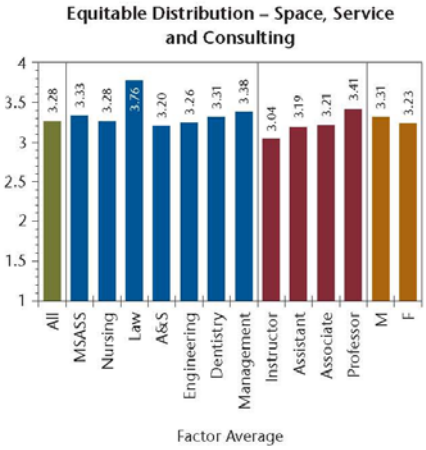


Multivariate tests reveal significant differences on this factor due to: • Rank ($p<.01$)

10. Fairness of Resources in Comparison with Others (question 10B)

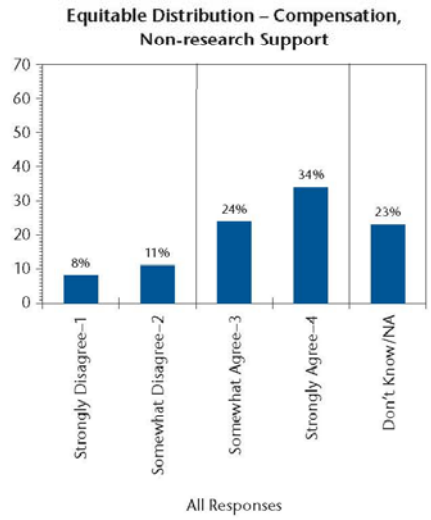
Factor 1: Equitable Distribution of Office and Lab Space, Service Assignments and Consulting Opportunities

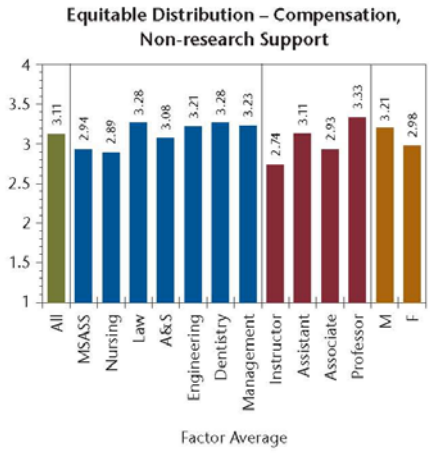




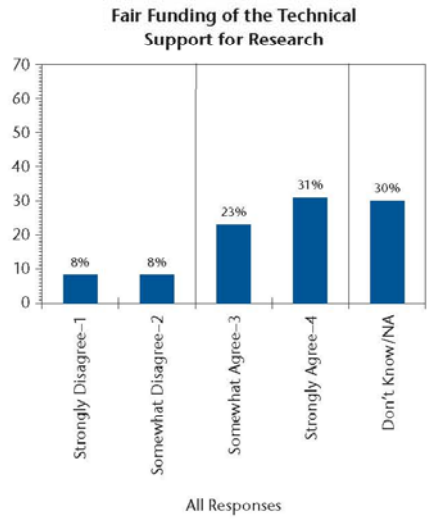
Multivariate tests reveal significant differences on this factor due to: • Rank ($p<.05$)

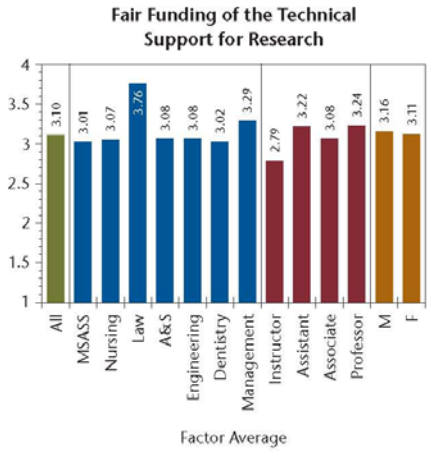
Factor 2: Equitable Distribution of Compensation and Non-research Related Support and Assignments





Factor 3: Fair Funding Of and Technical Support for Research

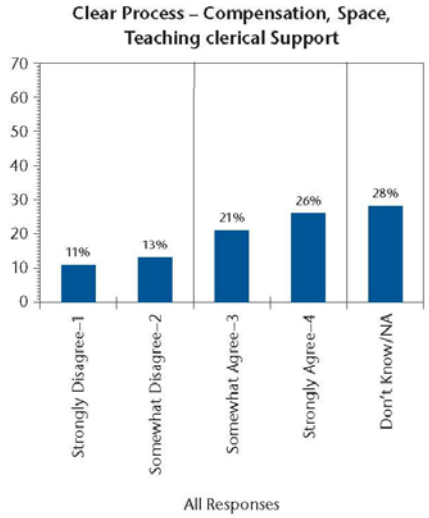


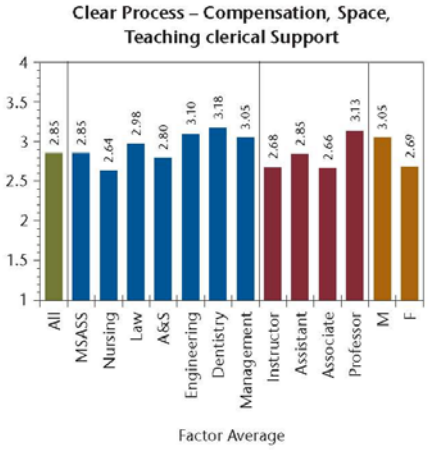


Multivariate tests reveal significant differences on this factor due to: • Rank ($p<.001$) • Gender ($p<.05$)

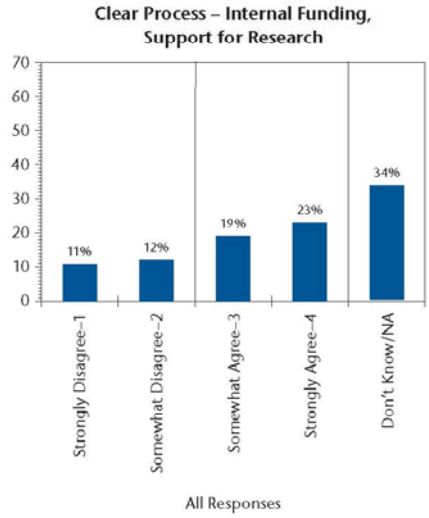
11. Transparency in Resource Allocation Process (question 10C)

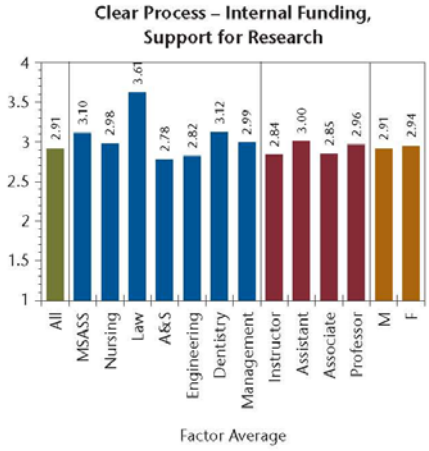
Factor 1: Clear Process for Allocating Compensation, Space, Teaching and Clerical Supports





Factor 2: Clear Process for Allocating Internal Funding and Support for Research

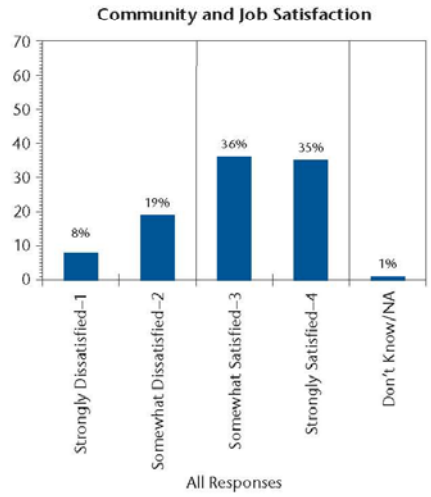


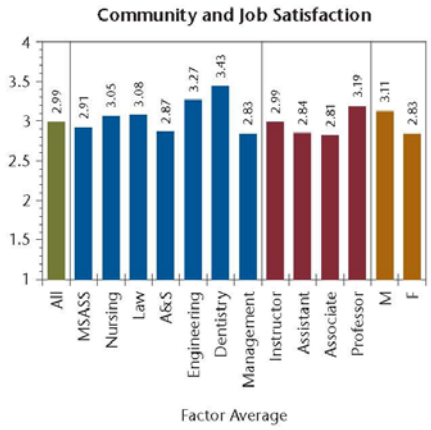


Multivariate tests reveal significant differences on this factor due to: • Rank ($p<.01$) • Gender ($p<.001$)

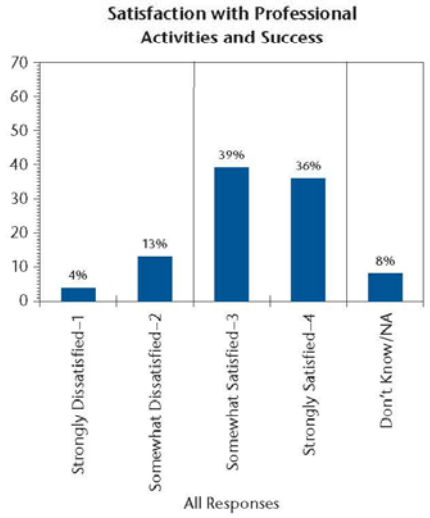
12. Satisfaction with Community and Academic Dimensions (question 11)

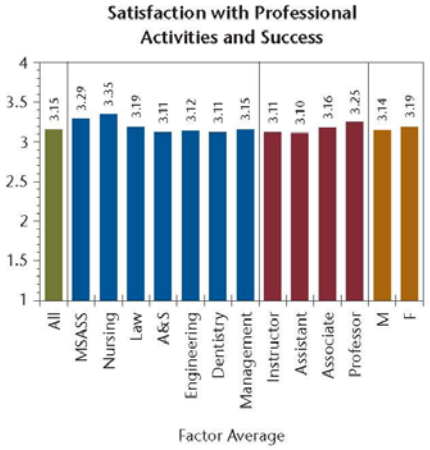
Factor 1: Community and Job Satisfaction





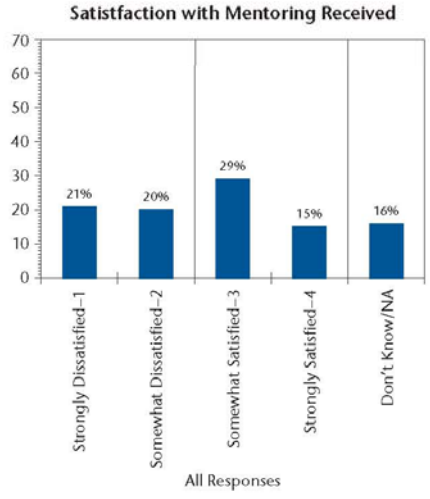
Factor 2: Satisfaction with Professional Activities and Success





Multivariate tests reveal significant differences on this factor due to: • Rank ($p<.01$) • Gender ($p<.01$)

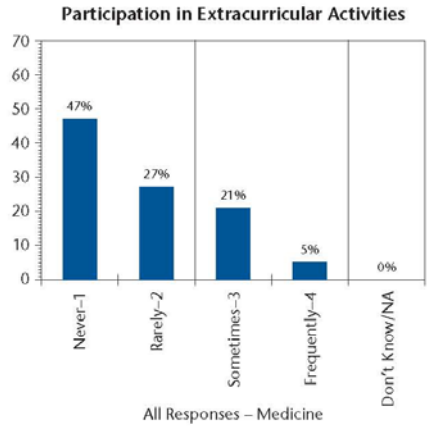
Factor 3: Satisfaction with Mentoring Received

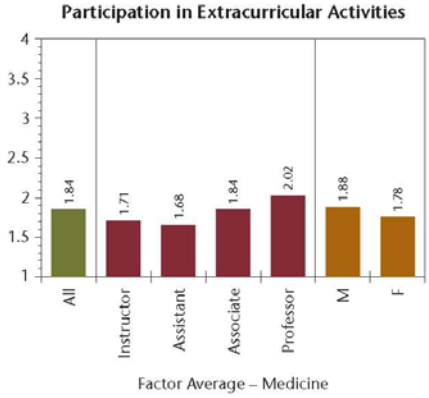


FINDINGS FOR THE SCHOOL OF MEDICINE (N=206)

1. Participation in Activities on Campus or in University Circle (question 1)

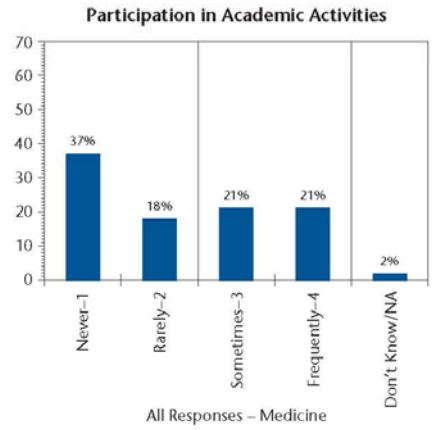
Factor 1: Participation in extracurricular activities

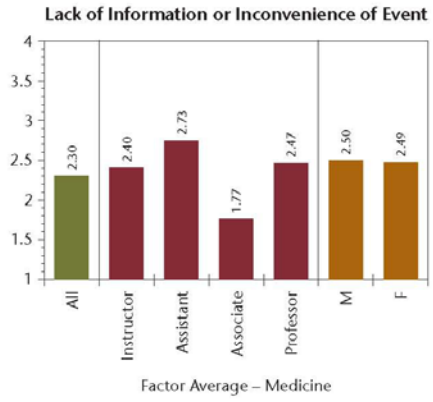




Multivariate tests reveal significant differences on this factor due to: • Rank ($p<.01$)

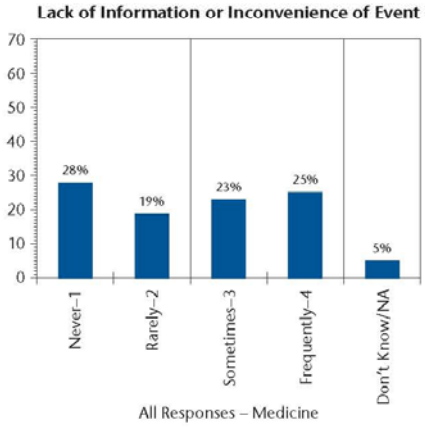
Factor 2: Participation in academic activities

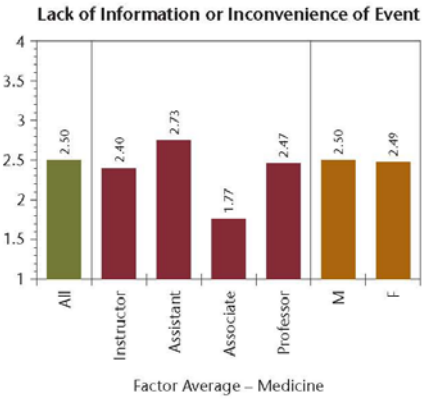




2. Reasons for Not Attending an Event on Campus or in University Circle (question 2)

Factor 1: Lack of information or inconvenience of event

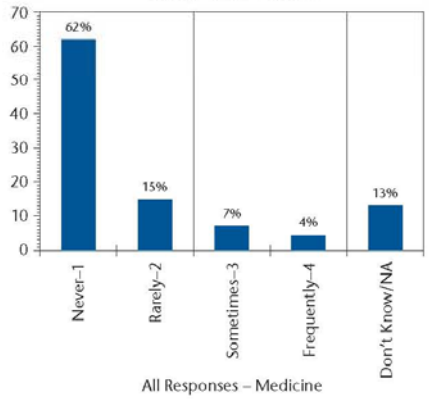




Multivariate tests reveal significant differences on this factor due to: • Rank ($p<.01$)

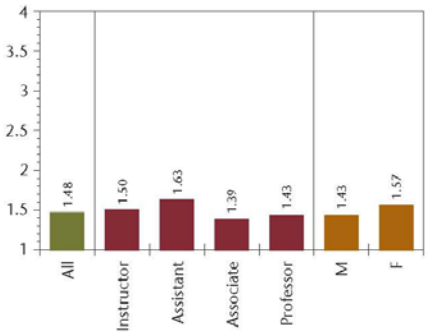
Factor 2: Safety and Location

Safety and Location



All Responses – Medicine

Safety and Location

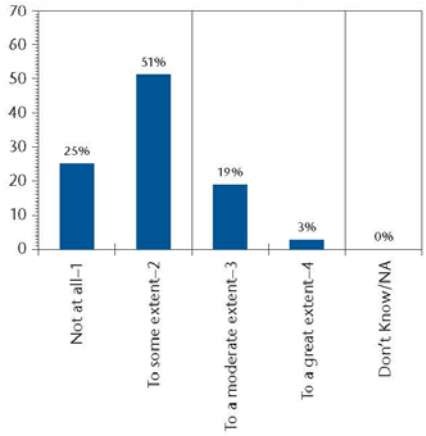


Factor Average – Medicine

Multivariate tests reveal significant differences on this factor due to: • Rank ($p<.05$)

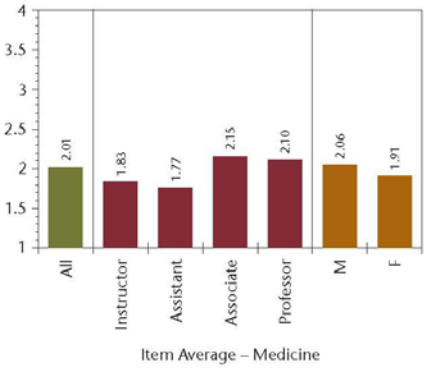
3. Overall Involvement in Campus Activities (question 3)

Overall Involvement in Campus Activities



All Responses – Medicine

Overall Involvement in Campus Activities

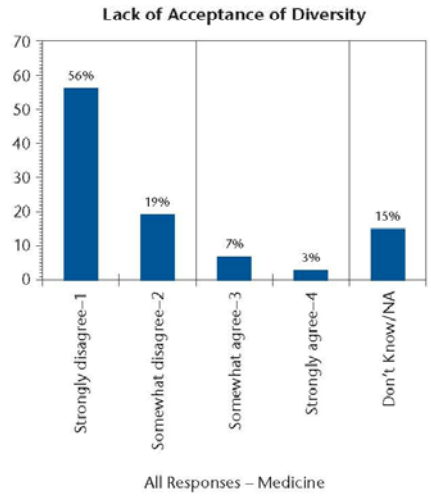


Item Average – Medicine

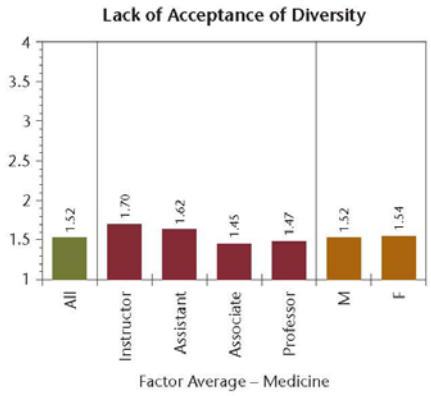
Multivariate tests reveal significant differences on this factor due to: • Rank ($p<.05$)

4. Quality of Relationships Within the Campus Community (question 7)

Factor 1: Lack of Acceptance of Diversity

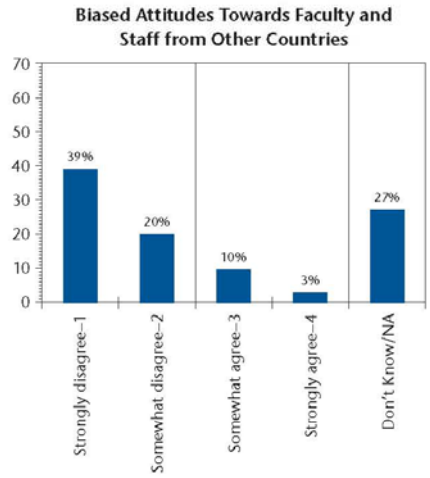


All Responses – Medicine

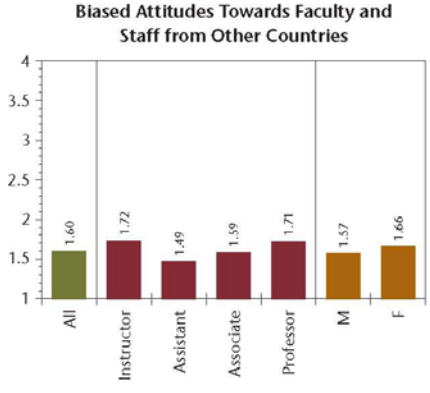


Factor Average – Medicine

Factor 2: Biased Attitudes toward Faculty and Staff from Other Countries



All Responses – Medicine

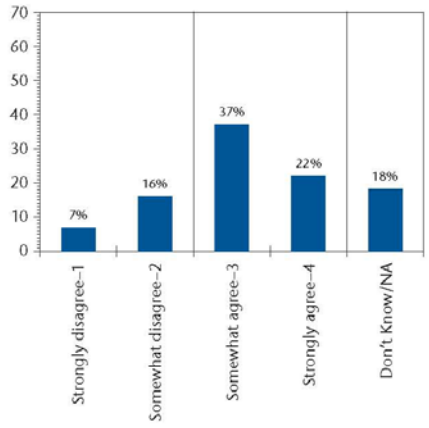


Factor Average – Medicine

33

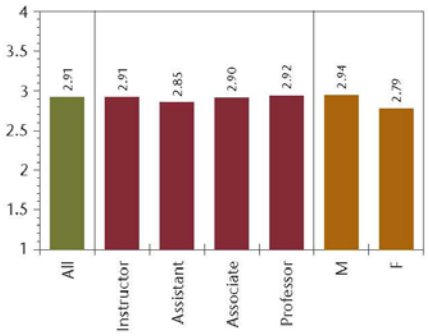
Factor 3: Respectful Relationships Among Faculty and With Administrators

Respectful Relationships Among Faculty and With Administrators



All Responses – Medicine

Respectful Relationships Among Faculty and With Administrators

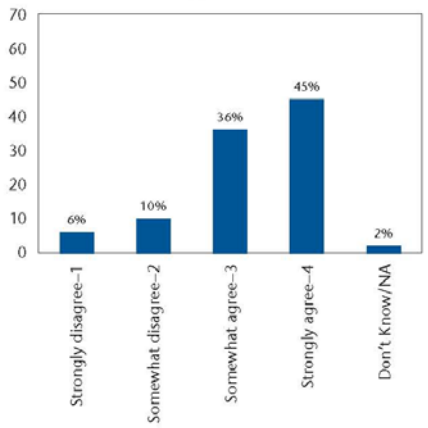


Factor Average – Medicine

5. Quality of Colleagueship and Support in Primary Unit (question 4)

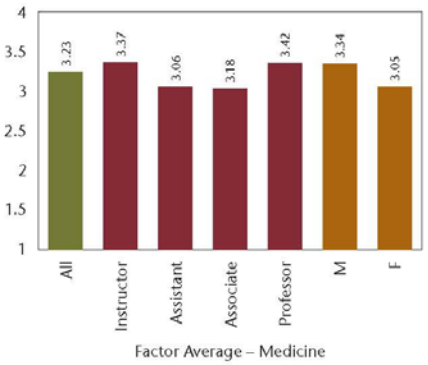
Factor 1: Sense of Being Valued and Included

Sense of Being Valued and Included



All Responses – Medicine

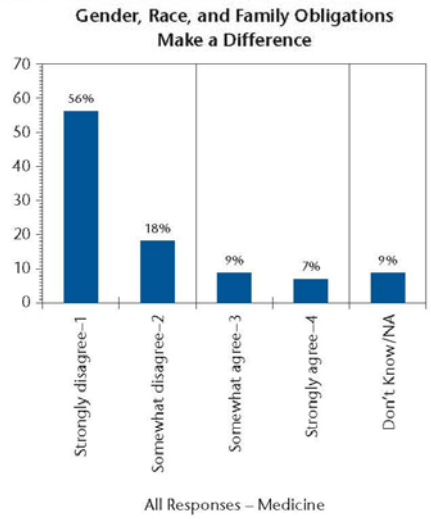
Sense of Being Valued and Included



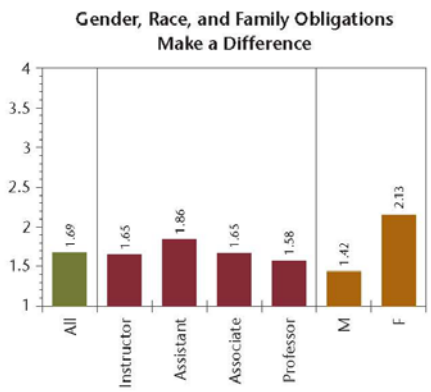
Factor Average – Medicine

Multivariate tests reveal significant differences on this factor due to: • Rank ($p<.01$) • Gender ($p<.001$)

Factor 2: Gender, Race, and Family Obligations Make a Difference



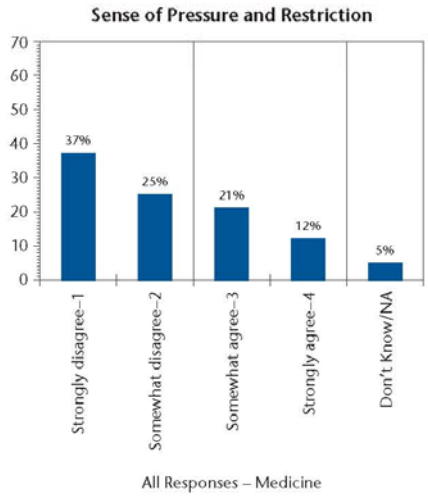
All Responses – Medicine



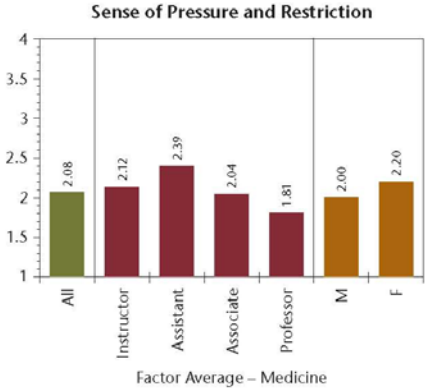
Factor Average – Medicine

Multivariate tests reveal significant differences on this factor due to: • Gender (p<.001)

Factor 3: Sense of Pressure and Restrictions



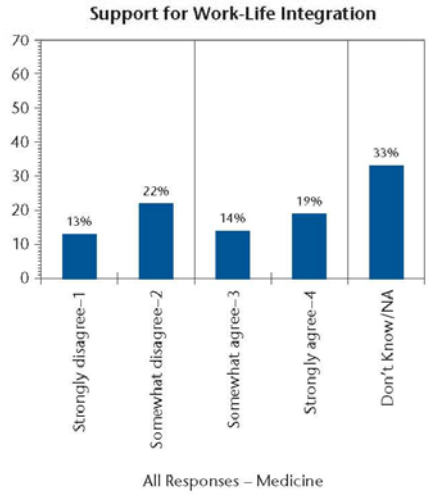
All Responses – Medicine



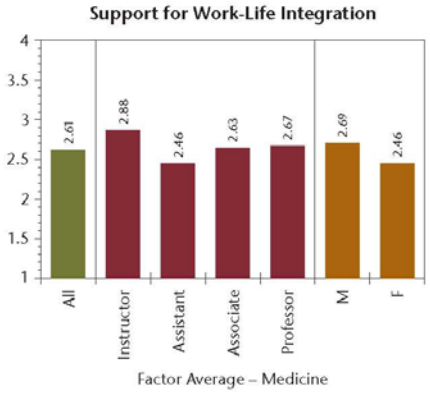
Factor Average – Medicine

Multivariate tests reveal significant differences on this factor due to: • Rank (p<.001)

6. Support for Work-Life Integration (question 5)
Factor 1: Support for Work-Life Integration



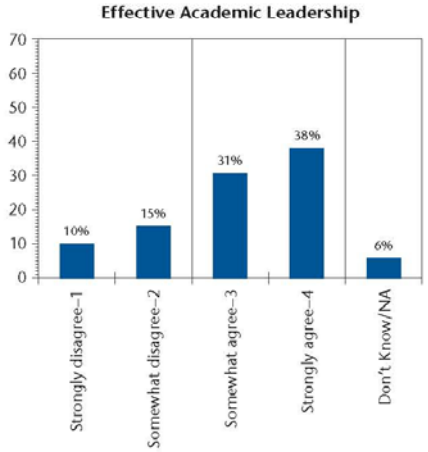
All Responses – Medicine



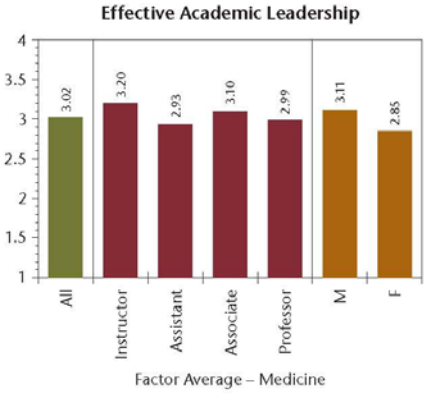
Factor Average – Medicine

Multivariate tests reveal significant differences on this factor due to: • Gender (p<.05)

7. Effectiveness of Primary Unit Head (Chair/Dean) (question 6)
Factor 1: Effective Academic Leadership



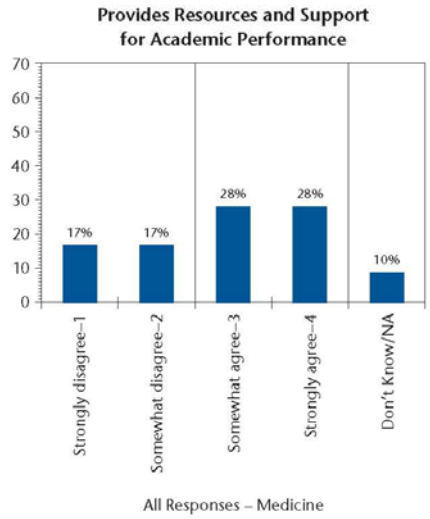
All Responses – Medicine



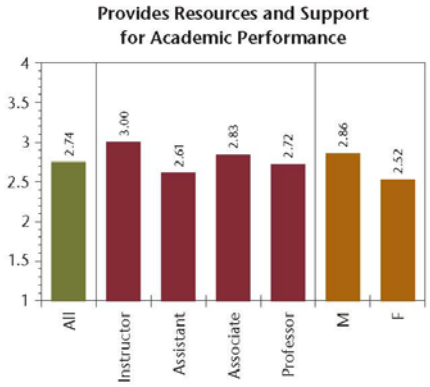
Factor Average – Medicine

Multivariate tests reveal significant differences on this factor due to: • Gender (p<.05)

Factor 2: Provides Resources and Support for Academic Performance



All Responses – Medicine

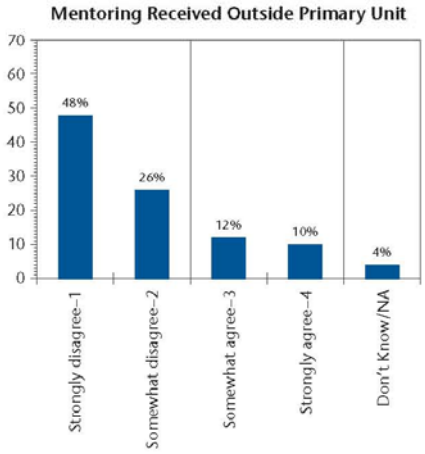


Factor Average – Medicine

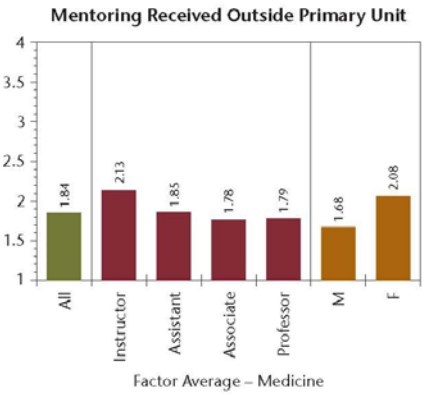
Multivariate tests reveal significant differences on this factor due to: • Gender (p<.05)

8. Mentoring Received (question 9)

Factor 1: Mentoring Received Outside Primary Unit



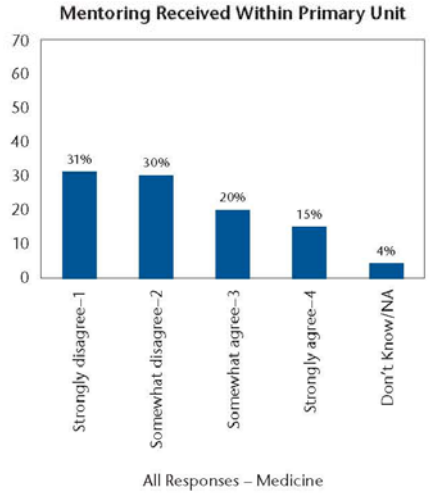
All Responses – Medicine

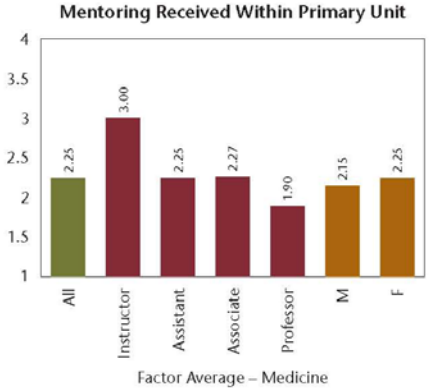


Factor Average – Medicine

Multivariate tests reveal significant differences on this factor due to: • Gender (p<.001)

Factor 2: Mentoring Received Within Primary Unit

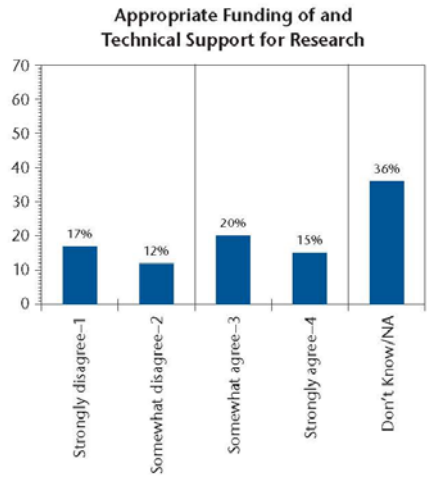


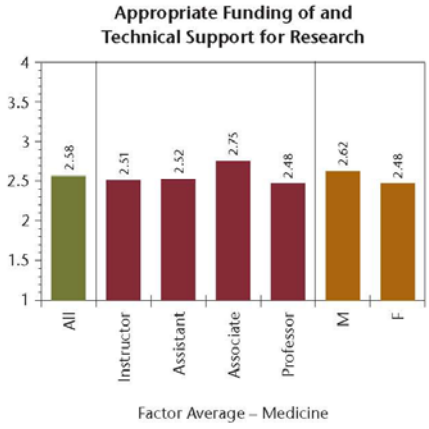


Multivariate tests reveal significant differences on this factor due to: • Rank (p<.001)

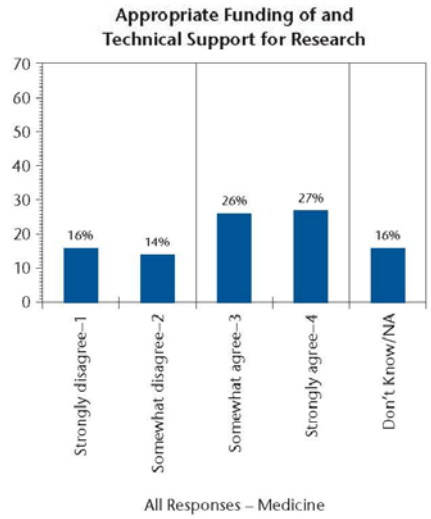
9. Appropriateness of Resources to Advance Academic Work (question 10A)

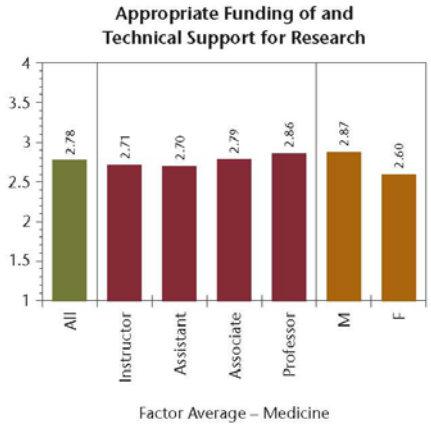
Factor 1: Appropriate Funding of and Technical Support for Research



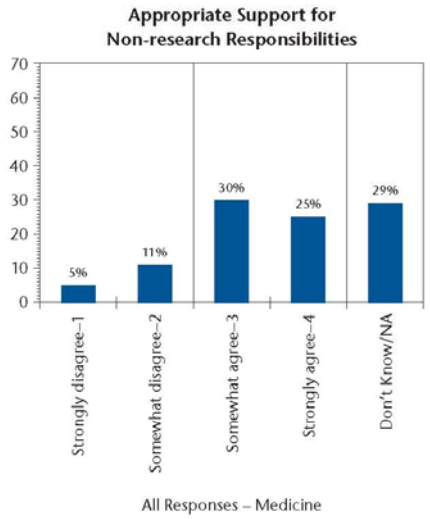


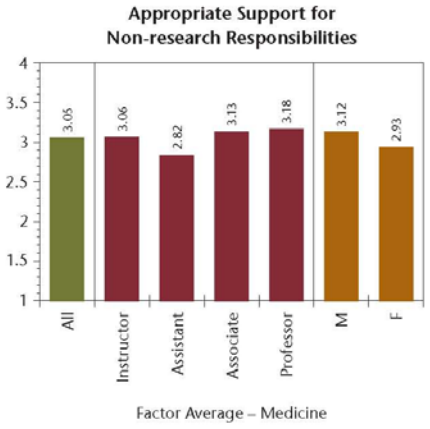
Factor 2: Appropriate Compensation, Office Space, and Clerical Support





Factor 3: Appropriate Support for Non-research Responsibilities

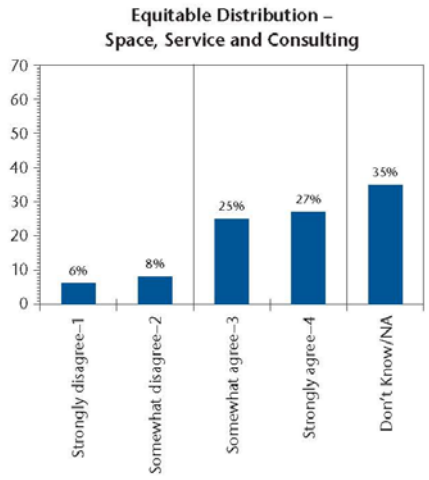




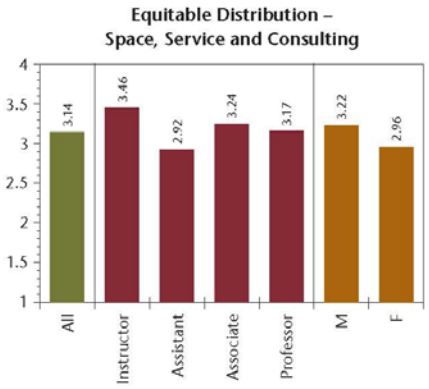
Multivariate tests reveal significant differences on this factor due to: • Gender ($p<.05$)

10. Fairness of Resources in Comparison with Others (question 10B)

Factor 1: Equitable Distribution of Office and Lab Space, Service Assignments and Consulting Opportunities



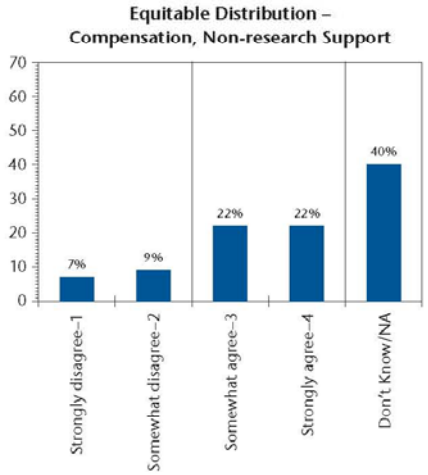
All Responses – Medicine



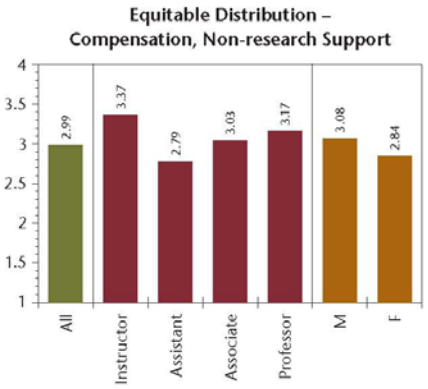
Factor Average – Medicine

Multivariate tests reveal significant differences on this factor due to: • Rank ($p<.05$) • Gender ($p<.01$)

Factor 2: Equitable Distribution of Compensation and Non-research Related Support and Assignments

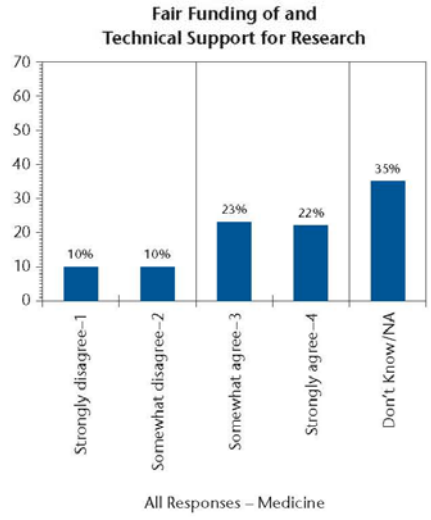


All Responses – Medicine

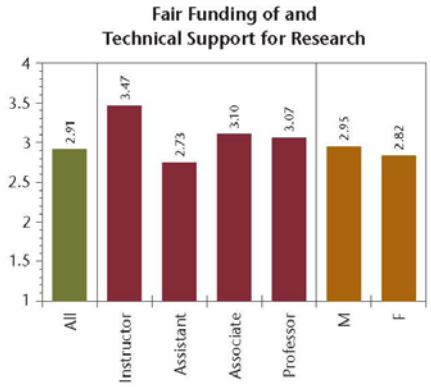


Factor Average – Medicine

Factor 3: Fair Funding of and Technical Support for Research



All Responses – Medicine

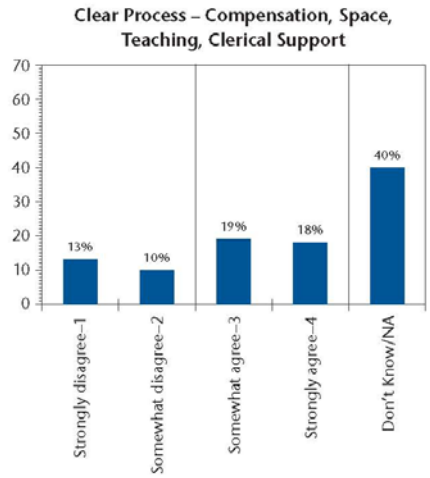


Factor Average – Medicine

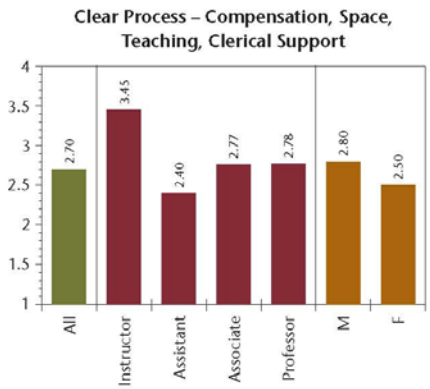
Multivariate tests reveal significant differences on this factor due to: • Rank ($p<.01$)

11. Transparency in Resource Allocation Process (question 10C)

Factor 1: Clear Process for Allocating Compensation, Space, Teaching and Clerical Supports



All Responses – Medicine

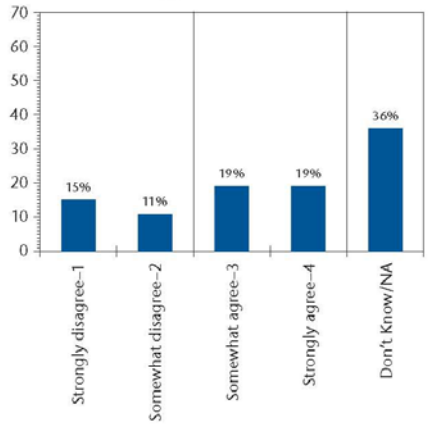


Factor Average – Medicine

Multivariate tests reveal significant differences on this factor due to: • Rank ($p<.01$) • Gender ($p<.05$)

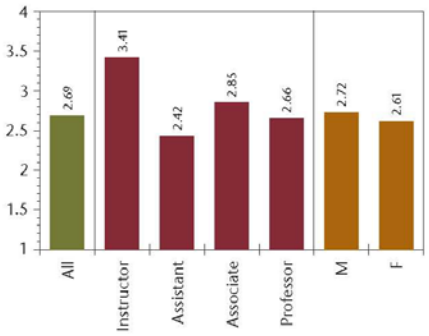
Factor 2: Clear Process for Allocating Internal Funding and Support for Research

Clear Process – Internal Funding, Support for Research



All Responses – Medicine

Clear Process – Compensation, Space, Teaching, Clerical Support



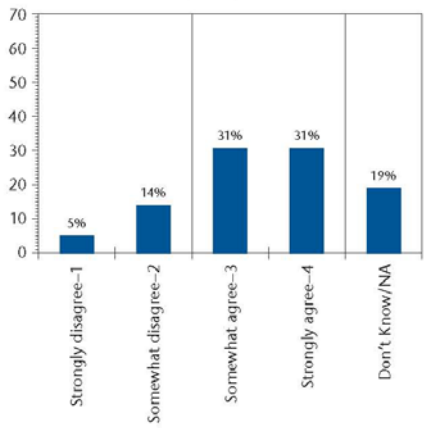
Factor Average – Medicine

Multivariate tests reveal significant differences on this factor due to: • Rank (p<.01)

12. Satisfaction with Community and Academic Dimensions (question 11)

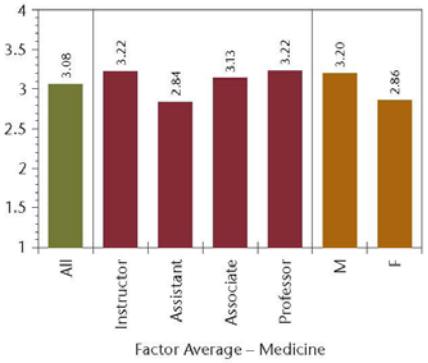
Factor 1: Community and Job Satisfaction

Community and Job Satisfaction



All Responses – Medicine

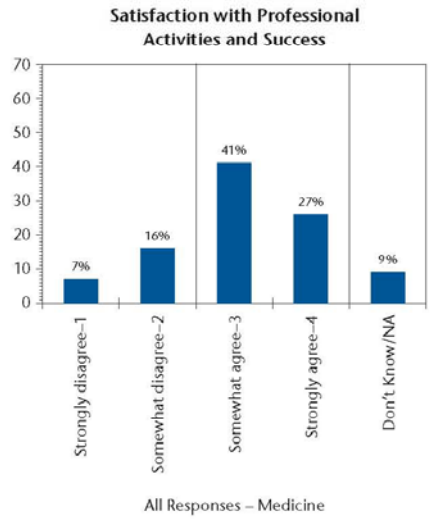
Community and Job Satisfaction



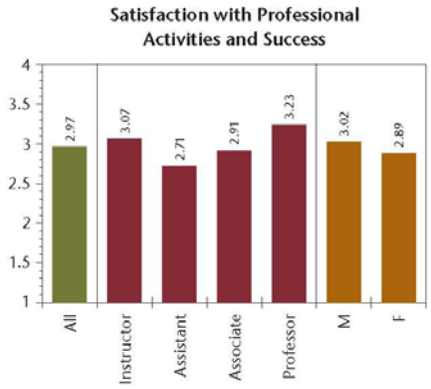
Factor Average – Medicine

Multivariate tests reveal significant differences on this factor due to: • Rank (p<.01) • Gender (p<.001)

Factor 2: Satisfaction with Professional Activities and Success



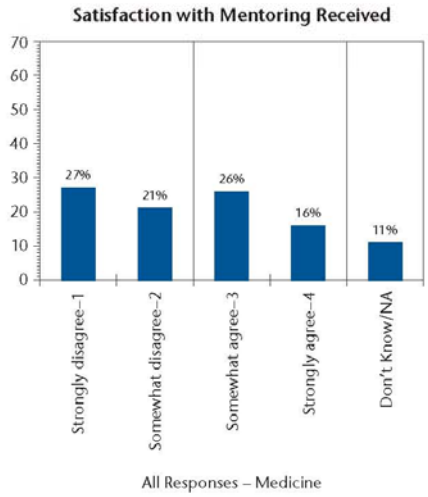
All Responses – Medicine



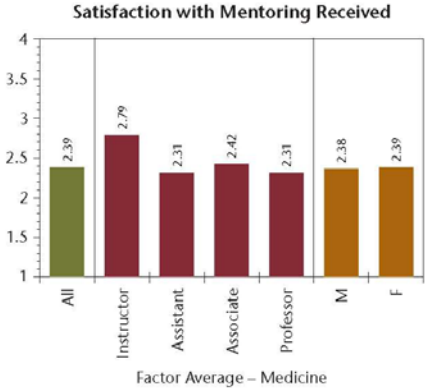
Factor Average – Medicine

Multivariate tests reveal significant differences on this factor due to: • Rank ($p<.001$)

Factor 3: Satisfaction with Mentoring Received



All Responses – Medicine



Factor Average – Medicine

Qualitative Findings

This section of the report summarizes findings from the analysis and coding of qualitative data (N=159 respondents). A brief description of each theme is presented, followed by direct quotes. This method allows the faculty respondents to speak for themselves, providing illustrative examples of how these themes are manifested and experienced at Case, while producing a succinct report. Quotes included here, while representative of their respective themes, are *not* an exhaustive presentation of all qualitative data. Appendix 6 contains all qualitative data included in this analysis. These data have been de-identified to protect the anonymity of the respondents.

Analysis of the faculty comments resulted in 4 overarching categories, which are further defined by 15 themes:

a. Overall Sense of Community and Climate at Case

1. Positive perspectives on the academic climate
2. Concerns about community
3. Little things matter
4. Concerns about channels of communication and decision making
5. Teaching and service are undervalued
6. Business of the research university: money matters
7. Perceptions of bias or marginalization
8. Concerns about family-friendly policies

b. Resources and Supports at Case

1. Concerns about resources
2. Concerns about University infrastructure
3. Concerns about lack of mentoring

c. University Administration

1. Positive perspectives on University administration
2. Concerns about the University's direction

d. School / Department

1. Positive perspectives about school /department
2. Concerns about school / department

These themes are discussed in detail below.

a. Overall Sense of Community and Climate at Case

1. Positive perspectives on the academic climate

Description: In addition to quotes corresponding with subsequent themes, several respondents expressed a high regard for the climate at the university and their experiences of being a faculty member at Case.

"Case has had an unexpected number of exceptional faculty in any schools of the University."

"Case is a great environment because of its people, new leadership has invigorated the general attitude…"

"Overall I find academic life at Case stimulating and rewarding."

"I like and respect my colleagues in other departments quite a bit."

2. Concerns about community

Description: Respondents feel their school, department, and/or university needs to improve the sense of community, via physical amenities and increased opportunities for interaction among colleagues ranging from intellectual pursuits to casual interactions. Respondents express a desire for more engagement or belonging with the university community.

"The spatial layout of Case breaks up a university community environment. I find the food and public culture life on campus terribly lacking; there is no place where museum, arts & sciences, humanities, medicine, engineering etc. folks can hang out, bump into each other etc....The campus needs a building, built by an international architect, that is purposely designed to bring people together; it would offer interesting food, information, meeting rooms, coffee shops, hang out spaces, cultural performances, small lectures...etc.... I find this lack of public culture the one big reason I sometimes think about going elsewhere. There is no University diverse public culture here."

"My experience has been that there is a strong sense of community within my department… but a weak sense of community within the university generally."

"Overall, I don't feel that the level of intellectual activity and stimulation at Case is what it should be for a "major research university." This place is strangely dead."

"Faculty perform as independent contractors and there is no mechanism in place to change this culture."

"Having relocated…to accept this position I was astounded that no one reached out to help my[spouse]and me become acclimated to the region and to feel as if we belonged at Case. Overall, this has been the greatest disappointment in accepting the position at Case."

3. Little things matter

Description: Respondents feel department and/or university could improve sense of morale and climate by small gestures, in the form of physical amenities, opportunities for interaction among colleagues and other public forums, or changes in policy.

"Upset at not getting suitable parking near [my school] despite being a faculty member with a… baby."

"I was disappointed that business cards were not provided by the University."

"Recent losses in community feeling due to canceling the university ball, banning pets, etc. have greatly reduced the pleasant, convivial atmosphere Case used to have."

4. Concerns about channels of communication and decision making

Description: Respondents, speaking to either departmental or university levels, express a desire for improved communication channels and clearer decision making processes.

"Changes in President and Provost create some anxiety about expectations; they should let us know what they think about promotion expectations."

"Due to variations in teaching and travel schedules, I think it would be helpful to have a more systematic process for sharing information with everyone in the department, not only sharing things in senior faculty meetings and relying on serendipity for the junior faculty to also learn about what is going on."

"Leadership would benefit from actively and seriously LISTENING to feedback given by those at the 'bottom' of the academic ladder."

"… There is no comfortable way to give and no response to bottom up feedback. The top down management style predominates."

5. Teaching and service are undervalued

Description: Respondents express perceptions that their teaching and service activities are undervalued (compared to research activities), especially as this pertains to promotion and tenure.

"Individuals whose primary focus is [education] are undervalued compared with those performing… research."

"I realize that we are primarily a research institution and that is part of what makes this a great school, but those of us who have taken on the burden of service and teaching (another aspect that makes our school great!) are not adequately recognized with regard to promotion and tenure."

"… There is one criterion for getting tenure at the level of the provost and that criterion is publishing, in specific numbers and in specific places, using specific methods. The other criteria - teaching and service - are unimportant."

"[My school] says it is interested in improving the experience of undergraduates, but I see little evidence of that beyond lip service. All rewards go for research, despite heavy duties in administration, and teaching appears to get the least attention. Perhaps more importantly, there is nothing to encourage faculty to take an interest in students outside of the classroom, because all of the rewards in the system demand that one puts the lion's share of one's time into research…"

"Teaching faculty have been taken for granted for years. This did not worry [me] too much except when undeserving academic faculty who refuse to teach at all get promoted. [In the mean time] the teacher is told teaching is too hard to measure. [My school] should embrace and support its teaching faculty."

6. Business of the research university

Description: Respondents describe their role in economic terms. Some may describe faculty as "entrepreneur." Others discuss the importance of continued research funding within the context of University's emphasis on the "bottom line."

"I, and most faculty, feel that we are on their own (entrepreneurs) and that the bottom-line is measured in dollars."

"I am simply a source of revenue. Basically I rent space (very expensive space) in a University owned building."

"My clinical department runs more like a business venture than an academic department. This goes for equity in salary, research space, bridge funding and other components of academic life that would reduce the level of stress."

7. Perceptions of bias or marginalization

Description: Respondents describe perceptions and/or experiences in which they are not as valued in the University as another group. This theme encompassed the majority of comments throughout these data. Quotes included here speak to impressions of bias based on rank, gender, disability, race, discipline, field, or sexual orientation.

"This is a difficult place to be female--there is a persistent but implicit edge for committee work here. It's also striking that the President's cabinet is all male--it sends a sure and clear message to the women on campus."

"The biggest problem is the contempt for humanities and humane social sciences shown by natural scientists and engineers, as well as central University administration, and the atmosphere fostered by central University administration, through nonsense such as equating performing arts with humanities, permits and reinforces this contempt."

"… Homophobia… is rampant on campus."

"There still is a feeling, and is backed up with some actual information, that those in the Arts & Sciences are less well-respected and less well-paid than those in other colleges and schools.

"Ph.D. researchers flounder in clinical departments and are basically unnoticed."

"There is discrimination of people with disability."

"Case can do a better job of being a culturally competent university. The presence of international students doesn't make one competent. I find that the treatment of… African American students and faculty is neglectful as well as shameful."

8. Concerns about family-friendly policies

Description: Respondents express a desire for improved policies in the university or department regarding increased flexibility around family responsibilities, such as care taking

of children, elderly relatives. Comments included in this theme also include comments regarding a desire for accessible child care on campus.

"I am considered full-time, but only work [a percentage] of that time so that I can take care of [dependent family members]. The time frame for promotions does not seem too flexible to accommodate… someone working [less than 100%] time."

"We desperately need an overhaul of work-family or work-life policies. The tenure extension is great, but "leaves" for illness or birth or adoption are still a problem. When my[child] was born… I did not get a teaching release…[after 6 weeks] I was back in the classroom and [directing an academic program] and my research suffered considerably. I feel strongly that at a research university, faculty should get a teaching release during the term they give birth or adopt."

"Surprised at the lack of day care facilities at Case considering the number of women that work/attend Case."

"The University needs to institute a formal parental leave policy for faculty."

b. Resources and Supports at Case

1. Concerns about resources

Description: Respondents speak to needing more resources. Examples include requests for increased assistance in their departments with administrative responsibilities related to grant preparation, bridge funding, improved offers to potential recruits, and access to technological resources.

"Salary compensation is woefully inadequate. Salary compression is an ongoing (decades long) problem. According to salary surveys of comparable institutions by my discipline's professional organization, salaries at Case are in the bottom quartile (in a rank by rank comparison)."

"My department needs a larger faculty so that we will be able to create and maintain a true community of researchers."

"There were several places where I am not happy with the resources, but it is an institutional issue -- everyone in the department is in the same boat."

2. Concerns about University infrastructure

Description: Respondents speak about university support offices/infrastructure needing improved processes or policies (i.e., ORA and grants administration, HR, parking).

"Administratively, human resources and purchasing departments have been major disappointments. Human resources pass on incompetent research technicians from one lab to the next. Purchasing department is constantly mishandling purchasing orders."

"The IRB process could work more smoothly to save researchers time and frustration."

"A formal system of evaluating and replacing / retaining department chairs must be introduced and strictly implemented to avoid the administrative mismanagement and un-academic, unhealthy work environment at the department level."

"University bureaucracies such as the Office of Research, Human Resources, and Communications, actively undercut my work and make my job constantly harder."

3. Concerns about lack of mentoring

Description: Respondents express a desire for more opportunities for individual faculty development. They refer to professional/academic development, development of research ideas, personal/leadership development.

"My main disappointment with the university is in the lack of mentoring I have received, and the lack of leadership my department chairs and deans have shown."

"[I'm] not satisfied by my development in the research area, the lack of mentorship has led to a lack of motivation."

"'Mentoring' is… a pretty useless term for me—it would be nice to have a better idea how to be a chair… And one can't exactly be 'mentored' by higher administration because interests of chairs and higher administrators are not entirely the same (though key staff are reasonably helpful)."

c. University Administration

1. Positive perspectives on university administration

Description: Respondents feel top level of university administration (to include president, "cabinet," and board of trustees) has a strong relationship and communication with faculty and/or community.

"The current Case president is the best since I joined the faculty [30+] years ago."

"The new Dean… is the best thing that's happened here."

"Case is great environment because of its people, new leadership has invigorated the general attitude, challenges remain with old leadership compromising some of the departments in [my school].."

2. Concerns about the university's direction

Description: Respondents describe a sense of apprehension with the overall direction of the university. There is a perceived misalignment between personal and organizational objectives, priorities, and values.

"The rhetoric pertaining to becoming the 'most powerful learning environment in the world' is anti-intellectual and a source of embarrassment to many faculty. The faculty senate tends to be quite passive, and it does not examine decisions that affect the long-term fiscal health of the university such as the recent decision to invest endowment funds in development which is unfortunate. The current organization and funding of units within the University make interdisciplinary collaboration difficult despite current rhetoric."

"I have concerns about the overall direction of the University, the focus on marketing rather than building of necessary infrastructure, and the administrative disorganization and turmoil at the top levels."

"Case… seems to be caught [in] an identity struggle between being a research institution and a liberal arts school, but is only legitimately succeeding at the former."

"Great universities emphasize knowledge development, faculty independence, and scholarly productivity rather than rank and narrowly-defined "market-driven" indicators of success. The emphasis here has been on the latter to the detriment of the former."

d. School / Department

1. Positive perspectives about school/department

Description: Respondents feel their department/ school enjoys positive professional and interpersonal relationships.

"[My department and school have] turned a corner and is one of the most exciting schools in the country."

"I feel VERY supported in my Department."

The department chair is a god among men. How he maintains a level of effectiveness with as fractured and disagreeable faculty as exists in the department is truly amazing. He is further hindered by the University's lack of strong support [for our department] in general and [our field] in particular. He is the main reason I have stayed despite other job offers at competing universities.

"Life in my department has been wonderful."

2. Concerns about school/department

Description: Respondents speak to professional and/or interpersonal dissatisfaction in their department. Some respondents have included statements describing a desire for an improved working environment and/or better interpersonal relationships in their department.

"…My [department] here has some extremely unfriendly people who harass other members of the faculty. Apparently, nothing can be done to stop this."

"There are severe interpersonal problems within my department that have been going on for [several] years… and they have never been addressed. My department is extremely dysfunctional because of this, and a lot of money is spent hiring outside people to do work because some of our tenured faculty refuse to do departmental service."

"I'm disappointed that… I never was introduced to many members of the department… I was disappointed that my department chair didn't acknowledge the fact that I was nominated for… awards [early in my career here]."

FEEDBACK ON THE SURVEY

Some of the qualitative comments obtained from the survey also contained recommendations for the researchers when analyzing these data, as well as suggestions for follow-up studies. Recommendations spoke to general themes of concerns for confidentiality, inclusion/exclusion of issues, and length/format of the instrument itself. We have included a representative, but not exhaustive sample of these comments below.

"I'm curious as to why sexual orientation questions were not included in the questions about support for diversity."

"The sociodemographics you just asked for, when combined with the school and department (especially for the smaller departments) could easily identify people. I hope that the researchers will refrain from and protect the confidentiality of these study results."

"Questions are written in a way that makes many assumptions!"

"You didn't count the hospital committee work and limited hospital administrative support to patient care related activities."

"The scope of the survey is narrow...excluding faculty that are not focused on teaching, such as those in the athletic department. Coaches are faculty, but the Physical Education and Athletic Department was not listed as a department in the list."

"Please be notified that there is one department missing from the Dental section...the Department of General Practice Dentistry."

"This is much too long to complete for busy faculty."

APPENDIX 1 – FACTOR STRUCTURE WITH ITEM AVERAGES AND STANDARD DEVIATIONS FOR THE WHOLE SAMPLE N=473

1. Participation in Activities on Campus and in University Circle

Question: How often, in the past 24 months, have you participated in any of the following activities on campus or within University Circle? (**Overall α =.81**)

Factor 1: Participation in extracurricular activities on campus (α = **.79**)

Items:

(d) University academic ceremonies (e.g., convocation)

(e) Social event

(f) Politically oriented event.

(g) Sporting event.

(h) Student-organized event.

(i) Cultural event/performance

(j) Other community event

Factor 1: Extracurricular Activity	Item Mean	SD
University academic ceremonies (e.g., convocation).	2.31	1.14
Social event.	2.69	0.90
Politically oriented event.	1.62	0.80
Sporting event.	1.32	0.66
Student-organized event.	2.23	0.95
Cultural event/performance.	2.58	0.96
Other community event	2.10	0.85

Factor 2: Participation in academic activities (α = **.60**)

Items:

(a) Brown bag discussion

(b) Seminar/visiting lecturer

(c) Colloquium

Factor 2: Academic Activity	Item Mean	SD
Brown bag discussion.	1.94	1.05
Seminar/visiting lecturer.	3.30	0.86
Colloquium.	2.59	1.13

2. Reasons for Not Attending an Event on Campus or in University Circle

Question: How often, in the past 24 months, have you wanted to attend an event or function on campus or within University Circle, but did not because of the following reasons? (Overall α =.**74**)

Factor 1: Lack of information or inconvenience of event (α = **.67**)

Items:

(a) I did not know about the event

(b) I did not know anyone else who was going to attend

(c) I was too busy

(d) It was just too far away

(e) I had already gone home for the day

Factor 1: Lack of information or inconvenience of event	Item Mean	SD
I did not know about the event.	2.47	0.84
I did not know anyone else who was going to attend.	2.05	1.06
I was too busy.	3.68	0.65
It was just too far away.	2.10	1.05
I had already gone home for the day.	2.10	1.05

APPENDIX 1 – FACTOR STRUCTURE WITH ITEM AVERAGES AND STANDARD DEVIATIONS FOR THE WHOLE SAMPLE N=473 (CONT.)

Factor 2: Safety and location (α = .61)

Items:

(f) I don't feel safe on campus after dark

(g) It was on the other side of Euclid Avenue.

(h) Other

Factor 2: Safety and location	Item Mean	SD
I don't feel safe on campus after dark.	1.60	0.89
It was on the other side of Euclid Avenue.	1.51	0.84
Other.	1.62	0.99

3. Overall Involvement in Campus Activities

Question: Overall, how involved would you say you are in campus activities?

Overall Involvement in Campus Activities	Item Mean	SD
	2.39	0.83

4. Quality of Relationships within the Campus Community

Question: Please indicate your level of agreement with each of the following statements regarding the Case campus community as a whole (Overall α =.80)

Factor 1: Lack of Acceptance of Diversity (α = .85)

Items:

(g) Sexist remarks are heard in faculty gatherings at Case

(h) Racist remarks are heard in faculty gatherings at Case

(i) Ageist remarks are heard in faculty gatherings at Case

Factor 1: Lack of Acceptance of Diversity	Item Mean	SD
Sexist remarks are heard in faculty gatherings at Case.	1.62	0.87
Racist remarks are heard in faculty gatherings at Case.	1.38	0.72
Ageist remarks are heard in faculty gatherings at Case.	1.62	0.85

APPENDIX 1 – FACTOR STRUCTURE WITH ITEM AVERAGES AND STANDARD DEVIATIONS FOR THE WHOLE SAMPLE N=473 (CONT.)

4. Quality of Relationships within the Campus Community (cont.)

Factor 2: Biased Attitudes toward Faculty and Staff from Other Countries (α = **.94**)

Items:

(e) Faculty at Case has a condescending attitude towards faculty from other countries

(f) Faculty at Case has a condescending attitude towards staff from other countries.

Factor 2: Biased Attitudes	Item Mean	SD
Faculty at Case has a condescending attitude towards faculty from other countries.	1.60	0.82
Faculty at Case has a condescending attitude towards staff from other countries.	1.65	0.85

Factor 3: Respectful Relationships among Faculty and With Administrators (α = **.71**)

Items:

(a) Faculty at Case respect each other

(b) Faculty at Case are treated with respect by campus administrators

(c) Faculty at Case are typically at odds with campus administrators

Factor 3: Respectful Relationships	Item Mean	SD
Faculty at Case respects each other.	3.22	0.70
Faculty at Case is treated with respect by campus administrators.	2.81	0.89
Faculty at Case is typically at odds with campus administrators.	2.43	0.86

Responding to items about relationships among faculty and administrators, 62% of faculty respondents indicated perceptions of respectful and cooperative relationships.

APPENDIX 1 – FACTOR STRUCTURE WITH ITEM AVERAGES AND STANDARD DEVIATIONS FOR THE WHOLE SAMPLE N=473 (CONT.)

5. Quality of Relationships and Support in Primary Unit

Question 4: Please rate the following statements about your primary unit. Please consider your department as your primary unit, otherwise refer to your school as your primary unit (overall α =.92)

Factor 1: Sense of being valued and included (α = .92)

Items:

(a) Colleagues in my primary unit value my work

(b) Colleagues in my primary unit can be trusted

(e) I am comfortable asking questions about performance expectations

(g) I feel I can make my primary unit a better place to work

(h) Colleagues in my primary unit provide me feedback about research/scholarly issues (i) Colleagues in my primary unit provide me advice about career/professional issues

(m) Colleagues in my primary unit solicit my opinions about scholarly issues

(n) Colleagues in my primary unit solicit my opinions about professional/clinical activities

(o) I solicit my colleagues' advice/assistance about my research

(q) I generally interact positively with colleagues in my primary unit

(r) I feel professionally welcome and included by colleagues in my primary unit

(s) Colleagues in my primary unit include me in social events and activities on campus

(t) Colleagues in my primary unit include me in social events and activities off campus

Factor 1: Sense of being valued and included	Item Mean	SD
Colleagues in my primary unit value my work.	3.38	0.82
Colleagues in my primary unit can be trusted.	3.33	0.86
I am comfortable asking questions about performance expectations	3.25	0.85
I feel I can make my primary unit a better place to work.	3.26	0.85
Colleagues in my primary unit provide me feedback about research/ scholarly issues.	2.88	0.96
Colleagues in my primary unit provide me advice about career/ professional issues.	2.80	0.97
Colleagues in my primary unit solicit my opinions about scholarly issues.	2.98	0.92
Colleagues in my primary unit solicit my opinions about professional/clinical activities.	3.07	0.94
I solicit my colleagues' advice/ assistance about my research.	3.17	0.79
I generally interact positively with colleagues in my primary unit.	3.61	0.62
I feel professionally welcome and included by colleagues in my primary unit.	3.34	0.89
Colleagues in my primary unit include me in social events and activities on campus.	3.25	0.92
Colleagues in my primary unit include me in social events and activities off campus.	2.87	0.98

APPENDIX 1 – FACTOR STRUCTURE WITH ITEM AVERAGES AND STANDARD DEVIATIONS FOR THE WHOLE SAMPLE N=473 (CONT.)

5. Quality of Relationships and Support in Primary Unit (cont.)

Factor 2: Gender, race, and family obligations make a difference (α = **.87**)

Items:

(u) Gender makes a difference in everyday interactions in my primary unit

(v) Race makes a difference in everyday interactions in my primary unit

(w) Gender makes a difference in access to resources for faculty in my primary unit

(x) Race makes a difference in access to resources for faculty in my primary unit

(y) Colleagues in my primary unit consider female faculty who have children to be less committed to their careers

(z) Colleagues in my primary unit consider male faculty who have children to be less committed to their careers

Factor 2: Gender, race, and family obligations	Item Mean	SD
Gender makes a difference in everyday interactions in my primary unit.	1.96	1.11
Race makes a difference in everyday interactions in my primary unit.	1.67	0.97
Gender makes a difference in access to resources for faculty in my primary unit.	1.66	1.00
Race makes a difference in access to resources for faculty in my primary unit.	1.49	0.88
Colleagues in my primary unit consider female faculty who have children to be less committed to their careers.	1.87	0.98
Colleagues in my primary unit consider male faculty who have children to be less committed to their careers.	1.39	0.70

APPENDIX 1 – FACTOR STRUCTURE WITH ITEM AVERAGES AND STANDARD DEVIATIONS FOR THE WHOLE SAMPLE N=473 (CONT.)

Factor 3: Sense of Pressure and Restrictions (α = .83)

Items:

(c) I feel pressure to change my work habits to gain the respect of colleagues in my primary unit

(d) I feel pressure to change my work interests to earn tenure/promotion

(f) I am reluctant to raise controversial issues for fear it will affect my promotion/tenure., (l) I constantly feel under scrutiny by colleagues in my primary unit

(p) I have to work harder than my colleagues to be perceived as a legitimate scholar

Factor 3: Pressure and Restrictions	Item Mean	SD
I feel pressure to change my work habits to gain the respect of colleagues in my primary unit.	1.88	1.00
I feel pressure to change my work interests to earn tenure / promotion	2.09	1.14
I am reluctant to raise controversial issues for fear it will affect my promotion / tenure.	2.14	1.11
I constantly feel under scrutiny by colleagues in my primary unit.	2.01	0.99
I have to work harder than my colleagues to be perceived as a legitimate scholar.	2.26	1.11

6. Support for Work-Life Integration

Question: Please rate the extent to which your primary unit (department / school) supports the following career-relevant issues.

Factor 1: Support for Work-Life Integration (α = .91)

Items:

(a) Flexibility regarding family responsibilities

(b) Family leave

(c) Child care

(d) Partner/spousal hiring

(e) Tenure clock adjustment

(f) Sabbatical leave

(g) Mental/physical health accommodations

Factor 1: Support for Work-Life Integration	Item Mean	SD
Flexibility regarding family responsibilities.	2.95	0.98
Family leave.	2.85	1.06
Child care.	2.44	1.11
Partner / spousal hiring.	2.35	1.06
Tenure clock adjustment.	2.59	0.99
Sabbatical leave.	2.56	1.12
Mental / physical health accommodations.	2.81	1.01

APPENDIX 1 – FACTOR STRUCTURE WITH ITEM AVERAGES AND STANDARD DEVIATIONS FOR THE WHOLE SAMPLE N=473 (CONT.)

7. Effectiveness of Primary Unit Head (Chair/Dean)

Question: Please rate the following statements regarding the head (chair / dean) of your primary unit (department / school) (overall α = .97)

Factor 1: Effective Academic Leadership (α =.96)

Items:

(a) Maintains high academic standards

(b) Is open to constructive criticism

(c) Is an effective administrator

(d) Shows interest in faculty/researchers

(e) Treats faculty/researchers in an even-handed way

(h) Articulates a clear vision

(i) Articulates clear criteria for promotion/tenure

(j) Honors agreements

(k) Handles disputes/problems effectively

(l) Communicates consistently with faculty/researchers

(m) Creates a cooperative and supportive environment

(n) Shows commitment to diversity

(o) Facilitates collegial interactions among the faculty

Factor 1: Effective Academic Leadership	Item Mean	SD
Maintains high academic standards.	3.38	0.83
Is open to constructive criticism.	3.01	1.01
Is an effective administrator.	3.00	1.01
Shows interest in faculty / researchers.	3.30	0.95
Treats faculty/researchers in an even-handed way.	3.11	1.05
Articulates a clear vision.	2.82	1.10
Articulates clear criteria for promotion/tenure.	3.04	1.00
Honors agreements.	3.32	0.91
Handles disputes//problems effectively.	2.92	0.98
Communicates consistently with faculty/ researchers.	2.92	1.05
Creates a cooperative and supportive environment.	3.06	1.02
Shows commitment to diversity.	3.41	0.85
Facilitates collegial interactions among the faculty.	3.09	0.99

APPENDIX 1 – FACTOR STRUCTURE WITH ITEM AVERAGES AND STANDARD DEVIATIONS FOR THE WHOLE SAMPLE N=473 (CONT.)

Factor 2: Provides Resources and Support for Academic Performance (α = .94)

Items:

(f) Helps me obtain the resources I need

(g) Gives me useful feedback about my performance

(p) Is a mentor to me

(q) Values my mentoring of others

(r) Provides administrative opportunities

(s) Provides teaching/development opportunities

(t) Shares resources/opportunities fairly

(u) Involves me in important decision-making processes

Factor 2: Resources and Support	Item Mean	SD
Helps me obtain the resources I need.	2.99	1.05
Gives me useful feedback about my performance.	2.96	1.06
Is a mentor to me.	2.47	1.18
Values my mentoring of others.	3.01	1.08
Provides administrative opportunities.	2.96	1.07
Provides teaching/development opportunities.	3.01	0.97
Shares resources/opportunities fairly.	2.99	1.04
Involves me in important decision-making processes.	2.74	1.13

8. Mentoring Received

Question: Please rate the following regarding mentoring you receive, which is defined as advice or counsel on scholarly or career issues, or sponsorship or advocacy on your behalf (overall α =.76)

Factor 1: Mentoring Received Outside Primary Unit (α = .74)

Items:

(c) To what extent do you receive formal mentoring outside your primary unit, but within the University?

(d) To what extent do you receive informal mentoring outside your primary unit, but within the University?

(e) To what extent do you receive formal mentoring outside of the University?

(f) To what extent do you receive informal mentoring outside of the University?

Factor 1: Mentoring Outside Primary Unit	Item Mean	SD
To what extent do you receive formal mentoring outside your primary unit, but within the University?	1.52	0.88
To what extent do you receive informal mentoring outside your primary unit, but within the University?	1.84	0.93
To what extent do you receive formal mentoring outside of the University?	1.57	0.94
To what extent do you receive informal mentoring outside of the University?	2.23	1.02

APPENDIX 1 – FACTOR STRUCTURE WITH ITEM AVERAGES AND STANDARD DEVIATIONS FOR THE WHOLE SAMPLE N=473 (CONT.)

8. Mentoring Received (cont.)

Factor 2: Mentoring Received Within Primary Unit (α =.80)

Items:

(a) To what extent do you receive formal mentoring within your primary unit (department/school)?

(b) To what extent do you receive informal mentoring within your primary unit (department/school)?

Factor 2: Mentoring Within Primary Unit	Item Mean	SD
To what extent do you receive formal mentoring within your primary unit (department/school)?	1.95	1.10
To what extent do you receive informal mentoring within your primary unit (department/school)?	2.47	1.01

9. Appropriateness of Resources to Advance Academic Work

Question: Please rate the following statements whether resources in your primary unit are appropriate to advance your work. Please consider your department as your primary unit, otherwise refer to your school as your primary unit (overall α = .95)

Factor 1: Appropriate Funding Of and Technical Support for Research (α = .91)

Items:

(h) Internal funding for new research or teaching ideas

(i) Internal funding for bridge support between external grants

(m) Start-up package and contract

(n) Consulting opportunities

(p) Assistance in obtaining patents, copyrights, or trademarks

(q) Computers/equipment and technical support

Factor 1: Funding and Technical Support	Item Mean	SD
Internal funding for new research or teaching ideas.	2.50	1.12
Internal funding for bridge support between external grants.	2.06	1.08
Start-up package and contract.	2.58	1.19
Consulting opportunities.	2.71	1.08
Assistance in obtaining patents, copyrights, or trademarks.	2.48	1.08
Computers/ equipment and technical support.	2.80	1.07

APPENDIX 1 – FACTOR STRUCTURE WITH ITEM AVERAGES AND STANDARD DEVIATIONS FOR THE WHOLE SAMPLE N=473 (CONT.)

Factor 2: Appropriate Compensation, Office Space, and Clerical Support (α = .76)

Items:

(a) Office space

(j) Salary during academic year

(k) Salary during the summer

(o) Support for professional development/travel funds

(r) Clerical/secretarial support

Factor 2: Compensation, Office Space, and Clerical Support	Item Mean	SD
Office space.	3.28	0.91
Salary during academic year.	2.82	1.02
Salary during the summer.	2.88	1.03
Support for professional development/travel funds.	2.51	1.13
Clerical/ secretarial support.	2.52	1.09

Factor 3: Appropriate Support for Non-research Responsibilities (α = .75)

Items:

(c) Teaching assistants or graders

(d) Teaching load

(e) Student advising responsibilities

(f) Service/ committee assignments

Factor 3: Support for Non-research Responsibilities	Item Mean	SD
Teaching assistants or graders.	2.75	1.08
Teaching load.	3.11	0.94
Student advising responsibilities.	3.11	0.87
Service/ committee assignments.	3.08	0.88

10. Fairness of Resources in Comparison with Others

Question: Please rate the following statements whether resources in your primary unit are fair in comparison with others in your primary unit. Please consider your department as your primary unit, otherwise refer to your school as your primary unit (overall α = .97)

Factor 1: Equitable Distribution of Office and Lab Space, Service Assignments and Consulting Opportunities (α = .88)

Items:

(a) Office space

(b) Laboratory space/space for housing research animals

(f) Service/committee assignments

(g) Assistance in grant preparation, including budgets

(n) Consulting opportunities

(p) Assistance in obtaining patents, copyrights, or trademarks

Factor 1: Office and Lab Space	Item Mean	SD
Office space.	3.43	0.81
Laboratory space/space for housing research animals.	3.16	0.90
Service/ committee assignments.	3.03	0.93
Assistance in grant preparation, including budgets.	3.22	0.89
Consulting opportunities.	3.03	0.99
Assistance in obtaining patents, copyrights, or trademarks.	3.07	0.99

APPENDIX 1 – FACTOR STRUCTURE WITH ITEM AVERAGES AND STANDARD DEVIATIONS FOR THE WHOLE SAMPLE N=473 (CONT.)

10. Fairness of Resources in Comparison with Others (cont.)

Factor 2: Equitable Distribution of Compensation and Non-research Related Support and Assignments (α = .90)

Items:

(c) Teaching assistants or graders

(d) Teaching load

(e) Student advising responsibilities

(j) Salary during academic year

(k) Salary during the summer

(l) Administrative supplement salary

(r) Clerical/secretarial support

Factor 2: Compensation and Non-research Related Support	Item Mean	SD
Teaching assistants or graders.	3.22	0.92
Teaching load.	3.14	0.96
Student advising responsibilities.	3.07	0.94
Salary during academic year.	2.83	1.06
Salary during the summer.	3.08	0.97
Administrative supplement salary.	2.87	1.10
Clerical/ secretarial support.	3.05	0.97

Factor 3: Fair Funding Of and Technical Support for Research (α = .90)

Items:

(h) Internal funding for new research or teaching ideas

(i) Internal funding for bridge support between external grants

(m) Start-up package and contract

(o) Support for professional development/travel funds

(q) Computers/equipment and technical support

Factor 3: Fair Funding and Technical Support	Item Mean	SD
Internal funding for new research or teaching ideas.	3.00	1.02
Internal funding for bridge support between external grants.	2.74	1.09
Start-up package and contract.	2.68	1.19
Support for professional development/travel funds.	3.04	0.99
Computers/ equipment and technical support.	3.20	0.91

APPENDIX 1 – FACTOR STRUCTURE WITH ITEM AVERAGES AND STANDARD DEVIATIONS FOR THE WHOLE SAMPLE N=473 (CONT.)

11. Transparency in Resource Allocation Process
Question: Please rate the following statements whether the decision making process behind resource allocation is made clear in your primary unit. Please consider your department as your primary unit, otherwise refer to your school as your primary unit (overall α = **.98**)

Factor 1: Clear Process for Allocating Compensation, Space, Teaching and Clerical Supports (α = **.98**)

Items:

(a) Office space

(b) Laboratory space/space for housing research animals

(c) Teaching assistants or graders

(d) Teaching load

(e) Student advising responsibilities

(j) Salary during academic year

(k) Salary during the summer

(l) Administrative supplement salary

(m) Start-up package and contract

(n) Consulting opportunities

(q) Computers/equipment and technical support

(r) Clerical/secretarial support

Factor 1: Compensation, Space, Teaching and Clerical Supports	Item Mean	SD
Office space.	2.82	1.10
Laboratory space/space for housing research animals.	2.68	1.11
Teaching assistants or graders.	2.94	1.04
Teaching load.	2.92	1.05
Student advising responsibilities.	2.93	1.00
Salary during academic year.	2.57	1.10
Salary during the summer.	2.96	1.09
Administrative supplement salary.	2.67	1.17
Start-up package and contract.	2.50	1.18
Consulting opportunities.	2.88	1.09
Computers/ equipment and technical support.	2.87	1.05
Clerical/ secretarial support.	2.76	1.08

APPENDIX 1 – FACTOR STRUCTURE WITH ITEM AVERAGES AND STANDARD DEVIATIONS FOR THE WHOLE SAMPLE N=473 (CONT.)

11. Transparency in Resource Allocation Process (cont.)

Factor 2: Clear Process for Allocating Internal Funding and Support for Research (α = **.92**)

Items:

(f) Service/ committee assignments

(g) Assistance in grant preparation, including budgets

(h) Internal funding for new research or teaching ideas

(i) Internal funding for bridge support between external grants

(o) Support for professional development/travel funds

(p) Assistance in obtaining patents, copyrights, or trademarks

Factor 2: Internal Funding and Support for Research	Item Mean	SD
Service/ committee assignments.	2.92	0.99
Assistance in grant preparation, including budgets.	2.89	1.09
Internal funding for new research or teaching ideas.	2.64	1.13
Internal funding for bridge support between external grants.	2.40	1.15
Support for professional development/travel funds.	2.75	1.14
Assistance in obtaining patents, copyrights, or trademarks.	2.82	1.05

12. Satisfaction with Community and Academic Dimensions

Question: Please indicate how satisfied you are with each of the following dimensions of your professional life (overall α = **.90**)

Factor 1: Community and Job Satisfaction (α = **.86**)

Items:

(a) Overall experience of community at Case

(b) Overall experience of collegiality in your primary unit (department/school)

(c) Overall experience of being a faculty member in your primary unit (department/school)

(d) Teaching and service load

(e) Teaching and research balance

Factor 1: Community and Job Satisfaction	Item Mean	SD
Overall experience of community at Case.	2.94	0.84
Overall experience of collegiality in your primary unit (department / school).	3.07	0.99
Overall experience of being a faculty member in your primary unit (department / school).	3.09	0.95
Teaching and service load.	3.06	0.87
Teaching and research balance.	2.96	0.95

APPENDIX 1 – FACTOR STRUCTURE WITH ITEM AVERAGES AND STANDARD DEVIATIONS FOR THE WHOLE SAMPLE N=473 (CONT.)

Factor 2: Satisfaction with Professional Activities and Success (α = .79)

Items:

(f) Success of your research or scholarship

(g) Effectiveness of your teaching

(j) Service within the University

(k) Service in your academic discipline

(l) Community service

(m) Professional development opportunities

Factor 2: Professional Activities and Success	Item Mean	SD
Success of your research or scholarship.	3.05	0.91
Effectiveness of your teaching.	3.35	0.67
Service within the University.	2.91	0.88
Service in your academic discipline.	3.23	0.78
Community service.	3.06	0.83
Professional development opportunities.	2.76	0.98

Factor 3: Satisfaction with Mentoring Received (α = .79)

Items:

(h) Mentoring you have received in your primary unit (department/school)

(i) Mentoring you have received within the University

Factor 3: Satisfaction with Mentoring	Item Mean	SD
Mentoring you have received in your primary unit (department / school).	2.48	1.07
Mentoring you have received within the University.	2.32	1.05

APPENDIX 2 – ITEM AVERAGES BY SCHOOL/ COLLEGE – WHOLE SAMPLE N=446

1. Participation in Activities on Campus and in University Circle

Factor 1: Extracurricular Activity																							
Item	Mandel School of Applied Social Sciences (N=16)		School of Nursing (N=21)		School of Law (N=13)		Arts & Sciences (N=115)		School of Engineering (N=45)		School of Medicine (N=206)		School of Dental Medicine (N=7)		School of Manage-ment (N=23)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Universityacademic ceremonies (e.g., convocation).	2.88	1.09	3.43	0.75	2.46	0.97	2.45	1.06	2.98	1.00	1.77	1.00	3.29	0.76	2.78	1.04
Social event.	2.63	0.96	2.86	0.79	2.46	0.88	3.03	0.84	3.20	0.55	2.33	0.88	3.00	1.00	3.09	0.90
Politically oriented event.	2.00	0.82	1.95	1.07	1.54	0.88	1.95	0.87	1.55	0.70	1.36	0.60	1.86	0.90	1.57	0.90
Sporting event.	1.31	0.70	1.24	0.44	1.08	0.28	1.37	0.70	1.62	0.89	1.21	0.49	1.29	0.49	1.30	0.56
Student-organized event.	2.25	0.78	2.76	0.94	2.31	1.03	2.44	0.88	2.67	0.77	1.86	0.91	2.50	1.23	2.39	0.94
Cultural event / performance.	2.81	0.83	2.90	0.89	2.54	0.97	2.71	0.97	2.76	0.83	2.37	0.96	3.29	0.76	2.78	1.00
Other community event	2.25	0.78	2.48	0.81	1.69	0.86	2.04	0.79	2.25	0.72	1.99	0.86	3.29	0.49	2.48	0.79

Factor 2: Academic Activity																
Item	Mandel School of Applied Social Sciences		School of Nursing		School of Law		Arts & Sciences		School of Engineering		School of Medicine		School of Dental Medicine		School of Manage-ment	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Brown bag discussion.	2.44	0.89	3.05	0.92	2.38	1.04	2.22	1.01	1.98	0.99	1.43	0.78	2.29	1.38	3.13	0.87
Seminar / visiting lecturer.	3.07	0.59	2.70	0.98	3.31	0.86	3.23	0.84	3.91	0.36	3.28	0.88	3.33	0.52	3.61	0.66
Colloquium.	3.14	0.77	2.24	1.00	2.18	1.08	3.11	0.95	3.57	0.77	2.13	1.05	2.43	0.79	2.55	1.18

APPENDIX 2 – ITEM AVERAGES BY SCHOOL/ COLLEGE – WHOLE SAMPLE N=446 (CONT.)

2. Reasons for Not Attending an Event on Campus or in University Circle

Factor 1: Lack of information or inconvenience of event

Item	Mandel School of Applied Social Sciences		School of Nursing		School of Law		Arts & Sciences		School of Engineering		School of Medicine		School of Dental Medicine		School of Manage-ment	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
I did not know about the event.	2.60	0.63	2.38	0.74	2.60	0.70	2.37	0.80	2.35	0.78	2.51	0.92	2.71	0.95	2.64	0.73
I did not know anyone else who was going to attend.	2.19	1.28	2.38	1.07	2.38	1.19	1.86	0.94	1.82	0.92	2.09	1.11	2.29	0.95	2.00	1.09
I was too busy.	3.88	0.34	3.90	0.30	3.62	0.87	3.63	0.72	3.71	0.51	3.67	0.67	3.57	0.54	3.78	0.52
It was just too far away.	1.75	0.78	2.55	1.10	2.17	1.12	2.06	1.00	1.98	0.99	2.16	1.13	2.17	1.17	1.74	0.81
I had already gone home for the day.	1.88	0.96	2.43	1.03	2.23	1.24	2.35	1.09	1.91	0.95	1.95	1.03	2.00	1.27	2.18	1.10

Factor 2: Safety and location

Item	Mandel School of Applied Social Sciences		School of Nursing		School of Law		Arts & Sciences		School of Engineering		School of Medicine		School of Dental Medicine		School of Manage-ment	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
I don't feel safe on campus after dark.	1.50	0.82	2.29	1.01	1.38	0.96	1.74	0.98	1.25	0.44	1.49	0.82	1.86	0.90	1.68	1.04
It was on the other side of Euclid Avenue.	1.63	0.81	1.81	1.12	1.77	1.01	1.66	0.90	1.33	0.72	1.39	0.76	1.71	0.95	1.41	0.80
Other.	1.00		1.67	1.21	1.33	0.82	1.82	1.09	1.60	0.91	1.48	0.86	1.00		2.38	1.51

APPENDIX 2 – ITEM AVERAGES BY SCHOOL/ COLLEGE – WHOLE SAMPLE N=446 (CONT.)

3: Overall Involvement in Campus Activities

Overall Involvement in Campus Activities																				
Item	Mandel School of Applied Social Sciences		School of Nursing		School of Law		Arts & Sciences		School of Engineering		School of Medicine		School of Dental Medicine		School of Manage-ment	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
	2.44	0.63	2.52	0.68	2.25	0.62	2.79	0.84	2.70	0.59	2.01	0.77	2.29	0.49	2.91	0.79

4. Quality of Relationships within the Campus Community

Factor 1: Lack of Acceptance of Diversity																
Item	Mandel School of Applied Social Sciences		School of Nursing		School of Law		Arts & Sciences		School of Engineering		School of Medicine		School of Dental Medicine		School of Manage-ment	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Sexist remarks are heard in faculty gatherings at Case.	1.79	0.89	2.21	0.86	1.42	0.90	1.61	0.85	1.52	0.85	1.59	0.84	1.43	0.79	1.86	1.25
Racist remarks are heard in faculty gatherings at Case.	1.54	0.78	1.58	0.69	1.18	0.41	1.43	0.76	1.25	0.72	1.34	0.68	1.43	0.79	1.45	0.96
Ageist remarks are heard in faculty gatherings at Case.	1.69	1.03	2.16	1.02	1.18	0.41	1.61	0.75	1.56	0.77	1.58	0.88	1.43	0.79	1.77	1.02

APPENDIX 2 – ITEM AVERAGES BY SCHOOL/ COLLEGE – WHOLE SAMPLE N=446 (CONT.)

4. Quality of Relationships within the Campus Community (cont.)

Factor 2: Biased Attitudes

Item	Mandel School of Applied Social Sciences		School of Nursing		School of Law		Arts & Sciences		School of Engineering		School of Medicine		School of Dental Medicine		School of Manage-ment	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Faculty at Case have a condescending attitude towards faculty from other countries.	1.57	0.85	1.83	0.71	2.00	1.27	1.53	0.76	1.49	0.81	1.66	0.87	1.40	0.55	1.52	0.90
Faculty at Case have a condescending attitude towards staff from other countries.	1.85	0.90	1.74	0.81	1.50	1.00	1.60	0.82	1.58	0.84	1.72	0.87	1.80	0.84	1.55	1.01

Factor 3: Respectful Relationships

Item	Mandel School of Applied Social Sciences		School of Nursing		School of Law		Arts & Sciences		School of Engineering		School of Medicine		School of Dental Medicine		School of Manage-ment	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Faculty at Case respect each other.	3.06	0.57	2.90	0.77	3.27	0.47	3.07	0.78	3.42	0.54	3.34	0.64	3.50	0.84	3.00	0.93
Faculty at Case are treated with respect by campus administrators.	2.75	1.00	3.10	0.77	2.78	1.20	2.56	0.87	2.84	0.90	2.93	0.87	3.80	0.45	2.75	1.02
Faculty at Case are typically at odds with campus administrators.	2.60	0.63	2.80	0.89	2.71	0.95	2.36	0.78	2.57	0.97	2.67	0.86	3.25	0.96	2.57	1.08

APPENDIX 2 – ITEM AVERAGES BY SCHOOL/ COLLEGE – WHOLE SAMPLE N=446 (CONT.)

5. Quality of Relationships and Support in Primary Unit

Factor 1: Sense of Being valued and included																						
Item	Mandel School of Applied Social Sciences		School of Nursing		School of Law		Arts & Sciences		School of Engineering		School of Medicine		School of Dental Medicine		School of Management	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Colleagues in my primary unit value my work.	3.31	0.60	3.38	0.59	3.17	0.72	3.19	0.95	3.64	0.65	3.41	0.79	4.00	0.00	3.48	0.79
Colleagues in my primary unit can be trusted.	3.40	0.63	3.32	0.67	3.15	0.56	3.13	1.06	3.47	0.69	3.46	0.76	3.29	1.11	3.14	1.13
I am comfortable asking questions about performance expectations.	3.38	0.81	3.24	0.89	3.15	0.56	3.22	0.92	3.35	0.69	3.22	0.86	4.00	0.00	3.22	1.00
I feel I can make my primary unit a better place to work.	3.00	1.03	3.10	0.83	3.08	0.76	3.13	0.90	3.57	0.63	3.30	0.82	3.71	0.49	3.13	1.14
Colleagues in my primary unit provide me feedback about research/scholarly issues.	2.94	1.06	3.24	0.83	2.73	0.79	2.67	1.05	3.11	0.80	2.94	0.95	3.00	0.82	3.09	0.68
Colleagues in my primary unit provide me advice about career/professional issues.	3.06	1.06	3.05	0.87	2.92	0.28	2.63	0.99	2.98	0.95	2.82	0.98	2.71	1.25	2.96	0.88
Colleagues in my primary unit solicit my opinions about scholarly issues.	2.56	1.03	3.00	0.67	2.33	0.78	2.84	0.99	3.27	0.69	3.08	0.90	3.43	0.54	3.04	0.93

APPENDIX 2 – ITEM AVERAGES BY SCHOOL/ COLLEGE – WHOLE SAMPLE N=446 (CONT.)

Colleagues in my primary unit solicit my opinions about professional/clinical activities.	2.75	1.13	3.14	0.73	2.69	0.95	2.77	1.02	3.32	0.71	3.21	0.90	3.86	0.38	2.95	1.09				
I solicit my colleagues' advice/ assistance about my research.	3.06	0.93	3.60	0.50	3.08	0.67	2.84	0.90	3.29	0.63	3.27	0.77	3.50	0.58	3.27	0.55				
I generally interact positively with colleagues in my primary unit.	3.63	0.50	3.62	0.50	3.31	0.75	3.45	0.79	3.73	0.50	3.69	0.53	3.71	0.49	3.65	0.57				
I feel professionally welcome and included by colleagues in my primary unit.	3.25	0.93	3.14	0.85	3.23	0.83	3.18	1.04	3.64	0.72	3.41	0.81	3.86	0.38	3.35	0.94				
Colleagues in my primary unit include me in social events and activities on campus.	3.19	1.05	3.05	0.81	3.17	0.84	3.23	0.99	3.59	0.62	3.24	0.93	3.50	0.55	3.13	1.01				
Colleagues in my primary unit include me in social events and activities off campus.	3.00	1.00	2.52	0.98	2.83	0.84	2.86	1.02	3.18	0.87	2.92	0.96	3.00	0.63	2.55	1.06				

APPENDIX 2 – ITEM AVERAGES BY SCHOOL/ COLLEGE – WHOLE SAMPLE N=446 (CONT.)

5. Quality of Relationships and Support in Primary Unit (cont.)

Factor 2: Gender, race, and family obligations																							
Item	Mandel School of Applied Social Sciences		School of Nursing		School of Law		Arts & Sciences		School of Engineering		School of Medicine		School of Dentistry		School of Management	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Gender makes a difference in everyday interactions in my primary unit.	2.71	1.13	1.55	0.89	2.42	1.08	2.16	1.17	1.44	0.81	1.86	1.09	1.33	0.52	2.35	1.11
Race makes a difference in everyday interactions in my primary unit.	2.62	1.15	1.81	1.04	2.08	1.00	1.7	1.00	1.3	0.69	1.52	0.88	1.33	0.52	2.18	1.18
Gender makes a difference in access to resources for faculty in my primary unit.	2.7	1.25	1.24	0.46	1.91	1.22	1.68	1.02	1.2	0.46	1.66	1.02	1.17	0.41	1.81	1.16
Race makes a difference in access to resources for faculty in my primary unit.	2.53	1.19	2.05	1.05	1.92	1.08	1.43	0.81	1.12	0.34	1.5	0.80	1.17	0.41	1.75	1.16
Colleagues in my primary unit consider female faculty who have children to be less committed to their careers.	2.31	1.32	2.00	0.86	1.82	1.08	1.81	0.95	1.35	0.68	2.00	1.02	1.14	0.38	1.91	0.87
Colleagues in my primary unit consider male faculty who have children to be less committed to their careers.	1.92	1.26	1.41	0.51	1.62	0.77	1.41	0.72	1.17	0.45	1.38	0.68	1.29	0.76	1.41	0.73

APPENDIX 2 – ITEM AVERAGES BY SCHOOL/ COLLEGE – WHOLE SAMPLE N=446 (CONT.)

5. Quality of Relationships and Support in Primary Unit (cont.)

Factor 3: Pressure and Restrictions

Item	Mandel School of Applied Social Sciences		School of Nursing		School of Law		Arts & Sciences		School of Engineering		School of Medicine		School of Dental Medicine		School of Manage-ment	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
I feel pressure to change my work habits to gain the respect of colleagues in my primary unit.	2.12	1.03	2.25	1.07	2.15	1.07	1.65	0.96	1.99	1.06	1.88	0.99	1.71	0.95	2.13	1.10
I feel pressure to change my work interests to earn tenure / promotion.	2.31	1.25	2.86	1.11	2.11	1.05	1.91	1.11	2.03	1.14	2.09	1.13	1.67	1.21	2.33	1.20
I am reluctant to raise controversial issues for fear it will affect my promotion / tenure.	2.00	1.08	2.55	1.23	2.7	1.34	2.1	1.16	2.03	1.12	2.10	1.08	1.17	0.41	2.32	1.09
I constantly feel under scrutiny by colleagues in my primary unit.	1.87	0.81	2.48	0.98	1.46	0.66	1.84	1.03	1.73	0.90	2.05	0.98	2.29	0.76	2.39	1.08
I have to work harder than my colleagues to be perceived as a legitimate scholar.	2.37	1.26	2.9	1.04	1.91	0.94	2.08	1.12	1.43	1.11	2.32	1.08	2.33	1.21	2.36	1.05

APPENDIX 2 – ITEM AVERAGES BY SCHOOL/ COLLEGE – WHOLE SAMPLE N=446 (CONT.)

6. Support for Work-Life Integration

Factor 1: Support for Work-Life Integration																							
Item	Mandel School of Applied Social Sciences		School of Nursing		School of Law		Arts & Sciences		School of Engineering		School of Medicine		School of Dental Medicine		School of Manage-ment	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Flexibility regarding family responsibilities.	3.31	1.03	3.21	0.86	2.85	0.69	3.01	0.90	3.33	0.79	2.84	1.05	3.00	0.89	2.82	0.96
Family leave.	3.33	1.00	3.21	0.89	2.91	0.94	2.68	1.10	3.00	1.21	2.88	1.05	2.83	0.75	2.61	1.15
Child care.	2.57	0.98	2.67	0.98	2.54	0.97	2.45	1.12	2.33	1.32	2.43	1.13	2.25	0.96	2.44	1.15
Partner / spousal hiring.	2.08	1.17	2.38	1.19	1.44	0.73	2.26	1.17	2.52	0.99	2.47	0.98	2.33	0.58	2.29	1.11
Tenure clock adjustment.	2.79	0.80	2.29	1.07	2.75	0.89	2.82	0.91	2.43	1.08	2.50	1.04	2.80	0.84	2.50	1.05
Sabbatical leave.	3.08	0.95	2.00	1.16	3.00	0.87	3.03	0.95	3.17	1.05	1.99	1.06	2.25	1.26	2.77	0.97
Mental / physical health accommodations.	3.50	0.80	3.00	0.84	2.86	0.90	2.84	0.98	3.04	1.00	2.71	1.04	3.00	1.23	2.58	1.17

7. Effectiveness of Primary Unit Head (Chair/Dean)

Factor 1: Effective Academic Leadership																
Item	Mandel School of Applied Social Sciences		School of Nursing		School of Law		Arts & Sciences		School of Engineering		School of Medicine		School of Dental Medicine		School of Manage-ment	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Maintains high academic standards.	3.75	0.45	3.19	0.81	3.54	0.52	3.25	0.99	3.61	0.69	3.39	0.79	3.57	0.79	3.30	0.97
Is open to constructive criticism.	3.40	1.12	3.00	0.89	3.36	0.67	2.94	1.11	3.33	0.75	2.88	1.02	3.43	0.79	3.00	1.00

APPENDIX 2 – ITEM AVERAGES BY SCHOOL/ COLLEGE – WHOLE SAMPLE N=446 (CONT.)

Is an effective administrator.	3.56	0.63	2.76	0.94	3.64	0.51	2.92	1.07	3.07	0.95	2.94	1.02	3.83	0.41	2.91	1.13								
Shows interest in faculty / researchers.	3.50	0.89	3.67	0.58	3.75	0.45	3.17	1.07	3.50	0.70	3.25	0.92	3.14	1.22	3.30	1.11								
Treats faculty/ researchers in an even-handed way.	3.27	1.03	3.10	0.77	3.36	0.81	3.01	1.19	3.43	0.85	3.04	1.05	3.29	1.25	3.17	0.98								
Articulates a clear vision.	2.69	0.87	2.90	1.00	3.38	0.51	2.72	1.22	3.05	1.08	2.79	1.06	3.50	0.84	2.74	1.25								
Articulates clear criteria for promotion/tenure.	3.60	0.63	2.90	1.12	3.23	0.73	3.18	1.02	3.30	0.79	2.89	1.03	3.14	0.90	2.82	1.18								
Honors agreements.	3.80	0.56	3.43	0.81	3.73	0.47	3.30	0.98	3.59	0.59	3.16	0.95	3.80	0.45	3.45	0.91								
Handles disputes/ problems effectively.	3.57	0.65	2.90	0.89	3.50	0.52	2.78	1.11	3.12	0.75	2.82	0.97	3.43	0.54	3.00	1.09								
Communicates consistently with faculty/ researchers.	3.53	0.83	3.14	0.91	3.33	0.65	2.79	1.15	3.02	0.91	2.85	1.05	3.14	1.07	3.04	1.11								
Creates a cooperative and supportive environment.	3.50	0.73	3.43	0.87	3.25	0.97	2.88	1.15	3.20	0.80	3.00	1.02	3.43	0.98	3.09	1.00								
Shows commitment to diversity.	3.53	0.92	3.95	0.22	3.42	0.79	3.38	0.91	3.51	0.80	3.35	0.83	4.00	0.00	3.23	0.97								
Facilitates collegial interactions among the faculty.	3.73	0.46	3.40	0.68	3.25	0.87	2.92	1.13	3.14	0.80	3.09	0.97	3.50	1.23	3.04	1.07								

APPENDIX 2 – ITEM AVERAGES BY SCHOOL/ COLLEGE – WHOLE SAMPLE N=446 (CONT.)

7. Effectiveness of Primary Unit Head (Chair/Dean)(cont.)

Factor 2: Resources and Support																						
Item	Mandel School of Applied Social Sciences		School of Nursing		School of Law		Arts & Sciences		School of Engineering		School of Medicine		School of Dental Medicine		School of Manage-ment	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Helps me obtain the resources I need.	3.25	1.07	3.29	0.90	3.50	1.00	3.03	1.08	3.02	0.99	2.83	1.05	3.14	1.07	3.18	1.10
Gives me useful feedback about my performance.	3.38	0.72	3.24	0.89	3.08	1.08	2.93	1.13	3.25	0.84	2.81	1.08	3.29	0.76	2.91	1.20
Is a mentor to me.	2.50	1.16	2.80	1.01	2.31	1.25	2.55	1.21	2.29	1.09	2.41	1.18	2.50	1.64	2.59	1.30
Values my mentoring of others.	3.14	1.03	3.44	0.86	2.78	1.30	2.96	1.11	3.21	1.01	2.91	1.10	4.00	0.00	2.83	1.19
Provides administrative opportunities.	3.14	1.10	3.26	1.05	3.29	1.25	3.04	1.14	3.29	0.80	2.79	1.05	3.00	1.27	3.20	1.06
Provides teaching/ development opportunities.	3.29	0.83	3.43	0.75	3.36	1.03	3.02	0.97	3.00	0.91	2.87	1.02	2.86	0.69	3.36	0.90
Shares resources/ opportunities fairly.	3.20	1.08	3.10	0.89	3.45	0.82	2.97	1.11	3.18	0.87	2.86	1.05	3.17	1.17	3.17	0.94
Involves me in important decision-making processes.	2.88	1.20	2.81	0.93	2.92	1.08	2.87	1.16	3.00	0.90	2.49	1.14	3.14	1.22	3.04	1.02

APPENDIX 2 – ITEM AVERAGES BY SCHOOL/ COLLEGE – WHOLE SAMPLE N=446 (CONT.)

8. Mentoring Received

Factor 1: Mentoring Outside Primary Unit

Item	Mandel School of Applied Social Sciences		School of Nursing		School of Law		Arts & Sciences		School of Engineering		School of Medicine		School of Dental Medicine		School of Manage-ment	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
To what extent do you receive formal mentoring outside your primary unit, but within the University?	1.50	0.82	1.48	0.75	1.18	0.60	1.51	0.95	1.23	0.58	1.60	0.93	1.67	0.82	1.35	0.65
To what extent do you receive informal mentoring outside your primary unit, but within the University?	1.81	0.83	1.86	0.73	1.25	0.62	1.95	1.00	1.54	0.79	1.89	0.97	1.83	0.75	1.70	0.88
To what extent do you receive formal mentoring outside of the University?	1.56	0.96	2.15	1.04	1.50	0.80	1.40	0.82	1.13	0.52	1.64	0.99	2.00	1.27	1.78	1.04
To what extent do you receive informal mentoring outside of the University?	2.06	0.68	2.38	0.92	2.25	0.87	2.33	1.04	1.56	0.79	2.21	1.05	2.29	1.11	2.57	0.95

APPENDIX 2 – ITEM AVERAGES BY SCHOOL/ COLLEGE – WHOLE SAMPLE N=446 (CONT.)

8. Mentoring Received (cont.)

Factor 2: Mentoring Within Primary Unit																						
Item	Mandel School of Applied Social Sciences		School of Nursing		School of Law		Arts & Sciences		School of Engineering		School of Medicine		School of Dental Medicine		School of Manage-ment	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
To what extent do you receive formal mentoring within your primary unit (department/ school)?	2.40	1.18	2.65	1.09	1.58	0.90	1.80	1.17	1.72	0.94	1.97	1.08	2.17	1.33	2.00	1.09
To what extent do you receive informal mentoring within your primary unit (department/ school)?	2.69	1.08	3.00	0.84	2.33	0.99	2.42	1.09	2.49	0.94	2.43	0.98	2.00	1.23	2.52	0.99

APPENDIX 2 – ITEM AVERAGES BY SCHOOL/ COLLEGE – WHOLE SAMPLE N=446 (CONT.)

9. Appropriateness of Resources to Advance Academic Work

Factor 1: Funding and Technical Support

Item	Mandel School of Applied Social Sciences		School of Nursing		School of Law		Arts & Sciences		School of Engineering		School of Medicine		School of Dental Medicine		School of Manage-ment	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Internal funding for new research or teaching ideas.	3.20	1.01	3.10	0.77	3.50	0.97	2.32	1.01	2.22	1.20	2.44	1.13	2.60	1.14	2.76	1.18
Internal funding for bridge support between external grants.	2.00	0.87	2.23	0.83	4.00		1.95	1.06	1.64	0.96	2.23	1.10	2.33	1.16	2.40	1.35
Start-up package and contract.	2.25	1.28	2.33	1.16	2.86	1.22	2.65	1.11	2.67	1.20	2.52	1.23	3.00	1.73	3.20	1.08
Consulting opportunities.	2.78	0.97	2.61	1.20	3.25	0.96	2.58	1.01	3.17	1.02	2.67	1.09	2.50	1.00	0.13	1.16
Assistance in obtaining patents, copyrights, or trademarks.	2.00	1.41	2.67	1.21			1.92	0.63	2.45	1.15	2.58	1.10	4.00	0.00	4.00	0.00
Computers/ equipment and technical support.	3.19	1.05	3.52	0.68	3.92	0.29	2.58	0.97	2.64	1.27	2.67	1.07	3.14	1.22	3.64	0.79

APPENDIX 2 – ITEM AVERAGES BY SCHOOL/ COLLEGE – WHOLE SAMPLE N=446 (CONT.)

9. Appropriateness of Resources to Advance Academic Work (cont.)

Factor 2: Compensation, Office Space, and Clerical Support																						
Item	Mandel School of Applied Social Sciences		School of Nursing		School of Law		Arts & Sciences		School of Engineering		School of Medicine		School of Dental Medicine		School of Management	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Office space.	3.00	1.16	3.05	0.92	3.58	0.79	3.31	0.90	3.47	0.73	3.23	0.93	3.50	1.23	3.78	0.42
Salary during academic year.	2.50	1.16	2.76	1.00	3.38	1.19	2.56	0.96	3.00	0.87	2.90	1.03	2.57	0.98	3.26	0.92
Salary during the summer.	2.69	1.03	3.00	1.13	3.36	1.21	2.72	0.99	2.89	1.04	3.01	1.04	3.00		3.00	1.00
Support for professional development/travel funds.	2.50	1.10	2.57	1.17	3.77	0.44	2.50	1.09	2.21	1.19	2.43	1.12	2.43	0.98	3.27	0.94
Clerical/ secretarial support.	2.80	1.15	2.10	1.14	3.38	0.87	2.39	1.00	2.93	1.08	2.41	1.09	3.57	0.54	2.96	1.07

APPENDIX 2 – ITEM AVERAGES BY SCHOOL/ COLLEGE – WHOLE SAMPLE N=446 (CONT.)

9. Appropriateness of Resources to Advance Academic Work (cont.)

Factor 3: Support for Non-research Responsibilities																						
Item	Mandel School of Applied Social Sciences		School of Nursing		School of Law		Arts & Sciences		School of Engineering		School of Medicine		School of Dental Medicine		School of Manage-ment	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Teaching assistants or graders.	2.60	1.35	2.16	1.17	3.00	1.00	2.85	0.97	3.05	1.07	2.68	1.06	2.67	1.53	3.00	1.16
Teaching load.	2.67	1.18	2.81	1.08	3.50	1.00	3.03	0.98	3.26	0.93	3.17	0.82	3.17	1.17	2.91	1.19
Student advising responsibilities.	3.27	0.80	3.10	0.77	3.42	0.79	3.02	0.92	3.19	0.74	3.14	0.85	3.67	0.52	3.00	1.10
Service/ committee assignments.	2.87	0.92	3.47	0.51	3.91	0.30	2.94	0.86	3.23	0.86	3.04	0.86	3.67	0.52	3.00	1.09

APPENDIX 2 – ITEM AVERAGES BY SCHOOL/ COLLEGE – WHOLE SAMPLE N=446 (CONT.)

10. Fairness of Resources in Comparison with Others

Factor 1: Office and Lab Space																						
Item	Mandel School of Applied Social Sciences		School of Nursing		School of Law		Arts & Sciences		School of Engineering		School of Medicine		School of Dental Medicine		School of Management	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Office space.	3.56	0.89	3.48	0.60	3.67	0.78	3.43	0.85	3.43	0.66	3.40	0.81	3.71	0.49	3.78	0.74
Laboratory space/ space for housing research animals.	3.33	1.16	3.00	0.00			3.23	1.05	3.09	0.98	3.17	0.83	4.00		4.00	
Service/ committee assignments.	3.07	0.96	3.20	0.70	3.82	0.41	2.87	1.01	3.05	0.81	3.02	0.93	3.60	0.89	3.26	1.01
Assistance in grant preparation, including budgets.	3.27	0.59	3.40	0.75	4.00	0.00	3.32	0.90	3.51	0.56	3.09	0.95	2.75	1.26	2.94	1.06
Consulting opportunities.	3.17	0.98	3.00	1.11	3.50	1.00	3.11	0.85	3.42	0.76	2.84	1.07	2.60	0.89	3.17	1.12
Assistance in obtaining patents, copyrights, or trademarks.	3.00		3.00	1.27			3.04	1.04	3.04	1.04	3.05	0.98	3.50	0.71	4.00	0.00

APPENDIX 2 – ITEM AVERAGES BY SCHOOL/ COLLEGE – WHOLE SAMPLE N=446 (CONT.)

10. Fairness of Resources in Comparison with Others (cont.)

Factor 2: Compensation and Non-research Related Support

Item	Mandel School of Applied Social Sciences		School of Nursing		School of Law		Arts & Sciences		School of Engineering		School of Medicine		School of Dental Medicine		School of Manage-ment	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Teaching assistants or graders.	3.40	0.84	3.00	1.10	3.00	1.00	3.30	0.91	3.45	0.71	3.09	0.93	3.50	0.71	3.38	1.02
Teaching load.	3.13	0.99	2.95	1.02	3.42	1.17	3.16	1.02	3.21	0.91	3.10	0.93	3.17	1.17	3.23	0.97
Student advising responsibilities.	3.33	0.90	3.14	0.73	3.33	0.89	2.95	1.05	3.14	0.81	3.09	0.90	3.67	0.52	3.09	1.11
Salary during academic year.	2.36	1.15	2.61	1.04	3.00	1.32	2.76	1.08	2.89	0.94	2.87	1.05	2.67	1.37	3.18	1.10
Salary during the summer.	2.78	1.20	2.81	1.22	3.40	1.27	3.03	0.94	3.19	0.83	3.06	0.92	3.00		3.18	1.02
Administrative supplement salary.	2.50	1.31	2.64	1.12	3.00	1.55	2.76	1.07	3.32	1.06	2.86	1.09	2.33	1.53	3.38	0.74
Clerical/ secretarial support.	3.10	0.88	2.75	1.12	3.67	0.49	3.18	0.87	3.15	0.98	2.90	1.00	3.57	0.54	3.35	0.98

APPENDIX 2 – ITEM AVERAGES BY SCHOOL/ COLLEGE – WHOLE SAMPLE N=446 (CONT.)

10. Fairness of Resources in Comparison with Others (cont.)

Factor 3: Fair Funding and Technical Support																							
Item	Mandel School of Applied Social Sciences		School of Nursing		School of Law		Arts & Sciences		School of Engineering		School of Medicine		School of Dental Medicine		School of Manage-ment	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Internal funding for new research or teaching ideas.	3.27	0.96	3.19	0.81	3.70	0.95	3.11	1.00	3.06	0.86	2.81	1.05	3.00	1.41	3.00	1.10
Internal funding for bridge support between external grants.	2.89	0.93	2.67	0.89	4.00		2.90	1.15	2.85	1.12	2.69	1.09	2.67	1.53	2.50	1.08
Start-up package and contract.	2.13	1.13	2.60	1.17	2.50	1.29	2.74	1.27	2.85	1.14	2.61	1.21	2.50	2.12	3.07	1.21
Support for professional development/travel funds.	3.23	1.01	2.86	1.06	3.92	0.28	3.12	0.93	3.00	0.92	2.98	1.00	2.80	1.10	3.33	0.97
Computers/ equipment and technical support.	3.17	1.12	3.55	0.83	3.92	0.29	3.13	0.89	3.23	0.90	3.07	0.93	3.00	1.29	3.67	0.80

APPENDIX 2 – ITEM AVERAGES BY SCHOOL/ COLLEGE – WHOLE SAMPLE N=446 (CONT.)

11. Transparency in Resource Allocation Process

Factor 1: Compensation, Space, Teaching and Clerical Supports																						
Item	Mandel School of Applied Social Sciences		School of Nursing		School of Law		Arts & Sciences		School of Engineering		School of Medicine		School of Dental Medicine		School of Manage-ment	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Office space.	3.07	1.10	2.20	1.06	3.64	0.67	2.89	1.09	3.11	0.87	2.68	1.11	3.00	1.23	3.30	1.06
Laboratory space/ space for housing research animals.	2.67	1.16	2.50	1.00			2.78	1.10	3.00	1.06	2.53	1.16			4.00	
Teaching assistants or graders.	3.10	1.10	2.28	0.96	2.67	0.58	3.13	0.98	3.32	0.76	2.72	1.12	3.50	0.71	2.86	1.20
Teaching load.	2.67	1.18	2.76	1.00	3.00	1.04	3.01	1.13	3.16	0.87	2.80	1.03	3.17	1.17	3.09	1.19
Student advising responsibilities.	3.00	1.00	2.81	0.87	2.92	1.08	2.84	1.04	3.14	0.83	2.91	1.03	3.67	0.52	3.05	1.17
Salary during academic year.	2.60	1.24	2.44	0.98	2.33	1.07	2.29	1.06	2.85	1.01	2.63	1.12	3.00	1.23	2.87	1.14
Salary during the summer.	2.79	1.05	2.75	1.18	3.00	1.25	2.96	1.10	3.30	0.88	2.87	1.15			2.89	1.10
Administrative supplement salary.	2.50	1.27	2.27	1.27	2.44	1.33	2.53	1.16	3.24	1.09	2.72	1.17	2.25	1.26	3.00	1.12
Start-up package and contract.	2.25	1.17	2.17	1.12	2.33	1.21	2.49	1.17	2.67	1.09	2.48	1.22	1.00		2.60	1.30
Consulting opportunities.	3.50	0.84	3.00	1.18	3.25	0.96	2.76	0.99	3.35	0.93	2.74	1.14	2.80	1.10	2.85	1.21
Computers/ equipment and technical support.	2.93	1.16	3.19	1.08	3.73	0.47	2.57	1.03	2.97	0.85	2.77	1.08	3.20	1.10	3.43	1.03
Clerical/ secretarial support.	2.83	1.03	2.35	1.09	3.36	0.67	2.68	1.10	3.05	0.84	2.67	1.12	3.33	0.82	3.14	1.24

APPENDIX 2 – ITEM AVERAGES BY SCHOOL/ COLLEGE – WHOLE SAMPLE N=446 (CONT.)

11. Transparency in Resource Allocation Process (cont.)

Factor 2: Internal Funding and Support for Research																						
Item	Mandel School of Applied Social Sciences		School of Nursing		School of Law		Arts & Sciences		School of Engineering		School of Medicine		School of Dental Medicine		School of Manage-ment	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Service/ committee assignments.	2.93	1.14	3.20	0.62	3.45	0.52	2.91	1.01	3.00	0.87	2.77	1.04	3.60	0.89	3.13	1.10
Assistance in grant preparation, including budgets.	3.36	0.75	3.39	0.70	3.50	0.71	2.86	1.15	3.16	0.86	2.75	1.15	2.50	1.00	2.69	1.25
Internal funding for new research or teaching ideas.	3.40	0.74	3.11	0.81	3.50	0.97	2.62	1.15	2.53	1.13	2.46	1.13	3.00	1.41	2.70	1.17
Internal funding for bridge support between external grants.	2.80	1.03	2.75	0.97	4.00		2.37	1.21	2.24	1.19	2.34	1.16	2.67	1.53	2.50	1.08
Support for professional development/travel funds.	2.86	1.17	2.65	1.09	3.92	0.29	2.63	1.19	2.78	1.07	2.72	1.17	2.80	1.10	3.19	1.03
Assistance in obtaining patents, copyrights, or trademarks.	3.00		2.83	1.17			2.60	1.00	2.72	1.02	2.85	1.11	3.67	0.58	4.00	0.00

APPENDIX 2 – ITEM AVERAGES BY SCHOOL/ COLLEGE – WHOLE SAMPLE N=446 (CONT.)

12. Satisfaction with Community and Academic Dimensions

Factor 1: Community and Job Satisfaction

Item	Mandel School of Applied Social Sciences		School of Nursing		School of Law		Arts & Sciences		School of Engineering		School of Medicine		School of Dental Medicine		School of Manage-ment	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Overall experience of community at Case.	2.93	0.77	3.14	0.85	2.69	0.75	2.87	0.83	3.18	0.78	2.87	0.84	3.57	0.79	3.04	0.93
Overall experience of collegiality in your primary unit (department / school).	3.25	0.86	3.09	0.94	2.92	1.04	2.79	1.09	3.44	0.66	3.19	0.95	3.57	1.13	2.78	1.13
Overall experience of being a faculty member in your primary unit (department / school).	3.13	0.89	3.19	0.98	3.23	1.01	2.91	1.04	3.35	0.65	3.11	0.93	3.57	1.13	2.90	0.97
Teaching and service load.	2.73	1.03	3.00	0.89	3.46	0.78	2.96	0.90	3.20	0.85	3.10	0.84	3.28	1.11	2.86	0.97
Teaching and research balance.	2.67	1.05	2.80	0.81	3.25	1.14	2.79	0.99	3.15	0.83	3.09	0.93	3.00	1.10	2.59	0.96

APPENDIX 2 – ITEM AVERAGES BY SCHOOL/ COLLEGE – WHOLE SAMPLE N=446 (CONT.)

12. Satisfaction with Community and Academic Dimensions (cont.)

Factor 2: Professional Activities and Success																					
Item	Mandel School of Applied Social Sciences		School of Nursing		School of Law		Arts & Sciences		School of Engineering		School of Medicine		School of Dental Medicine		School of Management	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Success of your research or scholarship.	3.25	0.86	2.95	0.86	3.33	0.71	3.17	0.79	3.28	0.94	2.93	0.95	2.42	0.98	3.04	0.95
Effectiveness of your teaching.	3.33	0.82	3.70	0.57	3.46	0.66	3.36	0.68	3.34	0.57	3.26	0.66	3.00	0.58	3.47	0.85
Service within the University.	3.21	1.05	3.15	0.69	2.80	1.23	3.03	0.84	3.09	0.77	2.77	0.86	2.83	1.17	2.95	1.00
Service in your academic discipline.	3.46	0.64	3.65	0.59	3.41	0.67	3.18	0.81	3.29	0.67	3.17	0.83	3.57	0.79	3.21	0.80
Community service.	3.60	0.51	3.38	0.74	3.00	0.74	3.04	0.74	2.91	0.83	2.96	0.88	3.66	0.82	2.94	1.00
Professional development opportunities.	3.00	0.89	3.30	0.80	3.15	0.99	2.68	0.94	2.79	1.00	2.67	0.99	3.14	1.07	3.04	1.02

Factor 3: Satisfaction with Mentoring																
Item	Mandel School of Applied Social Sciences		School of Nursing		School of Law		Arts & Sciences		School of Engineering		School of Medicine		School of Dental Medicine		School of Management	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Mentoring you have received in your primary unit (department / school).	2.93	1.00	2.70	1.03	2.46	1.05	2.50	1.07	2.36	1.10	2.40	1.09	2.50	1.05	2.55	1.10
Mentoring you have received within the University.	2.58	1.00	2.26	0.99	2.11	1.17	2.49	1.02	2.09	1.07	2.26	1.08	2.50	1.05	2.15	0.93

APPENDIX 3 – ITEM AVERAGES BY RANK AND GENDER – WHOLE SAMPLE N=443

1. Participation in Activities on Campus and in University Circle

Factor 1: Extracurricular Activity								
Item	Instructor		Assistant		Associate		Professor	
	F N=26	M N=9	F N=63	M N=57	F N=52	M N=73	F N=31	M N=132
University academic ceremonies (e.g., convocation).	2.50	2.44	1.87	1.95	2.56	2.00	2.55	2.65
Social event.	2.54	3.00	2.62	2.50	2.65	2.63	2.48	2.88
Politically oriented event.	1.73	1.63	1.52	1.45	1.69	1.53	1.84	1.65
Sporting event.	1.54	2.00	1.17	1.28	1.06	1.23	1.19	1.47
Student-organized event.	2.65	2.56	2.17	2.09	2.20	2.31	2.06	2.18
Cultural event / performance.	2.65	2.67	2.43	2.39	2.56	2.51	2.71	2.77
Other community event	2.12	2.56	1.89	1.91	2.08	1.97	2.17	2.36

Factor 2: Academic Activity								
Item	Instructor		Assistant		Associate		Professor	
	F	M	F	M	F	M	F	M
Brown bag discussion.	2.00	1.86	1.70	1.96	2.17	1.75	2.10	2.05
Seminar / visiting lecturer.	2.96	3.56	3.24	3.25	2.94	3.38	3.14	3.56
Colloquium.	2.13	1.88	2.30	2.48	2.55	2.56	2.68	2.88

2. Reasons for Not Attending an Event on Campus or in University Circle

Factor 1: Lack of information or inconvenience of event								
Item	Instructor		Assistant		Associate		Professor	
	F	M	F	M	F	M	F	M
I did not know about the event.	2.36	2.78	2.49	2.67	2.42	2.25	2.38	2.49
I did not know anyone else who was going to attend.	2.48	2.00	2.07	2.49	2.19	1.61	1.70	1.96
I was too busy.	3.81	3.56	3.81	3.68	3.83	3.68	3.50	3.58
It was just too far away.	2.40	1.71	2.10	2.04	1.94	1.93	2.17	2.22
I had already gone home for the day.	2.54	1.88	2.39	2.10	2.15	2.04	1.61	1.98

APPENDIX 3 – ITEM AVERAGES BY RANK AND GENDER – WHOLE SAMPLE N=443 (CONT.)

2. Reasons for Not Attending an Event on Campus or in University Circle (cont.)

Factor 2: Safety and location								
Item	Instructor		Assistant		Associate		Professor	
	F	M	F	M	F	M	F	M
I don't feel safe on campus after dark.	1.85	1.38	2.00	1.55	2.00	1.42	1.61	1.27
It was on the other side of Euclid Avenue.	1.88	1.88	1.66	1.32	1.61	1.38	1.45	1.42
Other.	1.33	1.00	1.95	1.27	1.70	1.63	1.33	1.67

3: Overall Involvement in Campus Activities

Overall Involvement in Campus Activities								
Item	Instructor		Assistant		Associate		Professor	
	F	M	F	M	F	M	F	M
	2.27	2.56	2.16	2.11	2.46	2.45	2.35	2.49

APPENDIX 3 – ITEM AVERAGES BY RANK AND GENDER – WHOLE SAMPLE N=443 (CONT.)

4. Quality of Relationships within the Campus Community

Factor 1: Lack of Acceptance of Diversity								
Item	Instructor		Assistant		Associate		Professor	
	F	M	F	M	F	M	F	M
Sexist remarks are heard in faculty gatherings at Case.	1.88	1.13	1.87	1.47	2.17	1.44	1.90	1.36
Racist remarks are heard in faculty gatherings at Case.	1.63	1.75	1.49	1.46	1.51	1.25	1.44	1.18
Ageist remarks are heard in faculty gatherings at Case.	1.96	1.13	1.76	1.45	1.91	1.42	1.87	1.50

Factor 2: Biased Attitudes								
Item	Instructor		Assistant		Associate		Professor	
	F	M	F	M	F	M	F	M
Faculty at Case have a condescending attitude towards faculty from other countries.	1.71	1.60	1.63	1.55	1.66	1.51	1.62	1.55
Faculty at Case have a condescending attitude towards staff from other countries.	1.86	1.83	1.60	1.66	1.79	1.56	1.57	1.61

Factor 3: Respectful Relationships								
Item	Instructor		Assistant		Associate		Professor	
	F	M	F	M	F	M	F	M
Faculty at Case respect each other.	2.92	2.88	3.22	3.13	3.18	3.36	3.17	3.33
Faculty at Case are treated with respect by campus administrators.	3.09	2.38	2.92	2.82	2.91	2.97	2.69	2.76
Faculty at Case are typically at odds with campus administrators.	2.50	2.86	2.41	2.43	2.27	2.37	2.37	2.39

APPENDIX 3 – ITEM AVERAGES BY RANK AND GENDER – WHOLE SAMPLE N=443 (CONT.)

5. Quality of Relationships and Support in Primary Unit

Factor 1: Sense of being valued and included								
Item	Instructor		Assistant		Associate		Professor	
	F	M	F	M	F	M	F	M
Colleagues in my primary unit value my work.	3.27	3.00	3.14	3.33	3.19	3.51	3.26	3.65
Colleagues in my primary unit can be trusted.	3.24	3.00	3.07	3.39	3.10	3.38	3.10	3.63
I am comfortable asking questions about performance expectations.	3.31	3.00	3.08	3.36	3.02	3.26	3.39	3.38
I feel I can make my primary unit a better place to work.	3.31	3.44	3.10	3.36	2.88	3.34	2.93	3.45
Colleagues in my primary unit provide me feedback about research/ scholarly issues.	2.92	2.63	2.73	2.88	2.68	3.00	2.81	3.05
Colleagues in my primary unit provide me advice about career/ professional issues.	2.92	2.89	2.73	2.98	2.69	2.81	2.42	2.92
Colleagues in my primary unit solicit my opinions about scholarly issues.	2.63	2.00	2.64	2.89	2.67	3.21	3.03	3.32
Colleagues in my primary unit solicit my opinions about professional/ clinical activities.	2.96	2.56	2.78	2.93	2.75	3.33	3.00	3.40
I solicit my colleagues' advice/assistance about my research.	3.26	3.13	3.15	3.15	2.94	3.27	3.17	3.27
I generally interact positively with colleagues in my primary unit.	3.54	3.44	3.53	3.68	3.54	3.62	3.29	3.77
I feel professionally welcome and included by colleagues in my primary unit.	3.15	2.67	3.10	3.40	2.98	3.49	3.16	3.69
Colleagues in my primary unit include me in social events and activities on campus.	3.20	2.63	2.95	3.35	2.92	3.29	3.03	3.58
Colleagues in my primary unit include me in social events and activities off campus.	2.85	2.63	2.60	2.93	2.59	2.93	2.78	3.16

APPENDIX 3 – ITEM AVERAGES BY RANK AND GENDER – WHOLE SAMPLE N=443 (CONT.)

5. Quality of Relationships and Support in Primary Unit (cont.)

Factor 2: Gender, race, and family obligations make a difference								
Item	Instructor		Assistant		Associate		Professor	
	F	M	F	M	F	M	F	M
Gender makes a difference in everyday interactions in my primary unit.	2.32	1.50	2.33	1.79	2.65	1.58	2.65	1.50
Race makes a difference in everyday interactions in my primary unit.	1.96	1.38	1.98	1.72	2.21	1.38	2.13	1.35
Gender makes a difference in access to resources for faculty in my primary unit.	1.76	1.38	2.15	1.50	2.16	1.39	2.17	1.29
Race makes a difference in access to resources for faculty in my primary unit.	1.77	1.38	1.67	1.63	2.00	1.26	1.78	1.22
Colleagues in my primary unit consider female faculty who have children to be less committed to their careers.	2.04	1.88	2.62	1.76	2.21	1.51	2.37	1.46
Colleagues in my primary unit consider male faculty who have children to be less committed to their careers.	1.48	1.25	1.40	1.46	1.50	1.37	1.38	1.27

Factor 3: Sense of Pressure and Restrictions								
Item	Instructor		Assistant		Associate		Professor	
	F	M	F	M	F	M	F	M
I feel pressure to change my work habits to gain the respect of colleagues in my primary unit.	2.12	1.44	2.31	2.07	2.06	1.86	1.60	1.57
I feel pressure to change my work interests to earn tenure / promotion.	2.46	2.13	2.52	2.49	2.31	2.17	1.65	1.32
I am reluctant to raise controversial issues for fear it will affect my promotion / tenure.	2.57	2.50	2.48	2.54	2.33	2.24	1.65	1.42
I constantly feel under scrutiny by colleagues in my primary unit.	2.00	2.13	2.33	2.07	2.08	1.96	1.86	1.84
I have to work harder than my colleagues to be perceived as a legitimate scholar.	2.71	3.00	2.62	2.53	2.72	2.00	2.34	1.75

APPENDIX 3 – ITEM AVERAGES BY RANK AND GENDER – WHOLE SAMPLE N=443 (CONT.)

6. Support for Work-Life Integration

Factor 1: Support for Work-Life Integration								
Item	Instructor		Assistant		Associate		Professor	
	F	M	F	M	F	M	F	M
Flexibility regarding family responsibilities.	2.74	2.83	2.76	2.78	2.79	3.08	2.76	3.25
Family leave.	2.83	2.00	2.79	2.59	2.85	2.94	2.65	3.12
Child care.	2.65	2.60	2.13	2.26	2.28	2.63	2.19	2.69
Partner / spousal hiring.	2.25	2.40	2.13	1.97	2.34	2.38	2.32	2.58
Tenure clock adjustment.	2.30	2.67	2.47	2.43	2.36	2.51	2.68	2.89
Sabbatical leave.	1.67	2.67	2.39	2.04	2.39	2.34	2.71	2.92
Mental / physical health accommodations.	3.05	2.75	2.61	2.50	2.68	2.83	2.81	3.09

7. Effectiveness of Primary Unit Head (Chair/Dean)

Factor 1: Effective Academic Leadership								
Item	Instructor		Assistant		Associate		Professor	
	F	M	F	M	F	M	F	M
Maintains high academic standards.	3.40	3.29	3.18	3.44	3.34	3.31	3.03	3.63
Is open to constructive criticism.	2.92	3.17	2.89	2.98	2.82	3.11	2.55	3.24
Is an effective administrator.	3.00	3.43	2.75	3.19	2.66	3.10	2.70	3.12
Shows interest in faculty / researchers.	3.36	2.56	3.21	3.31	3.25	3.32	3.07	3.48
Treats faculty/researchers in an even-handed way.	2.96	3.00	2.83	3.15	2.90	3.28	2.82	3.37
Articulates a clear vision.	2.92	3.00	2.64	3.00	2.46	2.78	2.60	2.99
Articulates clear criteria for promotion/tenure.	3.14	2.88	2.75	2.81	2.71	3.00	3.26	3.42
Honors agreements.	3.33	3.22	3.11	3.28	3.21	3.42	3.08	3.54
Handles disputes//problems effectively.	2.88	3.14	2.70	3.07	2.57	3.06	2.48	3.12
Communicates consistently with faculty/ researchers.	3.12	2.67	2.78	3.14	2.73	2.93	2.57	3.05
Creates a cooperative and supportive environment.	3.00	2.78	2.84	3.16	2.81	3.22	2.70	3.25
Shows commitment to diversity.	3.63	2.88	3.26	3.43	3.43	3.50	3.10	3.51
Facilitates collegial interactions among the faculty.	3.28	3.00	2.80	3.18	2.70	3.23	2.62	3.35

APPENDIX 3 – ITEM AVERAGES BY RANK AND GENDER – WHOLE SAMPLE N=443 (CONT.)

7. Effectiveness of Primary Unit Head (Chair/Dean) (cont.)

Factor 2: Resources and Support								
Item	Instructor		Assistant		Associate		Professor	
	F	M	F	M	F	M	F	M
Helps me obtain the resources I need.	3.15	3.11	2.80	3.05	2.88	3.01	2.61	3.16
Gives me useful feedback about my performance.	3.20	2.89	2.73	3.05	2.67	2.99	2.59	3.23
Is a mentor to me.	2.52	3.00	2.36	2.89	2.39	2.46	2.00	2.47
Values my mentoring of others.	3.14	3.33	2.52	2.83	2.87	3.06	2.86	3.36
Provides administrative opportunities.	3.13	2.67	2.74	3.02	2.74	3.05	2.62	3.19
Provides teaching/development opportunities.	3.21	3.11	2.86	3.04	2.79	3.04	2.81	3.17
Shares resources/opportunities fairly.	3.08	3.29	2.67	3.04	2.78	3.13	2.63	3.17
Involves me in important decision-making processes.	2.65	2.38	2.41	2.78	2.47	2.94	2.50	3.02

8. Mentoring Received

Factor 1: Mentoring Outside Primary Unit								
Item	Instructor		Assistant		Associate		Professor	
	F	M	F	M	F	M	F	M
To what extent do you receive formal mentoring outside your primary unit, but within the University?	1.60	1.78	1.87	1.48	1.45	1.48	1.48	1.42
To what extent do you receive informal mentoring outside your primary unit, but within the University?	1.76	2.00	2.35	1.75	1.94	1.76	2.00	1.64
To what extent do you receive formal mentoring outside of the University?	2.20	2.33	1.82	1.46	1.61	1.40	1.61	1.41
To what extent do you receive informal mentoring outside of the University?	2.48	2.33	2.68	1.95	2.50	2.11	2.69	1.92

APPENDIX 3 – ITEM AVERAGES BY RANK AND GENDER – WHOLE SAMPLE N=443 (CONT.)

8. Mentoring Received (cont.)

Factor 2: Mentoring Within Primary Unit								
Item	Instructor		Assistant		Associate		Professor	
	F	M	F	M	F	M	F	M
To what extent do you receive formal mentoring within your primary unit (department/school)?	1.96	2.44	2.37	2.21	1.98	1.96	1.50	1.69
To what extent do you receive informal mentoring within your primary unit (department/school)?	2.73	2.44	2.69	2.67	2.62	2.58	2.00	2.22

9. Appropriateness of Resources to Advance Academic Work

Factor 1: Funding and Technical Support								
Item	Instructor		Assistant		Associate		Professor	
	F	M	F	M	F	M	F	M
Internal funding for new research or teaching ideas.	2.53	2.83	2.62	2.48	2.74	2.36	2.41	2.50
Internal funding for bridge support between external grants.	2.70	2.00	2.19	1.84	2.08	2.38	1.68	2.06
Start-up package and contract.	2.33	1.67	2.72	2.74	2.32	2.33	2.19	3.00
Consulting opportunities.	2.43	2.40	2.22	2.03	2.67	3.00	2.64	3.13
Assistance in obtaining patents, copyrights, or trademarks.	3.00	2.33	2.50	2.44	2.56	2.45	2.25	2.49
Computers/ equipment and technical support.	3.23	3.00	2.80	2.83	2.79	2.73	2.69	2.81

Factor 2: Compensation, Office Space, and Clerical Support								
Item	Instructor		Assistant		Associate		Professor	
	F	M	F	M	F	M	F	M
Office space.	3.19	2.44	3.18	3.26	3.39	3.27	2.77	3.52
Salary during academic year.	2.38	2.11	2.78	2.88	2.86	2.73	2.65	3.11
Salary during the summer.	3.00	2.67	2.88	2.74	3.00	2.90	2.62	3.04
Support for professional development/ travel funds.	2.04	2.57	2.62	2.54	2.65	2.39	2.52	2.59
Clerical/ secretarial support.	2.77	2.71	2.33	2.67	1.90	2.42	2.29	2.82

APPENDIX 3 – ITEM AVERAGES BY RANK AND GENDER – WHOLE SAMPLE N=443 (CONT.)

9. Appropriateness of Resources to Advance Academic Work (cont.)

Factor 3: Support for Non-research Responsibilities								
Item	Instructor		Assistant		Associate		Professor	
	F	M	F	M	F	M	F	M
Teaching assistants or graders.	2.44	2.00	2.69	2.59	2.68	2.85	2.44	3.04
Teaching load.	3.36	3.43	2.91	2.93	3.04	3.06	2.85	3.35
Student advising responsibilities.	3.26	3.50	2.91	2.74	2.88	3.13	3.27	3.36
Service/ committee assignments.	2.83	3.40	2.84	2.88	2.88	3.12	3.19	3.33

10. Fairness of Resources in Comparison with Others

Factor 1: Office and Lab Space								
Item	Instructor		Assistant		Associate		Professor	
	F	M	F	M	F	M	F	M
Office space.	3.35	3.13	3.17	3.36	3.60	3.42	3.20	3.62
Laboratory space/space for housing research animals.	3.17	2.75	2.91	2.96	3.07	3.18	2.81	3.43
Service/ committee assignments.	2.96	2.60	2.87	3.00	2.67	3.08	2.89	3.27
Assistance in grant preparation, including budgets.	3.18	3.00	3.10	3.03	3.31	3.35	2.92	3.37
Consulting opportunities.	3.09	3.33	2.07	2.43	2.85	3.24	2.87	3.37
Assistance in obtaining patents, copyrights, or trademarks.	3.67	2.33	2.67	2.92	2.88	3.21	3.00	3.11

Factor 2: Compensation and Non-research Related Support								
Item	Instructor		Assistant		Associate		Professor	
	F	M	F	M	F	M	F	M
Teaching assistants or graders.	2.88	2.20	3.20	3.03	3.24	3.18	3.06	3.52
Teaching load.	3.33	3.14	2.96	3.04	3.13	3.00	3.19	3.37
Student advising responsibilities.	3.14	3.00	2.86	2.90	2.80	3.12	3.15	3.26
Salary during academic year.	2.73	2.29	2.55	3.00	2.73	2.74	2.72	3.17
Salary during the summer.	3.19	2.80	2.95	2.96	3.00	3.13	3.00	3.33
Administrative supplement salary.	2.20	1.00	2.44	2.50	2.83	3.00	2.47	3.25
Clerical/ secretarial support.	3.21	2.50	2.87	3.08	2.69	2.97	3.00	3.27

APPENDIX 3 – ITEM AVERAGES BY RANK AND GENDER – WHOLE SAMPLE N=443 (CONT.)

10. Fairness of Resources in Comparison with Others (cont.)

Factor 3: Fair Funding and Technical Support								
Item	Instructor		Assistant		Associate		Professor	
	F	M	F	M	F	M	F	M
Internal funding for new research or teaching ideas.	2.89	3.00	3.07	2.88	3.03	3.09	2.83	3.08
Internal funding for bridge support between external grants.	3.10	2.00	2.54	2.30	2.63	3.14	2.53	2.92
Start-up package and contract.	2.89	1.80	2.40	2.84	2.26	2.69	2.08	3.20
Support for professional development/ travel funds.	2.75	3.00	2.88	3.05	3.07	3.15	3.00	3.21
Computers/ equipment and technical support.	3.50	3.17	3.18	3.12	3.07	3.31	2.93	3.26

11. Transparency in Resource Allocation Process

Factor 1: Compensation, Space, Teaching, and Clerical Supports								
Item	Instructor		Assistant		Associate		Professor	
	F	M	F	M	F	M	F	M
Office space.	2.61	2.60	2.26	2.77	2.82	2.97	2.47	3.08
Laboratory space/space for housing research animals.	3.00	3.00	2.16	2.44	2.36	2.70	2.19	3.09
Teaching assistants or graders.	3.07	2.00	2.48	2.76	2.64	2.95	2.63	3.35
Teaching load.	3.22	3.00	2.76	2.82	2.65	2.94	2.56	3.24
Student advising responsibilities.	3.14	3.00	2.72	2.67	2.70	2.95	2.88	3.22
Salary during academic year.	2.52	2.50	2.21	2.71	2.40	2.36	2.13	2.98
Salary during the summer.	3.00	2.80	2.75	2.73	2.69	3.10	2.60	3.34
Administrative supplement salary.	2.31	1.00	1.64	2.47	2.60	2.79	2.11	3.14
Start-up package and contract.	3.00	2.00	2.08	2.57	2.09	2.38	2.00	3.24
Consulting opportunities.	2.67	3.50	2.14	2.27	2.91	3.09	2.69	3.25
Computers/ equipment and technical support.	3.16	3.20	2.66	2.96	2.71	2.84	2.55	3.02
Clerical/ secretarial support.	2.92	2.40	2.52	2.68	2.39	2.68	2.46	3.13

APPENDIX 3 – ITEM AVERAGES BY RANK AND GENDER – WHOLE SAMPLE N=443 (CONT.)

11. Transparency in Resource Allocation Process (cont.)

Factor 2: Internal Funding and Support for Research								
Item	Instructor		Assistant		Associate		Professor	
	F	M	F	M	F	M	F	M
Service/ committee assignments.	2.96	2.75	2.68	2.76	2.81	3.02	2.62	3.18
Assistance in grant preparation, including budgets.	3.18	3.20	2.61	2.67	2.88	3.05	2.48	3.13
Internal funding for new research or teaching ideas.	2.79	3.00	2.49	2.37	2.94	2.54	2.68	2.78
Internal funding for bridge support between external grants.	3.09	1.50	2.12	2.14	2.43	2.60	2.24	2.50
Support for professional development/ travel funds.	2.74	3.00	2.57	2.83	2.69	2.63	2.56	3.03
Assistance in obtaining patents, copyrights, or trademarks.	3.83	2.00	2.29	2.79	2.63	2.85	2.73	2.87

12. Satisfaction with Community and Academic Dimensions

Factor 1: Community and Job Satisfaction								
Item	Instructor		Assistant		Associate		Professor	
	F	M	F	M	F	M	F	M
Overall experience of community at Case.	3.04	3.00	2.74	2.84	2.86	3.01	2.77	3.11
Overall experience of collegiality in your primary unit (department / school).	3.12	2.56	2.73	3.12	2.86	3.12	2.71	3.43
Overall experience of being a faculty member in your primary unit (department / school).	3.27	3.00	2.70	3.09	2.79	3.15	2.81	3.44
Teaching and service load.	3.32	3.13	2.79	2.96	2.80	3.16	2.83	3.31
Teaching and research balance.	2.74	3.14	2.63	2.83	2.89	3.03	2.87	3.23

APPENDIX 3 – ITEM AVERAGES BY RANK AND GENDER – WHOLE SAMPLE N=443 (CONT.)

12. Satisfaction with Community and Academic Dimensions

Factor 2: Professional Activities and Success								
Item	Instructor		Assistant		Associate		Professor	
	F	M	F	M	F	M	F	M
Success of your research or scholarship.	2.65	3.13	2.83	2.57	2.92	3.03	3.28	3.45
Effectiveness of your teaching.	3.56	3.75	3.20	3.37	3.34	3.44	3.11	3.34
Service within the University.	2.86	2.63	2.89	2.58	3.12	2.80	3.23	3.02
Service in your academic discipline.	3.43	3.13	3.12	3.04	3.25	3.16	3.42	3.38
Community service.	3.26	3.00	2.87	2.81	3.05	2.98	3.40	3.18
Professional development opportunities.	2.76	2.63	2.57	2.40	2.84	2.74	2.86	3.10

Factor 3: Satisfaction with Mentoring								
Item	Instructor		Assistant		Associate		Professor	
	F	M	F	M	F	M	F	M
Mentoring you have received in your primary unit (department / school).	2.44	2.75	2.43	2.53	2.41	2.45	2.22	2.65
Mentoring you have received within the University.	2.74	2.29	2.61	2.12	2.24	2.25	2.32	2.27

APPENDIX 4 – ITEM AVERAGES FOR ALL SCHOOLS/COLLEGES
EXCEPT SCHOOL OF MEDICINE N=240

1. Participation in Activities on Campus and in University Circle

Factor 1: Extracurricular Activity	Item Mean	SD
University academic ceremonies (e.g., convocation).	2.72	1.05
Social event.	3.00	0.82
Politically oriented event.	1.82	0.87
Sporting event.	1.38	0.69
Student-organized event.	2.49	0.89
Cultural event/performance.	2.76	0.92
Other community event	2.19	0.81

Factor 2: Academic Activity	Item Mean	SD
Brown bag discussion.	2.36	1.05
Seminar/visiting lecturer.	3.35	0.81
Colloquium.	3.00	1.02

2. Reasons for Not Attending an Event on Campus or in University Circle

Factor 1: Lack of information or inconvenience of event	Item Mean	SD
I did not know about the event.	2.43	0.77
I did not know anyone else who was going to attend.	1.98	1.01
I was too busy.	3.70	0.62
It was just too far away.	2.04	0.99
I had already gone home for the day.	2.21	1.07

Factor 2: Safety and location	Item Mean	SD
I don't feel safe on campus after dark.	1.66	0.93
It was on the other side of Euclid Avenue.	1.59	0.89
Other.	1.77	1.09

3: Overall Involvement in Campus Activities

Overall Involvement in Campus Activities	Item Mean	SD
	2.70	0.76

APPENDIX 4 – ITEM AVERAGES FOR ALL SCHOOLS/COLLEGES
EXCEPT SCHOOL OF MEDICINE N=240 (CONT.)

4. Quality of Relationships within the Campus Community

Factor 1: Lack of Acceptance of Diversity	Item Mean	SD
Sexist remarks are heard in faculty gatherings at Case.	1.67	0.91
Racist remarks are heard in faculty gatherings at Case.	1.40	0.76
Ageist remarks are heard in faculty gatherings at Case.	1.64	0.83

Factor 2: Biased Attitudes	Item Mean	SD
Faculty at Case has a condescending attitude towards faculty from other countries.	1.56	0.80
Faculty at Case has a condescending attitude towards staff from other countries.	1.62	0.85

Factor 3: Respectful Relationships	Item Mean	SD
Faculty at Case respects each other.	3.14	0.74
Faculty at Case is treated with respect by campus administrators.	2.74	0.92
Faculty at Case is typically at odds with campus administrators.	2.51	0.87

APPENDIX 4 – ITEM AVERAGES FOR ALL SCHOOLS/COLLEGES
EXCEPT SCHOOL OF MEDICINE N=240 (CONT.)

5. Quality of Relationships and Support in Primary Unit

Factor 1: Sense of being valued and included	Item Mean	SD
Colleagues in my primary unit value my work.	3.35	0.83
Colleagues in my primary unit can be trusted.	3.23	0.93
I am comfortable asking questions about performance expectations	3.27	0.85
I feel I can make my primary unit a better place to work.	3.21	0.88
Colleagues in my primary unit provide me feedback about research/scholarly issues.	2.88	0.95
Colleagues in my primary unit provide me advice about career/professional issues.	2.81	0.95
Colleagues in my primary unit solicit my opinions about scholarly issues.	2.93	0.92
Colleagues in my primary unit solicit my opinions about professional/clinical activities.	2.96	0.97
I solicit my colleagues' advice/assistance about my research.	3.07	0.82
I generally interact positively with colleagues in my primary unit.	3.55	0.68
I feel professionally welcome and included by colleagues in my primary unit.	3.31	0.94
Colleagues in my primary unit include me in social events and activities on campus.	3.27	0.91
Colleagues in my primary unit include me in social events and activities off campus.	2.87	0.99

Factor 2: Gender, race, and family obligations	Item Mean	SD
Gender makes a difference in everyday interactions in my primary unit.	2.03	1.12
Race makes a difference in everyday interactions in my primary unit.	1.81	1.04
Gender makes a difference in access to resources for faculty in my primary unit.	1.65	1.00
Race makes a difference in access to resources for faculty in my primary unit.	1.57	0.93
Colleagues in my primary unit consider female faculty who have children to be less committed to their careers.	1.77	0.94
Colleagues in my primary unit consider male faculty who have children to be less committed to their careers.	1.41	0.72

APPENDIX 4 – ITEM AVERAGES FOR ALL SCHOOLS/COLLEGES
EXCEPT SCHOOL OF MEDICINE N=240 (CONT.)

5. Quality of Relationships and Support in Primary Unit (cont.)

Factor 3: Pressure and Restrictions	Item Mean	SD
I feel pressure to change my work habits to gain the respect of colleagues in my primary unit.	3.13	1.02
I feel pressure to change my work interests to earn tenure / promotion	2.89	1.16
I am reluctant to raise controversial issues for fear it will affect my promotion / tenure.	2.85	1.15
I constantly feel under scrutiny by colleagues in my primary unit.	3.03	1.00
I have to work harder than my colleagues to be perceived as a legitimate scholar.	2.82	1.13

6. Support for Work-Life Integration

Factor 1: Support for Work-Life Integration	Item Mean	SD
Flexibility regarding family responsibilities.	3.07	0.89
Family leave.	2.83	1.08
Child care.	2.46	1.10
Partner / spousal hiring.	2.26	1.10
Tenure clock adjustment.	2.67	0.96
Sabbatical leave.	2.92	1.03
Mental / physical health accommodations.	2.92	0.99

APPENDIX 4 – ITEM AVERAGES FOR ALL SCHOOLS/COLLEGES
EXCEPT SCHOOL OF MEDICINE N=240 (CONT.)

7. Effectiveness of Primary Unit Head (Chair/Dean)

Factor 1: Effective Academic Leadership	Item Mean	SD
Maintains high academic standards.	3.38	0.87
Is open to constructive criticism.	3.09	1.00
Is an effective administrator.	3.03	1.01
Shows interest in faculty / researchers.	3.34	0.96
Treats faculty/researchers in an even-handed way.	3.16	1.05
Articulates a clear vision.	2.86	1.13
Articulates clear criteria for promotion/tenure.	3.17	0.97
Honors agreements.	3.45	0.85
Handles disputes//problems effectively.	2.99	0.99
Communicates consistently with faculty/ researchers.	2.98	1.05
Creates a cooperative and supportive environment.	3.09	1.02
Shows commitment to diversity.	3.47	0.85
Facilitates collegial interactions among the faculty.	3.10	1.01

Factor 2: Resources and Support	Item Mean	SD
Helps me obtain the resources I need.	3.11	1.04
Gives me useful feedback about my performance.	3.06	1.03
Is a mentor to me.	2.51	1.18
Values my mentoring of others.	3.06	1.09
Provides administrative opportunities.	3.14	1.06
Provides teaching/development opportunities.	3.12	0.92
Shares resources/opportunities fairly.	3.09	1.01
Involves me in important decision-making processes.	2.92	1.07

APPENDIX 4 – ITEM AVERAGES FOR ALL SCHOOLS/COLLEGES
EXCEPT SCHOOL OF MEDICINE N=240 (CONT.)

8. Mentoring Received

Factor 1: Mentoring Outside Primary Unit	Item Mean	SD
To what extent do you receive formal mentoring outside your primary unit, but within the University?	1.43	0.82
To what extent do you receive informal mentoring outside your primary unit, but within the University?	1.80	0.91
To what extent do you receive formal mentoring outside of the University?	1.49	0.88
To what extent do you receive informal mentoring outside of the University?	2.21	0.99

Factor 2: Mentoring Within Primary Unit	Item Mean	SD
To what extent do you receive formal mentoring within your primary unit (department/school)?	1.92	1.14
To what extent do you receive informal mentoring within your primary unit (department/school)?	2.50	1.03

9. Appropriateness of Resources to Advance Academic Work

Factor 1: Funding and Technical Support	Item Mean	SD
Internal funding for new research or teaching ideas.	2.56	1.10
Internal funding for bridge support between external grants.	1.96	1.05
Start-up package and contract.	2.68	1.15
Consulting opportunities.	2.80	1.06
Assistance in obtaining patents, copyrights, or trademarks.	2.38	1.07
Computers/ equipment and technical support.	2.90	1.08

Factor 2: Compensation, Office Space, and Clerical Support	Item Mean	SD
Office space.	3.36	0.88
Salary during academic year.	2.77	1.00
Salary during the summer.	2.85	1.03
Support for professional development/travel funds.	2.61	1.13
Clerical/ secretarial support.	2.64	1.08

APPENDIX 4 – ITEM AVERAGES FOR ALL SCHOOLS/COLLEGES
EXCEPT SCHOOL OF MEDICINE N=240 (CONT.)

9. Appropriateness of Resources to Advance Academic Work (cont.)

Factor 3: Support for Non-research Responsibilities	Item Mean	SD
Teaching assistants or graders.	2.83	1.07
Teaching load.	3.04	1.03
Student advising responsibilities.	3.11	0.87
Service/ committee assignments.	3.11	0.87

10. Fairness of Resources in Comparison with Others

Factor 1: Office and Lab Space	Item Mean	SD
Office space.	3.50	0.78
Laboratory space/space for housing research animals.	3.18	0.98
Service/ committee assignments.	3.05	0.94
Assistance in grant preparation, including budgets.	3.32	0.83
Consulting opportunities.	3.17	0.91
Assistance in obtaining patents, copyrights, or trademarks.	3.09	1.02

Factor 2: Compensation and Non-research Related Support	Item Mean	SD
Teaching assistants or graders.	3.32	0.89
Teaching load.	3.17	1.00
Student advising responsibilities.	3.09	0.96
Salary during academic year.	2.80	1.08
Salary during the summer.	3.07	0.99
Administrative supplement salary.	2.89	1.12
Clerical/ secretarial support.	3.19	0.91

Factor 3: Fair Funding and Technical Support	Item Mean	SD
Internal funding for new research or teaching ideas.	3.14	0.97
Internal funding for bridge support between external grants.	2.83	1.09
Start-up package and contract.	2.73	1.21
Support for professional development/travel funds.	3.15	0.95
Computers/ equipment and technical support.	3.28	0.91

APPENDIX 4 – ITEM AVERAGES FOR ALL SCHOOLS/COLLEGES EXCEPT SCHOOL OF MEDICINE N=240 (CONT.)

11. Transparency in Resource Allocation Process

Factor 1: Compensation, Space, Teaching and Clerical Supports	Item Mean	SD
Office space.	2.97	1.06
Laboratory space/space for housing research animals.	2.87	1.07
Teaching assistants or graders.	3.05	0.99
Teaching load.	3.00	1.07
Student advising responsibilities.	2.95	1.00
Salary during academic year.	2.52	1.09
Salary during the summer.	2.99	1.07
Administrative supplement salary.	2.66	1.20
Start-up package and contract.	2.47	1.16
Consulting opportunities.	3.00	1.04
Computers/ equipment and technical support.	2.89	1.04
Clerical/ secretarial support.	2.83	1.06

Factor 2: Internal Funding and Support for Research	Item Mean	SD
Service/ committee assignments.	3.02	0.95
Assistance in grant preparation, including budgets.	3.01	1.03
Internal funding for new research or teaching ideas.	2.78	1.11
Internal funding for bridge support between external grants.	2.44	1.16
Support for professional development/travel funds.	2.81	1.14
Assistance in obtaining patents, copyrights, or trademarks.	2.79	1.02

12. Satisfaction with Community and Academic Dimensions

Factor 1: Community and Job Satisfaction	Item Mean	SD
Overall experience of community at Case.	2.99	0.83
Overall experience of collegiality in your primary unit (department / school).	3.00	1.02
Overall experience of being a faculty member in your primary unit (department / school).	3.07	0.97
Teaching and service load.	3.03	0.91
Teaching and research balance.	2.87	0.97

APPENDIX 4 – ITEM AVERAGES FOR ALL SCHOOLS/COLLEGES
EXCEPT SCHOOL OF MEDICINE N=240 (CONT.)

12. Satisfaction with Community and Academic Dimensions (cont.)

Factor 2: Professional Activities and Success	Item Mean	SD
Success of your research or scholarship.	3.15	0.86
Effectiveness of your teaching.	3.40	0.68
Service within the University.	3.05	0.87
Service in your academic discipline.	3.29	0.76
Community service.	3.11	0.79
Professional development opportunities.	2.87	0.97

Factor 3: Satisfaction with Mentoring	Item Mean	SD
Mentoring you have received in your primary unit (department / school).	2.53	1.06
Mentoring you have received within the University.	2.36	1.03

APPENDIX 5 – ITEM AVERAGES FOR SCHOOL OF MEDICINE N=206

1. Participation in Activities on Campus and in University Circle

Factor 1: Extracurricular Activity	Item Mean	SD
University academic ceremonies (e.g., convocation).	1.77	0.99
Social event.	2.33	0.88
Politically oriented event.	1.36	0.60
Sporting event.	1.21	0.49
Student-organized event.	1.86	0.91
Cultural event/performance.	2.37	0.96
Other community event	1.99	0.86

Factor 2: Academic Activity	Item Mean	SD
Brown bag discussion.	1.43	0.78
Seminar/visiting lecturer.	3.28	0.88
Colloquium.	2.13	1.05

2. Reasons for Not Attending an Event on Campus or in University Circle

Factor 1: Lack of information or inconvenience of event	Item Mean	SD
I did not know about the event.	2.51	0.92
I did not know anyone else who was going to attend.	2.09	1.11
I was too busy.	3.67	0.67
It was just too far away.	2.16	1.13
I had already gone home for the day.	1.95	1.03

Factor 2: Safety and location	Item Mean	SD
I don't feel safe on campus after dark.	1.49	0.82
It was on the other side of Euclid Avenue.	1.39	0.76
Other.	1.48	0.86

3: Overall Involvement in Campus Activities

Overall Involvement in Campus Activities	Item Mean	SD
	2.01	0.77

APPENDIX 5 – ITEM AVERAGES FOR SCHOOL OF MEDICINE N=206 (CONT.)

4. Quality of Relationships within the Campus Community

Factor 1: Lack of Acceptance of Diversity	Item Mean	SD
Sexist remarks are heard in faculty gatherings at Case.	1.59	0.84
Racist remarks are heard in faculty gatherings at Case.	1.34	0.68
Ageist remarks are heard in faculty gatherings at Case.	1.58	0.88

Factor 2: Biased Attitudes	Item Mean	SD
Faculty at Case has a condescending attitude towards faculty from other countries.	1.66	0.87
Faculty at Case has a condescending attitude towards staff from other countries.	1.72	0.87

Factor 3: Respectful Relationships	Item Mean	SD
Faculty at Case respects each other.	3.34	0.64
Faculty at Case is treated with respect by campus administrators.	2.93	0.87
Faculty at Case is typically at odds with campus administrators.	2.67	0.86

APPENDIX 5 – ITEM AVERAGES FOR SCHOOL OF MEDICINE N=206 (CONT.)

5. Quality of Relationships and Support in Primary Unit

Factor 1: Sense of being valued and included	Item Mean	SD
Colleagues in my primary unit value my work.	3.41	0.79
Colleagues in my primary unit can be trusted.	3.46	0.76
I am comfortable asking questions about performance expectations	3.22	0.86
I feel I can make my primary unit a better place to work.	3.30	0.82
Colleagues in my primary unit provide me feedback about research/scholarly issues.	2.94	0.95
Colleagues in my primary unit provide me advice about career/professional issues.	2.82	0.98
Colleagues in my primary unit solicit my opinions about scholarly issues.	3.08	0.90
Colleagues in my primary unit solicit my opinions about professional/clinical activities.	3.21	0.90
I solicit my colleagues' advice/assistance about my research.	3.27	0.77
I generally interact positively with colleagues in my primary unit.	3.69	0.53
I feel professionally welcome and included by colleagues in my primary unit.	3.41	0.81
Colleagues in my primary unit include me in social events and activities on campus.	3.24	0.93
Colleagues in my primary unit include me in social events and activities off campus.	2.92	0.96

Factor 2: Gender, Race, and Family Obligations	Item Mean	SD
Gender makes a difference in everyday interactions in my primary unit.	1.86	1.09
Race makes a difference in everyday interactions in my primary unit.	1.52	0.88
Gender makes a difference in access to resources for faculty in my primary unit.	1.66	1.02
Race makes a difference in access to resources for faculty in my primary unit.	1.40	0.80
Colleagues in my primary unit consider female faculty who have children to be less committed to their careers.	2.00	1.02
Colleagues in my primary unit consider male faculty who have children to be less committed to their careers.	1.38	0.68

APPENDIX 5 – ITEM AVERAGES FOR SCHOOL OF MEDICINE N=206 (CONT.)

5. Quality of Relationships and Support in Primary Unit (cont.)

Factor 3: Pressure and Restrictions	Item Mean	SD
I feel pressure to change my work habits to gain the respect of colleagues in my primary unit.	1.88	0.99
I feel pressure to change my work interests to earn tenure / promotion	2.09	1.13
I am reluctant to raise controversial issues for fear it will affect my promotion / tenure.	2.10	1.08
I constantly feel under scrutiny by colleagues in my primary unit.	2.05	0.98
I have to work harder than my colleagues to be perceived as a legitimate scholar.	2.32	1.08

6. Support for Work-Life Integration

Factor 1: Support for Work-Life Integration	Item Mean	SD
Flexibility regarding family responsibilities.	2.84	1.05
Family leave.	2.88	1.05
Child care.	2.43	1.13
Partner / spousal hiring.	2.47	0.98
Tenure clock adjustment.	2.50	1.04
Sabbatical leave.	1.99	1.06
Mental / physical health accommodations.	2.71	1.04

APPENDIX 5 – ITEM AVERAGES FOR SCHOOL OF MEDICINE N=206 (CONT.)

7. Effectiveness of Primary Unit Head (Chair/Dean)

Factor 1: Effective Academic Leadership	Item Mean	SD
Maintains high academic standards.	3.39	0.79
Is open to constructive criticism.	2.88	1.02
Is an effective administrator.	2.94	1.02
Shows interest in faculty / researchers.	3.25	0.92
Treats faculty/researchers in an even-handed way.	3.04	1.05
Articulates a clear vision.	2.79	1.06
Articulates clear criteria for promotion/tenure.	2.89	1.03
Honors agreements.	3.16	0.95
Handles disputes//problems effectively.	2.82	0.97
Communicates consistently with faculty/ researchers.	2.85	1.05
Creates a cooperative and supportive environment.	3.00	1.02
Shows commitment to diversity.	3.35	0.83
Facilitates collegial interactions among the faculty.	3.09	0.97

Factor 2: Resources and Support	Item Mean	SD
Helps me obtain the resources I need.	2.83	1.05
Gives me useful feedback about my performance.	2.81	1.08
Is a mentor to me.	2.41	1.18
Values my mentoring of others.	2.91	1.10
Provides administrative opportunities.	2.79	1.05
Provides teaching/development opportunities.	2.87	1.02
Shares resources/opportunities fairly.	2.86	1.05
Involves me in important decision-making processes.	2.49	1.18

APPENDIX 5 – ITEM AVERAGES FOR SCHOOL OF MEDICINE N=206 (CONT.)

8. Mentoring Received

Factor 1: Mentoring Outside Primary Unit	Item Mean	SD
To what extent do you receive formal mentoring outside your primary unit, but within the University?	1.60	0.93
To what extent do you receive informal mentoring outside your primary unit, but within the University?	1.89	0.97
To what extent do you receive formal mentoring outside of the University?	1.64	0.99
To what extent do you receive informal mentoring outside of the University?	2.21	1.05

Factor 2: Mentoring Within Primary Unit	Item Mean	SD
To what extent do you receive formal mentoring within your primary unit (department/school)?	1.97	1.08
To what extent do you receive informal mentoring within your primary unit (department/school)?	2.43	0.98

9. Appropriateness of Resources to Advance Academic Work

Factor 1: Funding and Technical Support	Item Mean	SD
Internal funding for new research or teaching ideas.	2.44	1.13
Internal funding for bridge support between external grants.	2.23	1.10
Start-up package and contract.	2.52	1.23
Consulting opportunities.	2.67	1.09
Assistance in obtaining patents, copyrights, or trademarks.	2.58	1.10
Computers/ equipment and technical support.	2.67	1.07

Factor 2: Compensation, Office Space, and Clerical Support	Item Mean	SD
Office space.	3.23	0.93
Salary during academic year.	2.90	1.03
Salary during the summer.	3.01	1.04
Support for professional development/travel funds.	2.43	1.12
Clerical/ secretarial support.	2.41	1.09

APPENDIX 5 – ITEM AVERAGES FOR SCHOOL OF MEDICINE N=206 (CONT.)

9. Appropriateness of Resources to Advance Academic Work (cont.)

Factor 3: Support for Non-research Responsibilities	Item Mean	SD
Teaching assistants or graders.	2.68	1.06
Teaching load.	3.17	0.82
Student advising responsibilities.	3.14	0.85
Service/ committee assignments.	3.04	0.86

10. Fairness of Resources in Comparison with Others

Factor 1: Office and Lab Space	Item Mean	SD
Office space.	3.40	0.81
Laboratory space/space for housing research animals.	3.17	0.83
Service/ committee assignments.	3.02	0.93
Assistance in grant preparation, including budgets.	3.09	0.95
Consulting opportunities.	2.84	1.07
Assistance in obtaining patents, copyrights, or trademarks.	3.05	0.98

Factor 2: Compensation and Non-research Related Support	Item Mean	SD
Teaching assistants or graders.	3.09	0.93
Teaching load.	3.10	0.93
Student advising responsibilities.	3.09	0.90
Salary during academic year.	2.87	1.05
Salary during the summer.	3.06	0.92
Administrative supplement salary.	2.86	1.09
Clerical/ secretarial support.	2.90	1.0

Factor 3: Fair Funding and Technical Support	Item Mean	SD
Internal funding for new research or teaching ideas.	2.81	1.05
Internal funding for bridge support between external grants.	2.69	1.09
Start-up package and contract.	2.61	1.21
Support for professional development/travel funds.	2.98	1.00
Computers/ equipment and technical support.	3.07	0.93

APPENDIX 5 – ITEM AVERAGES FOR SCHOOL OF MEDICINE N=206 (CONT.)

11. Transparency in Resource Allocation Process

Factor 1: Compensation, Space, Teaching, and Clerical Supports	Item Mean	SD
Office space.	2.68	1.11
Laboratory space/space for housing research animals.	2.53	1.16
Teaching assistants or graders.	2.72	1.12
Teaching load.	2.80	1.03
Student advising responsibilities.	2.91	1.03
Salary during academic year.	2.63	1.12
Salary during the summer.	2.87	1.15
Administrative supplement salary.	2.72	1.17
Start-up package and contract.	2.48	1.22
Consulting opportunities.	2.74	1.14
Computers/ equipment and technical support.	2.77	1.08
Clerical/ secretarial support.	2.67	1.12

Factor 2: Internal Funding and Support for Research	Item Mean	SD
Service/ committee assignments.	2.77	1.04
Assistance in grant preparation, including budgets.	2.75	1.15
Internal funding for new research or teaching ideas.	2.46	1.13
Internal funding for bridge support between external grants.	2.34	1.16
Support for professional development/travel funds.	2.72	1.17
Assistance in obtaining patents, copyrights, or trademarks.	2.85	1.11

12. Satisfaction with Community and Academic Dimensions

Factor 1: Community and Job Satisfaction	Item Mean	SD
Overall experience of community at Case.	2.88	0.84
Overall experience of collegiality in your primary unit (department / school).	3.20	0.95
Overall experience of being a faculty member in your primary unit (department / school).	3.11	0.93
Teaching and service load.	3.11	0.84
Teaching and research balance.	3.10	0.93

APPENDIX 5 – ITEM AVERAGES FOR SCHOOL OF MEDICINE N=206 (CONT.)

12. Satisfaction with Community and Academic Dimensions (cont.)

Factor 2: Professional Activities and Success	Item Mean	SD
Success of your research or scholarship.	2.93	0.95
Effectiveness of your teaching.	3.26	0.67
Service within the University.	2.77	0.86
Service in your academic discipline.	3.18	0.83
Community service.	2.97	0.88
Professional development opportunities.	2.67	0.99

Factor 3: Satisfaction with Mentoring	Item Mean	SD
Mentoring you have received in your primary unit (department / school).	2.40	1.09
Mentoring you have received within the University.	2.27	1.08

APPENDIX 6 – DE-IDENTIFIED LIST OF QUALITATIVE DATA[2]

Comments resulting from the question, "Is there anything more you'd like to tell the researchers?"

The University administration and board of trustees are widely perceived as incompetent, and/or unconcerned regarding/antagonistic to/unfamiliar with the priorities and needs of the faculty at a research university. This unfortunately does not strike me as an entirely inaccurate assessment.

Life in my department has been wonderful. Most problems have been from the poor administration of the University. I am hopeful that things are improving.

A University child-care facility would improve the work environment for younger faculty with children immensely. It's a travesty we don't have such a resource on campus, and it discourages a certain range of faculty from signing on at Case in my opinion.

The current Case president is the best since I joined the faculty [30+] years ago.

Upset at not getting suitable parking… despite being a faculty member with a one year old baby. Even more upset at Parking for giving an aggressive, Caucasian, male postdoctoral fellow parking… while not even considering my request.

Surprised at the lack of day care facilities at Case considering the number of women that work/attend Case.

Ph.D. researchers flounder in clinical departments and are basically unnoticed.

I and most faculty feel that we are on their own (entrepreneurs) and that the bottom-line is measured in dollars and there is no comfortable way to give and no response to bottom up feedback. The top down management style predominates.

Administratively, human resources and purchasing departments have been major disappointments. Human resources pass on incompetent research technicians from one lab to the next. Purchasing department is constantly mishandling purchasing orders. Overall, there is no sense of accountability with regards to the administration here at Case. I also find that the way administrators treat faculty is dependent on rank, race, and sex.

This is a difficult place to be female--there is a persistent but implicit edge for committee work here. It's also striking that the President's cabinet is all male--it sends a sure and clear message to the women on campus.

I realize that we are primarily a research institution and that is part of what makes this a great school, but those of us who have taken on the burden of service and teaching (another aspect that makes our school great!) are not adequately recognized with regard to promotion and tenure.

Salary compensation is woefully inadequate. Salary compression is an ongoing (decades long) problem. According to salary surveys of comparable institutions by my discipline's professional organization, salaries at Case are in the bottom quartile (in a rank by rank comparison).

The comments on the department reflect the soon-to-be departed leadership. current (interim, shortly to be permanent) leadership seems to be much better.

My satisfaction with CWRU has plummeted since the arrival of Pres. Hundert.

A number of problems at Case I have tried to resolve on my own. Two outstanding issues I feel I have less control over. 1) My department needs a larger faculty so that we will be able to create and maintain a true community of researchers. 2) The IRB process could work more smoothly to save researchers time and frustration. Thanks for administering the survey.

2. This appendix includes the comments of all faculty members who provided written remarks at the end of their questionnaires (N=159, including respondents from the School of Medicine). Although all comments are included here, many were edited of identifying characteristics. The research team used [brackets] to denote edited phrases or words. Our objectives in editing were twofold: maintaining confidentiality while preserving the integrity of each respondent's comments.

APPENDIX 6 – DE-IDENTIFIED LIST OF QUALITATIVE DATA (CONT.)

The university needs to institute a formal parental leave policy for faculty.

A formal system of evaluating and replacing/retaining department chairs must be introduced and strictly implemented to avoid the administrative mismanagement and un-academic, unhealthy work environment at the department level.

There is very little central support for research and scholarship. It appears that central administration is more interested in marketing and publicity than on establishing a true interdisciplinary educational/ research environment.

There is no forum to express opinions on this topic and, if one does so, 'names are taken'.

The rhetoric pertaining to becoming the "most powerful learning environment in the world" is anti-intellectual and a source of embarrassment to many faculty. The faculty senate tends to be quite passive, and it does not examine decisions that affect the long-term fiscal health of the university such as the recent decision to invest endowment funds in development which is unfortunate. The current organization and funding of units within the University make interdisciplinary collaboration difficult despite current rhetoric. Many departments within [my school] are small and under-funded, and work is needed to integrate and develop significantly in this area. This work cannot be confined to undergraduate educational initiatives.

Great universities emphasize knowledge development, faculty independence, and scholarly productivity rather than rank and narrowly-defined "market-driven" indicators of success. The emphasis here has been on the later to the detriment of the former.

Leadership would benefit from actively and seriously LISTENING to feedback given by those at the 'bottom' of the academic ladder.

One of the problems with community at Case is that the individual schools seem to be so independent that there seems to be a sense of many individual entities instead of one, united university. There needs to be more of a feeling of working together as an entire university rather than just everyone looking out for their own self interests.

I had several alternative comments here but have deleted each one. Somewhat surprisingly, the constant theme was a bitterness that is in contrast to the answers on the survey. Overall, I think the "University" is a pyramidal system that gives nothing back but demands everything. I suppose that we can take some comfort in that the production of graduated students is what the University gives back.

[My school] has turned a corner and is one of the most exciting schools in the country - Case has had an unexpected number of exceptional faculty in many schools of the University.

…I feel VERY supported in my Department; poorly supported by [my school]; and actively UNsupported by the University. Indeed, University bureaucracies such as the Office of Research, Human Resources, and Communications, actively undercut my work and make my job constantly harder.

The biggest problem is the contempt for humanities and humane social sciences shown by natural scientists and engineers, as well as central University administration, and the atmosphere fostered by central University administration, through nonsense such as equating performing arts with humanities, permits and reinforces this contempt. The second greatest problem are the woeful salaries and horrible benefits. Finally, this questionnaire exemplifies this contempt: there IS no summer salary in general for faculty in humanities and social science; the experience of natural sciences is taken in this questionnaire as normative for all faculty when it is not!

APPENDIX 6 – DE-IDENTIFIED LIST OF QUALITATIVE DATA (CONT.)

As a PhD in a clinical department I feel that neither the department nor the University express any commitment to me as researcher or teacher. I am simply a source of revenue (NIH grant overhead). Basically I rent space (very expensive space) in a University owned building.

My answers relate to my employment by the VA and Case. I think that the new logo stinks.

I have concerns about the overall direction of the university, the focus on marketing rather than building of necessary infrastructure, and the administrative disorganization and turmoil at the top levels.

I had decided not to complete this survey and had placed it in the trash. However, after talking to [a University administrator], I thought I would complete it. [My experience with the tenure and promotion process] has left me with very strong feelings about the University. I am very angry about the process which should be clear and apparent, but which is not. I am angry that there is one criterion… and that criterion is publishing, in specific numbers and in specific places, using specific methods. The other criteria - teaching and service - are unimportant. Research and money seem important too, but only as these serve publications. This is a very different message from the one delivered by the president and it certainly is different from that delivered in specific units.

[The] Committee on Women Faculty has been in place for more than 20 years; change in the numbers and constellation of women and minority faculty has been stagnant during almost all of that time. No progress has been made. Even the Resource Equity Committee has been unsuccessful at moving forward with an agenda to inform and educate about disparities here. Although there is talk about a commitment to diversity in the administration, it is not at all apparent. There may be some diversity in surname, but there is little real diversity in view or thinking, or more importantly, in perspective. The perspective is male, mostly white, and very privileged.

Most of my research is [the type of] work that the university said it was committed to doing. But what people in the community realize is that commitment is to high profile projects, with high pr return, and it amounts to little recognition of the needs or strengths of the community around us.

Overall I find academic life at Case stimulating and rewarding.

Case is great environment because of its people, new leadership has invigorated the general attitude, challenges remain with old leadership compromising some of the departments in [my school].

Overall I am happy working at Case. But, I also hope that we can have more resources and a higher standard, so that Case can become truly a top research university, nationally and internationally.

The central administration is like a black hole.

I think the endless repetition of the phrase "world's most powerful learning environment," is irritating, especially in the absence of any explanation of what it means in concrete terms. Like all universities, the public relations efforts at Case embrace values in conflict with the values inherent in the stated mission of the institution (e.g., honesty, critical thought).

Too many departmental chair searches result in the installation of internal candidates. The boards of directors of both Case and our affiliated hospital, University Hospitals of Cleveland, need improvement. This format of this survey, as is true for many similar surveys, severely limits the quality of the information obtained.

Case needs a daycare center badly!!!

As a clinician I feel completely disassociated from the University - that my raison d'etre is to generate income for the department - of which I see very little. I also feel that me and my colleagues (male and female) with

APPENDIX 6 – DE-IDENTIFIED LIST OF QUALITATIVE DATA (CONT.)

familial responsibilities are looked down upon by the good ol' boys because we cannot attend crack of dawn meetings or go to the bar at dusk. This culture at Case needs to change if we are to remain competitive.

There were several places where I am not happy with the resources, but it is an institutional issue -- everyone in the department is in the same boat.

CWRU is an excellent environment for developing people. Somehow it suffers from an inability to attract truly outstanding researchers. Thus we often settle for second-rank though excellent people. The problem is our provincial attitude and our hesitation to really roll out the red carpet for outstanding people.

Case is not different from many research institutions in promoting and supporting women and scholars of color. I do not think we get any accolades for the recruitment and promotion of women or women scholars of color or scholars of color. Moreover, women faculty with child responsibilities have all kinds of internal and external challenges in career advancement. In [my school it] is no different than the rest of the University.

[My] Dean is nice and efficient … but does not have a vision for the school. I think that the University has put this school at a disadvantage with the dean leadership. I suspect the answer is that [disciplines within my school are] not highly regarded by the University administration. The conclusion does not make me feel good about being here. But I will stay for a while longer. I think this is great effort to understand the faculty environment. Thanks.

There is discrimination of people with disability.

…I was hired without any regard to [the structural support that would be necessary for my position]. I have one full day of clinic and I am being told I am not [generating a sufficient amount of] my salary. I have been unable to get started on any research. I answered the above questions regarding colleagues, but basically… I have no colleagues.

I like to teach but if you reduce the teaching load (even a little) you get higher caliber research programs.

Recent losses in community feeling due to canceling the university ball, banning pets, etc have greatly reduced the pleasant, convivial atmosphere Case used to have. This loss was compounded by the process by which [recent administration changes and] transition[s] took place. The hiring & transition process was far from smooth & appears to have provoked (perhaps excessive & unnecessary) anxiety on the part of the faculty. (both the outcry against the first candidate & the increasingly negative response to the policies of the person who was eventually hired). In terms of atmosphere, this has been the most unpleasant year I've had at Case; the faculty spent much of the year in a panic that has thus far not abated. I do hope things will settle down next year & people will begin to feel comfortable again.

I am considered full-time, but only work [a percentage] of that time so that I can take care of [dependent family members]. The time frame for promotions do not seem too flexible to accommodate… someone working [less than] 100% full-time.

I have had a mixed experience at Case: little or negative support in dept but much better in the school, especially as I became more senior. I wish the spousal hire situation were better. I wish we got some real help on grant budget preparation."

The spatial layout of Case breaks up a university community environment. I find the food and public culture life on campus terribly lacking; there is no place where museum, arts & sciences, humanities, medicine, engineering etc. folks can hang out, bump into each other etc.....The campus needs a building, built by an international architect, that is purposely designed to bring people together; it would offer interesting food, information, meeting rooms, coffee shops, hang out spaces, cultural performances, small lectures...etc.....I find this lack of public culture the one big reason I sometimes think about going elsewhere. There is no University diverse public culture here and I have heard many faculty

APPENDIX 6 – DE-IDENTIFIED LIST OF QUALITATIVE DATA (CONT.)

say this same thing. Surely, we are smart enough to lay out a plan for such a building and space. Space matters and we need one that brings us all together...students, staff, etc..... I go to the orchestra, botanical gardens, and museum, but I never think of going to the university to hang out at night...I think that is a missed opportunity for all of Cleveland. WE should be a destination. We need urban geographers and architects to study the Case campus and lay out a strategic plan so that 15 years from now, I don't answer this survey lamenting that Case doesn't have a public culture. We work hard and stay in our offices all day, we take a short break at lunch, and everyone goes home at night. We don't have sports to bring us together and that is fine. The Orchestra doesn't. The museum doesn't. So what could? Can we have a conversation about this among all concerned? And if no one wants it, well given my desires, I might eventually look elsewhere. This would help build interdisciplinary talk, which does lack here. It could help build an intellectual environment, which there are many intellectuals here, but no environment that showcases it, no way to be a part of a public culture. Okay. Sorry. Enough is enough.

My experience has been that there is a strong sense of community within my [school] but a weak sense of community within the university generally.

Doing nontraditional research by ethnic faculty members often runs the risk of being undervalued by traditional academic standards.

Overall, I don't feel that the level of intellectual activity and stimulation at Case is what it should be for a "major research university." This place is strangely dead.

I know of no university with the kind of aspirations to national importance that Case has that supports graduate students so meagerly."

There has to be better communication among the various offices of the dean, accounting, and research administration. They must view themselves as part of a team that wants to do new and better things together with the faculty.

Small boys clubs within faculty is a big thing.

Treated unfairly and continue to be treated unfairly and making the environment for female faculty unbearable. To carry my vision, will find a home where I'm valued, respected and rewarded for what I bring in without punishing me. Case will lose as I'll carry my vision, ideas, grant funding to a new home if I do not receive a fair treatment and rewarded for my excellent credentials.

I believe our dept head tries to be fair, but in the name of "protecting junior faculty from unnecessary distractions," little information about school or university-level issues is relayed to the junior faculty. If I ever make a comment about feeling in the dark or that I would like to better understand the context for an issue we are discussing in a dept meeting, I have intermittently been treated as if it were my fault that I was uninformed. … Due to variations in teaching and travel schedules, I think it would be helpful to have a more systematic process for sharing information with everyone in the department, not only sharing things in senior faculty meetings and relying on serendipity for the junior faculty to also learn about what is going on.

Contrary to the 1970's norm of children being perceived as a detraction from one's work commitment, my experience in my department has been that children are legitimating--e.g., the needs of a child are always seen as a legitimate reason for missing a department event; a woman with child care responsibilities in addition to working is revered--and not having children seems to be equated with "immaturity" and "having no responsibilities."

I don't feel that there is intentional gender discrimination in our department or that people disregard my ideas because I am a woman. It's just that the "guys" have extra-curricular interests in common and get together with one another as couples with the guys discussing the hobby and work-related matters while the women discuss children and other home issues. I am not invited to these dinners, and at department parties, the men and women often end up in segregated conversations--

APPENDIX 6 – DE-IDENTIFIED LIST OF QUALITATIVE DATA (CONT.)

if I join in the men's conversation with my colleagues, I am treated by the women as a threat, but if I join the women's conversations, I miss the opportunity of informal interaction with my colleagues that could lead to improved relations at work and opportunities for collaboration or informal learning. This reminds me of the lament of [the women's movement] and may just be the plight of any "minority" member in a work group. There is also an "old-timers'" clique in our department. At department events, they sit together and talk to one another, and make no overtures to newcomers. … I don't believe that any ill will is intended. In fact, I think it's important to acknowledge that this pattern is typical of Cleveland, more generally, and so may simply reflect the culture of the region. Nonetheless, it is an aspect of [my school's] culture (if not the Case culture more generally) that makes Case unattractive to newcomers resulting in minimal interest in investing in the institution.

Tenure track system should be improved for humanities.

There are fundamental differences in the quality of Case experience as faculty for School of Medicine faculty that are based at UH versus otherwise. This survey does not capture this difference, which I believe is serious and the University underestimates.

Case is getting better.

I commute to Case from a great distance so it is difficult for me to attend weekend and evening events.

To the best of my knowledge, this is the first faculty poll of this sort in my fifteen years at the University. Much needed; long over-due.

Case can do a better job of being a culturally competent university. The presence of international students doesn't make one competent. I find that the treatment of one's own African American students and faculty is neglectful as well as shameful.

No long-term incentive from the university, school or department for extra-mural funding success. Very parochial place.

I do not feel a sense of community or pride about being at Case/University Hospitals. Our community stands deeply in the shadow of the Cleveland Clinic in the public eye. I also do not sense a feeling of faculty unity, community, or strong academic friendships within the school or between schools such as the feeling that exists at Hopkins, Harvard, Oxford or Cambridge. I feel that University leadership is on the right track but must recognize the need to bolster our reputation internationally, nationally, and in our local region.

Socializing amongst my colleagues is the single most challenging problem. Faculty perform as independent contractors and there is no mechanism in place to change this culture. Having relocated to accept this position I was astounded that no one reached out to help my [spouse and me] become acclimated to the region and to feel as if we belonged at Case. Overall, this has been the greatest disappointment in accepting the position at Case and has been one of the main factors in my departure.

There is no sense of any type of upward influence across our department. In other words, we are quite sure our immediate higher ups make decisions about our future without our input. There is incredibly low morale and very little respect for representatives of the school and the university.

Changes in President and Provost create some anxiety about expectations; they should let us know what they think about promotion expectations.

The department chair is the primary factor, which determines the faculty job satisfaction. Chairman performance (all aspects of leadership qualities and performance) needs more frequent evaluation.

Our department is in flux. I should note that I feel optimistic about our future as a department. Also, I had serious, serious equity concerns that were somewhat alleviated only very recently by a salary raise and office relocation (both in tandem with my promotion). And finally, we desperately need an overhaul of work-family or work-life policies. The tenure extension is great,

APPENDIX 6 – DE-IDENTIFIED LIST OF QUALITATIVE DATA (CONT.)

but "leaves" for illness or birth or adoption are still a problem. When [our child] was born… I did not get a teaching release… [after 6 weeks] I was back in the classroom and [directing an academic program] and my research suffered considerably. I feel strongly that at a research university, faculty should get a teaching release during the term they give birth or adopt. THAT is a family-friendly policy with teeth. Otherwise, exhaustion sets in and research productivity is the first to go. Right now, faculty must negotiate with their Chairs for what they "get" in terms of release, and this is a vulnerable position to be in, esp. for Jr. folks.

Certain senior faculty (especially one) take undue advantage of junior faculty in terms of forcing themselves as authors on work they have not participated in, and using junior faculty's research to write their own grants or program projects. Non-compliance by junior faculty results in serious consequences such as termination of job, taking away lab space, limiting the use of expensive equipment, and other unethical measures. The Department Chair in the past often chose not to interfere and let the practice continue since such senior faculty bring grant money to the department.

I'm disappointed with the salary I receive. I'm disappointed that our department never had a department meeting and I never was introduced to many members of the department. I was disappointed that business cards were not provided by the University. I was disappointed that my department chair didn't acknowledge the fact that I was nominated for awards [early in my career here]. Other than that, I am pretty content with my position.

Someone needs to review the alumni contribution department. I have constantly been turned off by the way they handle my pledges, have told them so and why and have received no response. If I were not so loyal to the university, I would stop pledging. Also, I have heard many complaints about the name change to eliminate Western-Reserve from the name. I thought the original intent was to change the name...but to poll the alumns and then to select a NEW name, not just case. I thought originally that it was just the older graduates that felt this way....then I saw some articles in the Observer from the present students that evidently feel the same way. I don't think this action was too swift.

Comments vis-a-vis my administrative unit refer to [my school] as a whole, not to my department. The administration within [my] department is quite good while administration within [my] school is terrible. The section evaluating the dean is an overall evaluation of the deans we've had while I've been here.

There still is a feeling, and is backed up with some actual information, that those in [my school] are less well-respected and less well-paid than those in other schools.

[My school] says it is interested in improving the experience of undergraduates, but I see little evidence of that beyond lip service. All rewards go for research, despite heavy duties in administration, and teaching appears to get the least attention. Perhaps more importantly, there is nothing to encourage faculty to take an interest in students outside of the classroom, because all of the rewards in the system demand that one puts the lion's share of one's time into research (which is a good thing) but also excessive administrative duties that do not seem very effective. Case… seems to be caught an identity struggle between being a research institution and a liberal arts school, but is only legitimately succeeding at the former.

… In [my] department at least, we need far more support staff. I have taught at three other institutions and Case has by FAR the least amount of support I've ever experienced. This is a huge problem, because it means that faculty are constantly having to learn to navigate a bureaucracy to get the most mundane things accomplished. One central person with the knowledge of how to do all of this (a secretary, for example, who is supposed to assist the faculty and not simply the chair) would save a lot of time.

… How can we claim to be a high-tech university?...

APPENDIX 6 – DE-IDENTIFIED LIST OF QUALITATIVE DATA (CONT.)

Centrally locating resources… would also be helpful. We have tremendous resources that never get used simply because they are housed in separate departments without anyone even knowing they are on campus.

In clinical departments the major limitation to academic productivity is clinical load. The other factors are of minor importance.

My survey will be skewed because the department I belong to is… small. As you will see from my responses, I am very unhappy, but there are good reasons. First of all, the Chair is an abysmal leader who NEVER holds faculty meetings, mentors, or even displays any care for [our] program other than being happy to make all the decisions without consulting anyone else. [The chair] doesn't even consult or hold meetings about teaching assignments. … Certainly [the] leadership, or lack thereof, is a problem for [our department] but the administration also bears some blame for either not caring… or wanting to punish the entire department because the Chair is so incompetent as an administrator. Either way, the University needs to give more attention to [our] program before things will improve. First of all, they need to do a search for a senior position to be the new Chair -- the current one does not have the proper temperament to be a good Chair. [My chair] is socially awkward and really only cares about his/her own research and has a unique talent for being oblivious to other faculty members' needs. Second of all, the University either should support [small departments]… or just fold it into another unit. I would hope they would do the former… but it is ridiculous to have a [small] department, with all the modern demands of research and publication… and then have a host of Visiting Appointments. No other department in the University is run in such a shoddy way. … So the way things are being done in [my department] does affect the quality of life for not only the professors but also the students. This should be a concern to the other faculty of the University. You may want to contact [other faculty] to verify if what I am saying is true. Yes, I am very angry about the treatment I have personally received. But I also do care about [my department's] program at Case and I believe I am correct about what is wrong and what needs to be done to make it better.

I wish there were more examples of part-time employment in my Dept.

A lot could be done to improve the experience (integration into the community, recognition of different job assignments, etc) of basic researchers in clinical departments.

Despite lip-service to the contrary, there is not consistent effort to be inclusive of fulltime VA teaching faculty in my dept.

There is a major change at [my school]. Whether the real support for teaching continues remains to be seen. However it is great to see it finally occur. Teaching faculty have been taken for granted for years. This did not worry them too much except when undeserving academic faculty who refuse to teach at all get promoted. [In the meantime], the teacher is told teaching is too hard to measure. The school should embrace and support its teaching faculty. There are signs this is beginning to happen.

I believe that there is a difference in support and vision in my department versus my school. In that section of the survey, my answers reflect my feelings towards the Dean and [my school] and are rather negative. My feelings towards my Department and Chair are more positive, but I had to choose between one and the other so I gave you my perceptions of the Dean and [my] school.

Why is engineering the only named school not identified by name? WE ARE OFFICIALLY KNOWN AS THE CASE SCHOOL OF ENGINEERING. This was approved by the Board of Trustees in 1992 and should be honored as the other named schools are recognized, i.e., Weatherhead, Mandell, etc.

Significant disparities exist between individual departments and institutions within the medical environment.

APPENDIX 6 – DE-IDENTIFIED LIST OF QUALITATIVE DATA (CONT.)

[My school] has hired a number of full-time women adjuncts who are paid significantly less for the same work than male full-time instructors. Bad idea.

My main disappointment with the University is in the lack of mentoring I have received, and the lack of leadership my department chairs and deans have shown. There are severe interpersonal problems within my department that have been going on for [quite some time], and they have never been addressed. Most of the problems came about because department chairs have made unilateral decisions that affected the entire department (with Dean's consent) without departmental consensus, and often without departmental discussion. My department is extremely dysfunctional because of this, and a lot of money is spent hiring outside people to do work because some of our tenured faculty refuse to do departmental service.

I am full time but [less than 100%]. I spent [several] years as a salaried employee so I could be a good mother. My mentoring has been very good over all. My boss is very fair and responsive to the needs of mothers who are doctors- [s/he] has been excellent. My mentor has stuck with me although I am essentially part-time and continues to provide advice. [My mentor's] support has been great. I want to use names because you should know who is doing a good job. Thank you.

[My department] attracts [a significant number of] undergrads [at Case and significant grant money, while holding national ranking]. Yet our staff support and building infrastructure are pathetic, which causes us to lose… faculty to other universities. This puts added pressure on remaining faculty and puts our department at serious risk for an unrecoverable slide: We will continue to lose faculty unless [we] receive bigger share of resources that is commensurate with our department's value to Case. *[The respondent provides specific details related to the lack of school/departmental resources.]* If this lack of support continues, I'll be forced to join the list of faculty who move on to better universities.

Although not satisfied by my development in the research area, the lack of mentorship has led to a lack of motivation. I therefore, feel partially responsible. Thanks.

School of Medicine's survival as a top flight academic medical center hinges on creating equitable reimbursement strategies and apportioning of indirect grant funds with its affiliate hospitals. The [School's promotion and tenure] process does a good job of rewarding those with traditional research careers. In new schemas excellence in patient care must be valued and rewarded with both reimbursement and professional advancement. The same concerns apply to those with a primary emphasis on teaching. Without this the academic medical center is doomed as dissatisfied faculty flee the system.

My clinical department runs more like a business venture than an academic department. The administrators seem not to be responsible to anyone. This goes for equity in salary, research space, bridge funding and other components of academic life that would reduce the level of stress. *[The respondent provides specific details related to a lack of institutional bridge funds.]* I have not received a legitimate salary increase commensurate with my standing in the research community (both nationally and internationally). In fact, when things got really testy I looked [to industry for a position] and [incredulity was expressed regarding my current salary]. Last year my department saw fit to raise by salary by [an insultingly small amount]. How embarrassing!! I don't believe that any university-wide committee will be able to rectify these injustices within my department. The possible exception is that the Dean has voiced approval for [my school] to pay faculty salaries in clinical departments. I hope to see this occur during my lifetime at CWRU.

Individuals whose primary focus is [education] are undervalued compared with those performing… research unless they hold an administrative position… We are being asked to work… with little accommodation for day to day teaching effort in the clinical arena.

APPENDIX 6 – DE-IDENTIFIED LIST OF QUALITATIVE DATA (CONT.)

The administration of [my school] has been benign by and large, and I like and respect my colleagues in other departments quite a bit. It is only in the last 3 years that my home department became a terrible place to work.

In general I find that [my school] is friendlier than at the last university where I worked. However, my dept. here has some extremely unfriendly people who harass other members of the faculty. Apparently, nothing can be done to stop this. I am unwilling to continue under these circumstances. … I do not understand why CASE would not be able to do something. This creates a lot of stress for all of us. Eventually, it causes good people to leave.

[My department] has recently suffered from very incompetent leadership. The […] department has been using [inappropriate gender-related criteria] for hiring and promotion. Overall, the quality of academic work among the professoriate is rather undistinguished.

The department chair is a god among men. How he maintains a level of effectiveness with as fractured and disagreeable faculty as exists in the department is truly amazing. He is further hindered by the University's lack of strong support [for our department] in general and [our field] in particular. He is the main reason I have stayed despite other job offers at competing universities.

Initially more involved with trying to develop basic research when I came. The package provided was very good but it was difficult to accomplish and achieve success because of clinical pressure, including perceived pressure from colleagues, mentoring, and the low "critical mass" of researchers in my areas of interest. After leaving basic research and moving into more clinical areas, medical colleagues saw me more as a researcher and this decreased my referral potential. I have been fighting this perception ever since. I do participate in clinical trial research but see the possibilities of developing my own patient clinical research trials as significantly difficult.

I would like to see more support for our department from [my school]. I would also like to see more guidance from the dean regarding space allocation, and future roles and expectations about [our department]. Our department has been thought to be a primarily teaching department in the past. This is no longer accurate and it would be nice to see some changes reflecting this.

The new Dean… is the best thing that's happened here. We need him because this is a University in state of decay. And in my department, a place with frankly unbearable conflicts.

[My department] is led by an unethical, sexist, group of scoundrels that are exposing the university to almost certain legal action.

Lab space for human subjects very inadequate and not fairly distributed.

There were some areas where this questionnaire was difficult to complete for faculty in the department of medicine who are located at the VAMC, MetroHealth, or CCF. This may skew your results as people try to figure out how to answer these problematic questions.

You should have included questions about homophobia, which is rampant on campus.

About half of this survey is irrelevant to someone in my position… In that context the transparency of resource allocation processes in the department naturally is different for me than for anyone else -- I make many of those allocations, so I ought to know why I made them. … It's impossible to answer most of the questions about my immediate supervisor because we don't know yet. Anyone who claims to know most answers about [our dean] is giving you lousy data. "Mentoring" is also a pretty useless term for me -- it would be nice to have a better idea how to be a chair… And one can't exactly be "mentored" by higher administration because interests of chairs and higher administrators are not entirely the same (though key staff are reasonably helpful).

I assume that the results are fully confidential and that individual data will never be shared.

Questions are written in a way that makes many assumptions!

APPENDIX 6 – DE-IDENTIFIED LIST OF QUALITATIVE DATA (CONT.)

I believe that there is a difference in support and vision in my department versus my school. In that section of the survey, my answers reflect my feelings towards [my dean and my school] are rather negative. My feelings towards my Department and Chair are more positive, but I had to choose between one and the other so I gave you my perceptions of [my dean and my school] .

You didn't count the hospital committee work and limited hospital administrative support to patient care related activities.

Interesting questions! however, it would help to define 'frequently', etc. Also, demographic questions are detailed enough to individually identify many faculty-- please be aware of this when compiling your reports.

You left out questions about the university/department's efforts on faculty's behalf to secure awards and fellowship support for its faculty (especially young, untenured faculty). I think we do a poor job compared with top ten departments.

RE questions about fairness, the process or issue could be considered to be unfairly biased in favor of one, rather than only unfairly biased against one. Your survey won't tell you which.

I really wasn't sure what you meant when you asked to what degree various elements (e.g., office space) were appropriate to advancing our work.

The scope of the survey is narrow...excluding faculty that are not focused on teaching, such as those in the athletic department. Coaches are faculty, but the Physical Education and Athletic Department was not listed as a department in the list.

The sociodemographic you just asked for, when combined with the school and department (especially for the smaller departments) could easily identify people. I hope that the researchers will refrain from and protect the confidentiality of these study results.

Please be notified that there is one department missing from the Dental section...the Department of General Practice Dentistry.

This questionnaire is far too long.

Department of Physical Education and Athletics. That choice was not available in the selection.

This is much too long to complete for busy faculty.

The way the final questions are set up doesn't give much of an opportunity to maintain anonymity. If I had seen these before I had started this questionnaire I probably would have declined to complete it.

In some cases the questions do not reflect [my primary unit, a research center] as we are [jointly assigned to two different units of the University].

Many questions are completely beyond the point or relevance, like 'race/gender inequities' in the [department] or school, done in order to beat the bureaucratic drums for new 'complaints', new 'measures', new quotas. Some important issues are omitted.

Some of the questions were difficult to assess as there are only two faculty in my discipline within the department.

I responded to questions regarding my "unit" with my department, not [my school] in mind.

I am fortunate to have [federal research] support so that I could continue with my research and teaching until the present time. I am sure that this and my successful research activities have colored many of my responses.

I work at MetroHealth and have very limited contact with the Case campus per se.

I'm curious as to why sexual orientation questions were not included in the questions about support for diversity.

This survey took 30-45 minutes to complete, much longer than the estimated 10-15 minutes.

APPENDIX 6 – DE-IDENTIFIED LIST OF QUALITATIVE DATA (CONT.)

Identity can be discerned from certain questions, which I did not answer. I am not confident about the confidentiality of the survey.

I was disappointed that there were no questions about homophobia at Case.

Survey is too long.

Your questionnaire is strongly oriented towards basic science faculty. It disregards the strong clinical faculty at UH, Metro & the VA.

My department is called General Practice and it is not within the list that you provide for the school of dentistry.

It was extremely difficult to complete major portions of this survey in a meaningful way. Because there were no comment boxes provided throughout, it is virtually guaranteed that many of my responses will be interpreted in ways that misrepresent my experience.

I don't like surveys in general. Usually little can be done to change things, no matter what the outcome of the survey is.

There are fundamental differences in the quality of Case experience as faculty for School of Medicine faculty that are based at UH versus otherwise. This survey does not capture this difference, which I believe is serious and the University underestimates.

There are too many questions; I was tempted to quit several times during the questionnaire.

Survey does not account for issues associated with working in cross-disciplinary units such as the Mandel Center.

[Your questions allow] you to identify a person particularly in smaller schools of the University, which should not be the case (small C).

I am part of the Department of Molecular Medicine. The disconnect between this new department and the rest of Case is reflected in it not being listed on the survey.

This survey is poorly designed for individuals who have been here through multiple administrations and departments. Perhaps limiting the questions to "this year?" would have been helpful, or breaking the situation down by 5 year periods?

Appendix 5

CASE
CASE WESTERN RESERVE UNIVERSITY

FACULTY EXIT ASSESSMENT

Thank you for taking time to respond to this exit assessment. This survey provides you the opportunity to share your opinions and ideas about certain aspects of your job at Case Western Reserve University. Your survey will be processed by HR Solutions, Inc., which will tabulate the results for Case. This process ensures your confidentiality and enables you to be completely open on this survey. The information obtained from this exit survey will be utilized by the Office of Equal Opportunity and Diversity as an administrative tool in the University's continuous efforts to improve.

This process assures your confidentiality and frees you to be completely honest on this exit assessment. Each of the survey items are to be answered by filling in one of the circles to the right of the statement. When you complete the survey, make heavy black marks that completely fill the circle, erase cleanly any answer you wish to change, and make no stray marks of any kind. Try to answer every survey item. However, if you believe a question does not apply to you, feel free to leave it blank and go on to the next survey item.

Correct Mark ● Incorrect Marks ⊘ ◉ ✓

Case's exit assessment is also available on the internet. If you prefer to complete the survey electronically, please type the following address into your internet browser's address bar: www.cwrusurvey.com

Before you begin your survey, please complete the coding grid to the right:

For example...
If your location/workgroup is Accountancy, you have been with the organization for 6 years, and you are 45 years old at the time you left Case Western, your coding grid should look like this:

	A	B	C	D	E	F	G
	1	0	0	0	6	4	5
0		●	●	●			
1	●						
2							
3							
4						●	
5							●
6					●		
7							
8							
9							

CODING:

	A	B	C	D	E	F	G
0							
1							
2							
3							
4							
5							
6							
7							
8							
9							

Demographics:

Gender:

○ Female ○ Male

Academic Rank at Hire:

○ Professor
○ Associate Professor
○ Assistant Professor
○ Instructor
○ Lecturer
○ Visiting Professor
○ Visiting Associate Professor
○ Visiting Assistant Professor
○ Visiting Lecturer
○ Other _____

Academic Rank at Departure:

○ Professor
○ Associate Professor
○ Assistant Professor
○ Instructor
○ Lecturer
○ Visiting Professor
○ Visiting Associate Professor
○ Visiting Assistant Professor
○ Visiting Lecturer
○ Other _____

Race/Ethnicity:

○ African/African American
○ Alaskan Native
○ Asian or Pacific Islander
○ Caucasian (European)
○ Caucasian (Indian)
○ Caucasian (Middle Eastern)
○ Caribbean Islander
○ Hispanic/Latino/Latina
○ Native American
○ Other _____

4759181342

Reasons for Leaving

Please choose any of the reasons below that influenced your decision to leave your position at Case and the degree to which they influenced you. If an item does not apply to you, please feel free to skip it and move on to the next item.

	Strong Influence	Moderate Influence	Slight Influence	No Influence
Administrative Policies	O	O	O	O
Opportunities for Advancement	O	O	O	O
Atmosphere of Campus Community	O	O	O	O
Location of University	O	O	O	O
Department	O	O	O	O
Chair/Colleagues	O	O	O	O
Amount of Research Support	O	O	O	O
Number Committee Assignments	O	O	O	O
Teaching/Advising Load	O	O	O	O
Start up package fulfillment	O	O	O	O
Salary	O	O	O	O
Benefits	O	O	O	O
Lab conditions	O	O	O	O
University/Hospital relations	O	O	O	O
Opportunity for research	O	O	O	O
Lack of mentoring	O	O	O	O
Tenure process (e.g. lack of transparency or fairness etc.)	O	O	O	O
Partner could not find job in area	O	O	O	O
Tuition Waiver Benefits	O	O	O	O
Child Care Options	O	O	O	O
Tenure Time Clock flexibility	O	O	O	O
Partner Lives Elsewhere	O	O	O	O
Desire to Leave Academia	O	O	O	O
Retirement	O	O	O	O
Personal Illness	O	O	O	O
Family Member Illness	O	O	O	O
Wish to work at home	O	O	O	O

5097181348

Using the choices or spaces below please indicate at least two things you liked best about working at Case. **Please use the space provided to list and/or expand on any topics that are not listed.**

O Intellectual Stimulation
O Opportunity for Professional Development
O University Circle Environment
O Other

Please list at least two things that most need to be changed at Case. **Please use the space provided to list and/or expand on any topics that are not listed.**

O Social Interaction
O Size of Department
O Other
O Salary
O Lack of Recognition

If you delayed retirement, or remained on half time instead of retiring, please elaborate on your reasons for that decision. **Please use the space provided to list and/or expand on any topics that are not listed.**

O Financial Issues
O Enjoy Working
O Healthcare Issues
O Other

Describe your reasons for leaving. **Please use the space provided to offer additional detail to any reasons for leaving.**

O Conflict with Supervisor
O Inequitable Load Distributions
O Other
O Money
O Isolation

Did the head (Chair/Dean) of your primary unit (department/school) seek to negotiate circumstances that might change your mind about leaving Case? O Yes O No **If no, please explain:**

Would you consider working for Case again? O Yes O No **If no, please explain:**

Would you recommend Case as an employer to others? O Yes O No **Why or why not?**

Do you have any suggestions for making Case a better place to do research/scholarship, or teach? **Please use the space provided to offer additional detail to any reasons for leaving.**

O Mentoring
O Research Support
O Other
O Opportunity for Leadership
O Administrative Support

1255181340

Please indicate your opinion about the following aspects of your employment. If you feel an item does not apply to you, please feel free to skip it and move on to the next item.

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
1. I had good opportunities to do research/scholarship.	○	○	○	○	○
2. I had a good balance between teaching, service, and research.	○	○	○	○	○
3. I had good opportunities for clinical involvement.	○	○	○	○	○
4. My department supported my research/scholarship.	○	○	○	○	○
5. My work environment was intellectually stimulating.	○	○	○	○	○
6. I had access to necessary office/lab space, equipment, etc.	○	○	○	○	○
7. I was satisfied with research assistance, pre-tenure.	○	○	○	○	○
8. I was satisfied with research assistance, post-tenure.	○	○	○	○	○
9. I was satisfied with teaching/clinical assistance.	○	○	○	○	○
10. I was satisfied with the classroom facilities available to me.	○	○	○	○	○
11. I was satisfied with Information Technology assistance I received.	○	○	○	○	○
12. I was satisfied with secretarial assistance I received.	○	○	○	○	○
13. I was satisfied with grant-writing assistance I received.	○	○	○	○	○
14. I was involved with (advised, sponsored, organized, or coordinated) campus events at Case.	○	○	○	○	○
15. I often attended campus events (seminars, political, cultural, sporting, student, social events etc.) at Case.	○	○	○	○	○
16. I was part of a collegial community at Case.	○	○	○	○	○
17. I felt that faculty at Case respect each other.	○	○	○	○	○
18. I felt that faculty at Case are treated with respect by the administration.	○	○	○	○	○
19. I felt that diverse people (differences in race, gender, age, religion sexual orientation, etc.) are treated fairly at case.	○	○	○	○	○

Please list any additional comments about your department/work/lab area in your primary unit (department/school).

20. I had a satisfactory overall working relationship with the head of my primary unit.	○	○	○	○	○
21. I felt that decision making processes in my department were made clear.	○	○	○	○	○
22. I felt the head of my primary unit was open to input and feedback.	○	○	○	○	○
23. I felt the head of my primary unit treats faculty/researchers in a fair way.	○	○	○	○	○
24. I was reluctant to raise controversial issues in my primary unit (department/school) for fear it would affect my tenure or promotion.	○	○	○	○	○
25. I felt that the tenure and promotion criteria were articulated clearly to me.	○	○	○	○	○
26. Colleagues in my department gave me feedback/advice about research & professional issues etc.	○	○	○	○	○
27. My colleagues solicited feedback/advice from me about research and professional issues etc.	○	○	○	○	○
28. I felt I was professionally welcome and included by my colleagues at Case.	○	○	○	○	○
29. I received formal mentoring in my primary unit (department/school).	○	○	○	○	○
30. I received informal mentoring in my primary unit (department/school).	○	○	○	○	○
31. There was good cooperation among the members of my primary unit (department/school).	○	○	○	○	○

9568181345

Please list any additional comments about your supervision and colleagues.

Please indicate your opinion about the following aspects of your employment. If you feel an item does not apply to you, please feel free to skip it and move on to the next item.

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
32. I was satisfied with my starting salary.	O	O	O	O	O
33. I was satisfied with my ending salary.	O	O	O	O	O
34. I was satisfied with the timeliness of my annual performance review.	O	O	O	O	O
35. I was satisfied with the fairness of my annual performance review.	O	O	O	O	O
36. I was satisfied with the development guidance I received during annual performance reviews.	O	O	O	O	O

Please list two ways the performance/salary review process can be improved.

Finally, please think back to when you were first hired at Case and choose any of the reasons below that influenced your decision to accept the position, and the degree to which they influenced you. If an item does not apply to you, feel free to skip it and move on to the next item.

	Strong Influence	Moderate Influence	Slight Influence	No Influence
Reputation of Case	O	O	O	O
Benefits	O	O	O	O
Opportunity for Advancement	O	O	O	O
Tuition Waiver Benefits	O	O	O	O
Location of University	O	O	O	O
Teaching/Advising Load	O	O	O	O
Reputation of Chair/Colleagues	O	O	O	O
Research Support	O	O	O	O
Number of Committee Assignments	O	O	O	O
Salary	O	O	O	O
Partner Job in Area	O	O	O	O
Start-up package	O	O	O	O
Personal/Family ties to area	O	O	O	O
Child Care options	O	O	O	O
Lab Conditions	O	O	O	O
Atmosphere of Campus Community	O	O	O	O
University/Hospital Relations	O	O	O	O
Reputation of Department	O	O	O	O

Please list any other reasons that influenced your accepting the position at Case.

9671181340

Thank you for participating!

HR Solutions, Inc. - 25 East Washington Street, Suite 1927 - Chicago, IL 60602
Phone: (312) 236-7170 - Fax: (312) 236-3959 - Web Site: www.hrsolutionsinc.com

1832181341

Appendix 6

Update on Coaching Participants

February 23, 2005

Individual Data Questionnaire - Descriptive Statistics

1 - Not at all, 2 - To Some Extent, 3 - To a Moderate Extent, 4 - To a Great Extent

****improved by at least .1**

**decreased by at least .1*

Round 1 - Women	**Pre-intervention (N=12)**				**Post-intervention (N=8)**			
Item	**Min**	**Max**	**Mean**	**Sd**	**Min**	**Max**	**Mean**	**sd**
1. Are clear about career direction and goals in the next 5 years**	2.00	4.00	**3.25**	0.87	1.00	4.00	**3.38**	1.06
2. Are able to clearly articulate your career direction and goals to others**	2.00	4.00	**3.25**	0.87	1.00	4.00	**3.38**	1.06
3. Have exercised initiative towards attaining your career goals**	2.00	4.00	**3.33**	0.65	3.00	4.00	**3.63**	0.52
4. Have taken proactive steps to increase your scholarly visibility (e.g.,hosting a conference, chairing a session, starting a colloquium series)**	1.00	4.00	**2.33**	1.07	3.00	4.00	**3.50**	0.53
*5. Are clear about the role of a mentor**	3.00	4.00	*3.58*	0.51	2.00	4.00	*3.13*	0.83
*6. Have actively sought mentoring from within your department**	2.00	4.00	*3.33*	0.78	2.00	4.00	*2.75*	0.71
7. Have actively sought mentoring from outside your department**	1.00	4.00	**2.42**	1.00	2.00	4.00	**3.00**	0.76
*8. Mentor other colleagues in your department**	1.00	3.00	*2.42*	0.90	1.00	3.00	*2.25*	0.71
9. Mentor students/postdocs in your department	2.00	4.00	3.67	0.65	2.00	4.00	3.63	0.74
10. Exert influence in your department**	1.00	4.00	**2.17**	0.94	1.00	4.00	**2.75**	0.89
11. Exert influence in your discipline/field**	1.00	4.00	**2.08**	1.08	1.00	4.00	**2.50**	1.07
12. Feel successful in your department**	1.00	4.00	**2.33**	1.07	1.00	4.00	**2.63**	0.92
13. Feel successful in your discipline/field	1.00	4.00	2.58	0.79	1.00	4.00	2.63	0.92
14. Feel a sense of control over your work and environment (e.g. time allocation, research and teaching agenda, resources)**	2.00	4.00	**2.50**	0.67	1.00	3.00	**2.63**	0.74
15. Are able to balance multiple priorities and effectively use your time	2.00	4.00	3.00	0.60	2.00	4.00	3.00	0.53
*16. Your current career opportunities**	1.00	4.00	*2.67*	0.89	1.00	4.00	*2.50*	1.31
*17. Your career progress to date**	1.00	4.00	*2.92*	1.08	1.00	4.00	*2.63*	0.92
*18. Your overall academic/scholarly contributions**	2.00	4.00	*3.00*	0.74	1.00	4.00	*2.63*	0.92
19. The colleagueship you provide in your department**	1.00	4.00	**2.91**	1.04	1.00	4.00	**3.29**	1.11
20. The leadership you provide in your department**	1.00	4.00	**2.64**	0.92	1.00	4.00	**3.00**	1.20
21. Your likely career success in the next 5 years	1.00	4.00	2.70	0.95	1.00	4.00	2.75	0.89

Individual Data Questionnaire - Descriptive Statistics

1 - Not at all, 2 - To Some Extent, 3 - To a Moderate Extent, 4 - To a Great Extent

Round 1 – Chairs	**Pre-intervention (N=3)**				**Post-intervention (N=)**			
Item	**Min**	**Max**	**Mean**	**sd**	**Min**	**Max**	**Mean**	**sd**
1. Are clear about your career direction and goals in the next 5 years	1.00	4.00	2.67	1.53				
2. Are clear about your department's direction and goals in the next 5 years	3.00	4.00	3.67	0.58				
3. Are able to clearly articulate your career goals to others	4.00	4.00	4.00	0.00				
4. Are able to clearly articulate your department's goals to others	3.00	4.00	3.67	0.58				
5. Have exercised initiative towards attaining your career goals	2.00	4.00	3.00	1.00				
6. Have exercised initiative toward attaining your department's goals	3.00	4.00	3.67	0.58				
7. Have taken proactive steps to increase your own visibility	2.00	3.00	2.67	0.58				
8. Have taken proactive steps to increase your department's visibility	3.00	4.00	3.67	0.58				
9. Are clear about the role of a mentor	4.00	4.00	4.00	0.00				
10. Have actively provided mentoring within your department	3.00	4.00	3.33	0.58				
11. Have actively provided mentoring outside your department	2.00	4.00	3.00	1.00				
12. Exert influence in your department	4.00	4.00	4.00	0.00				
13. Exert influence in the university	1.00	4.00	2.67	1.53				
14. Exert influence in your discipline/field	2.00	3.00	2.67	0.58				
15. Feel successful in your department	4.00	4.00	4.00	0.00				
16. Feel successful in the university	1.00	4.00	3.00	1.73				
17. Feel successful in your discipline/field/profession	3.00	4.00	3.33	0.58				
18. Feel a sense of control over your work and environment	3.00	4.00	3.67	0.58				
19. Are able to balance multiple priorities and effectively use your time	3.00	4.00	3.67	0.58				
20. Your current career opportunities	2.00	4.00	3.33	1.15				
21. Your career progress to date	2.00	4.00	3.33	1.15				
22. Your department's overall success in your academic discipline	3.00	4.00	3.67	0.58				
23. The leadership you provide in your department	3.00	4.00	3.67	0.58				
24. The mentoring you provide in your department	3.00	4.00	3.33	0.58				
25. Your likely career success in the next 5 years	3.00	3.00	3.00	0.00				
26. Your department's likely success in the next 5 years	3.00	4.00	3.67	0.58				

Individual Data Questionnaire - Descriptive Statistics

1 - Not at all, 2 - To Some Extent, 3 - To a Moderate Extent, 4 - To a Great Extent, 5 - Don't Know/Not Applicable

Round 2 - Women	Pre-intervention (N=12)				Post-intervention (N=)			
Item	Min	Max	Mean	sd	Min	Max	Mean	sd
1. Are clear about career direction and goals in the next 5 years	2.00	4.00	3.50	0.80				
2. Are able to clearly articulate your career direction and goals to others	2.00	4.00	3.33	0.65				
3. Have exercised initiative towards attaining your career goals	2.00	4.00	3.25	0.75				
4. Have taken proactive steps to increase your scholarly visibility (e.g.,hosting a conference, chairing a session, starting a colloquium series)	1.00	4.00	2.50	1.31				
5. Are clear about the role of a mentor	2.00	4.00	3.17	0.94				
6. Have actively sought mentoring from within your department	1.00	4.00	2.25	1.14				
7. Have actively sought mentoring from outside your department	1.00	4.00	2.67	0.99				
8. Mentor other colleagues in your department	1.00	4.00	1.92	1.08				
9. Mentor students/postdocs in your department	1.00	4.00	3.25	0.87				
10. Exert influence in your department	1.00	4.00	2.58	1.00				
11. Exert influence in your discipline/field	1.00	4.00	2.50	0.90				
12. Feel successful in your department	2.00	4.00	2.58	0.67				
13. Feel successful in your discipline/field	2.00	4.00	2.58	0.67				
14. Feel a sense of control over your work and environment (e.g. time allocation, research and teaching agenda, resources)	1.00	4.00	2.50	1.17				
15. Are able to balance multiple priorities and effectively use your time	1.00	4.00	2.58	0.90				
16. Your current career opportunities	2.00	4.00	2.83	0.58				
17. Your career progress to date	2.00	4.00	2.75	0.75				
18. Your overall academic/scholarly contributions	2.00	4.00	3.00	0.74				
19. The colleagueship you provide in your department	3.00	4.00	3.42	0.51				
20. The leadership you provide in your department	2.00	4.00	3.17	0.58				
21. Your likely career success in the next 5 years	1.00	4.00	3.08	1.16				

Individual Data Questionnaire - Descriptive Statistics

1 - Not at all, 2 - To Some Extent, 3 - To a Moderate Extent, 4 - To a Great Extent, 5 - Don't Know/Not Applicable

Round 2 – Chairs	Pre-intervention (N=6)				Post-intervention (N=)			
Item	Min	Max	Mean	sd	Min	Max	Mean	sd
1. Are clear about your career direction and goals in the next 5 years	2.00	4.00	3.33	0.82				
2. Are clear about your department's direction and goals in the next 5 years	3.00	4.00	3.67	0.52				
3. Are able to clearly articulate your career goals to others	3.00	4.00	3.67	0.52				
4. Are able to clearly articulate your department's goals to others	3.00	4.00	3.67	0.52				
5. Have exercised initiative towards attaining your career goals	3.00	4.00	3.60	0.55				
6. Have exercised initiative toward attaining your department's goals	4.00	4.00	4.00	0.00				
7. Have taken proactive steps to increase your own visibility	1.00	4.00	2.83	1.17				
8. Have taken proactive steps to increase your department's visibility	3.00	4.00	3.60	0.55				
9. Are clear about the role of a mentor	3.00	4.00	3.83	0.41				
10. Have actively provided mentoring within your department	1.00	4.00	3.40	1.34				
11. Have actively provided mentoring outside your department	1.00	2.00	1.67	0.52				
12. Exert influence in your department	3.00	4.00	3.60	0.55				
13. Exert influence in the university	1.00	3.00	2.50	0.84				
14. Exert influence in your discipline/field	2.00	4.00	3.00	0.63				
15. Feel successful in your department	2.00	4.00	3.33	0.82				
16. Feel successful in the university	2.00	4.00	3.17	0.75				
17. Feel successful in your discipline/field/profession	2.00	4.00	3.00	0.63				
18. Feel a sense of control over your work and environment	1.00	4.00	2.83	1.17				
19. Are able to balance multiple priorities and effectively use your time	2.00	4.00	3.00	0.63				
20. Your current career opportunities	3.00	4.00	3.17	0.41				
21. Your career progress to date	3.00	4.00	3.17	0.41				
22. Your department's overall success in your academic discipline	2.00	4.00	2.83	0.75				
23. The leadership you provide in your department	2.00	3.00	2.83	0.41				
24. The mentoring you provide in your department	3.00	4.00	3.25	0.50				
25. Your likely career success in the next 5 years	2.00	4.00	2.83	0.75				
26. Your department's likely success in the next 5 years	2.00	4.00	2.83	0.75				

NSF-ACES (Academic Careers in Engineering and Science) Individual Data Questionnaire (Women Faculty)

Please rate the extent to which you:

	Not At All	To Some Extent	To A Moderate Extent	To A Great Extent	Don't Know/ NA
1. Are clear about career direction and goals in the next 5 years	○	○	○	○	○
2. Are able to clearly articulate your career direction and goals to others	○	○	○	○	○
3. Have exercised initiative towards attaining your career goals	○	○	○	○	○
4. Have taken proactive steps to increase your scholarly visibility (e.g., hosting a conference, chairing a session, starting a colloquium series)	○	○	○	○	○
5. Are clear about the role of a mentor	○	○	○	○	○
6. Have actively sought mentoring from within your department	○	○	○	○	○
7. Have actively sought mentoring from outside your department	○	○	○	○	○
8. Mentor other colleagues in your department	○	○	○	○	○
9. Mentor students/postdocs in your department	○	○	○	○	○
10. Exert influence in your department	○	○	○	○	○
11. Exert influence in your discipline/field	○	○	○	○	○
12. Feel successful in your department	○	○	○	○	○
13. Feel successful in your discipline/field	○	○	○	○	○
14. Feel a sense of control over your work and environment (e.g. time allocation, research and teaching agenda, resources)	○	○	○	○	○
15. Are able to balance multiple priorities and effectively use your time	○	○	○	○	○

ACES
ACADEMIC CAREERS IN ENGINEERING AND SCIENCE
NSF-ADVANCE

Submit Answers

Reset Form

If you are filling out this form electronically, you can either save a copy and e-mail it to nsf-aces-evaluation@case.edu or click "Submit Answers" if you have a default e-mail program set up, such as Outlook, Eudora, or AOL.

If you are printing out this form, please mail it to:
Susan Perry
Dept. of Organizational Behavior 7235
or fax to Susan Perry at 216-368-4785

Thank you for your participation

Please rate how satisfied you are with:

	Very Dissatisfied	Somewhat Dissatisfied	Somewhat Satisfied	Very Satisfied	Don't Know/ NA
16. Your current career opportunities	○	○	○	○	○
17. Your career progress to date	○	○	○	○	○
18. Your overall academic/scholarly contributions	○	○	○	○	○
19. The colleagueship you provide in your department	○	○	○	○	○
20. The leadership you provide in your department	○	○	○	○	○
21. Your likely career success in the next 5 years	○	○	○	○	○

Is there anything else you would like to tell the researchers?

NSF-ACES (Academic Careers in Engineering and Science) Individual Data Questionnaire (Department Chairs)

Please rate the extent to which you	Not At All	To Some Extent	To A Moderate Extent	To A Great Extent	Don't Know/ NA
1. Are clear about your career direction and goals in the next 5 years	○	○	○	○	○
2. Are clear about your department's direction and goals in the next 5 years	○	○	○	○	○
3. Are able to clearly articulate your career goals to others	○	○	○	○	○
4. Are able to clearly articulate your department's goals to others	○	○	○	○	○
5. Have exercised initiative towards attaining your career goals	○	○	○	○	○
6. Have exercised initiative toward attaining your department's goals	○	○	○	○	○
7. Have taken proactive steps to increase your own visibility	○	○	○	○	○
8. Have taken proactive steps to increase your department's visibility	○	○	○	○	○
9. Are clear about the role of a mentor	○	○	○	○	○
10. Have actively provided mentoring within your department	○	○	○	○	○
11. Have actively provided mentoring outside your department	○	○	○	○	○
12. Exert influence in your department	○	○	○	○	○
13. Exert influence in the university	○	○	○	○	○
14. Exert influence in your discipline/field	○	○	○	○	○
15. Feel successful in your department	○	○	○	○	○
16. Feel successful in the university	○	○	○	○	○
17. Feel successful in your discipline/field/profession	○	○	○	○	○
18. Feel a sense of control over your work and environment (e.g. time allocation, research and teaching agenda, resources)	○	○	○	○	○
19. Are able to balance multiple priorities and effectively use your time	○	○	○	○	○

Please rate how satisfied you are with	Very Dissatisfied	Somewhat Dissatisfied	Somewhat Satisfied	Very Satisfied	Don't Know/ NA
20. Your current career opportunities	○	○	○	○	○
21. Your career progress to date	○	○	○	○	○
22. Your department's overall success in your academic discipline	○	○	○	○	○
23. The leadership you provide in your department	○	○	○	○	○
24. The mentoring you provide in your department	○	○	○	○	○
25. Your likely career success in the next 5 years	○	○	○	○	○
26. Your department's likely success in the next 5 years	○	○	○	○	○

Is there anything else you would like to tell the researchers?

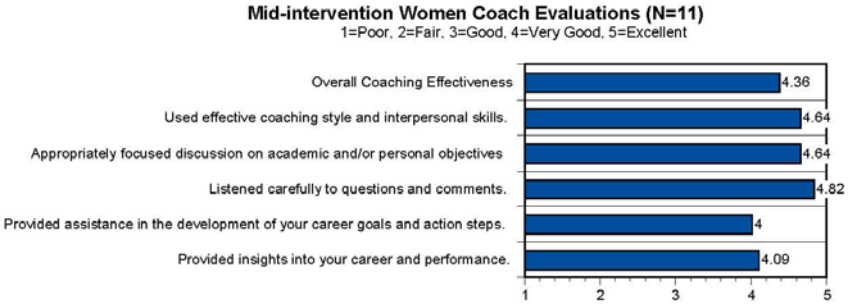
Submit Answers

Reset Form

If you are filling out this form electronically, you can either save a copy and e-mail it to nsf-aces-evaluation@case.edu or click "Submit Answers" if you have a default e-mail program set up, such as Outlook, Eudora, or AOL.

If you are printing out this form, please mail it to:
Susan Perry
Dept. of Organizational Behavior
7235
or fax to Susan Perry at 216-368-4785

Thank you for your participation



Coaches were rated higher on each item for the post-intervention evaluations.

Post - Individual data questionnaire comments – women (N=8):

I began my career at a disadvantage because I was not trained in the field in which I work. This means that I am an outsider with little visibility, and there are no "powerful leaders" with an investment in my success. ACES has helped me to recognize the importance of this and begin to change it.

ACES programs are helpful to women dealing with small career issues, but are totally inadequate for helping those with larger issues, for example, not having an opportunity to do one's independent research. More resources need to be available for women to make a real difference.

Post coach eval comments – women (N=7):

Provided insights into your career and performance.

Although my coach was not necessarily attuned to my particular field, she was able to give insight about my performance as an academic in general.

Provided assistance in the development of your career goals and action steps.

I did not really need help in articulating my career goals; they were pretty clear once I had gone through the exercise of writing them down.

Listened carefully to questions and comments.

She was a great listener and this was the most important part of my coaching experience!

Appropriately focused discussion on academic and/or personal objectives.

She helped me to focus on my personal objectives, since my academic objectives and milestones were pretty clear and on track.

Used effective coaching style and interpersonal skills.

She is a pleasant person with a very approachable demeanor.

Overall coaching effectiveness.

The coaching process greatly increased my self-confidence and my willingness to take initiative on some projects.

I was not sure what to expect from the experience, so it is hard to say whether it was "effective". Nonetheless, I am glad I participated in the program.

Please describe your overall coaching experience.

[*My coach*] let me set the agenda for each session, encouraging me to think ahead of time about which issues I wanted to explore in depth. We focused on one or two dilemmas facing me in each session, and discussed options for moving ahead, weighing their pros and cons. She was helpful in surfacing options I hadn't considered, in helping me to consider the possible impact of different options, and in working with me to overcome any hesitations I had about moving ahead.

Initially, I felt the coaching was a bit of a waste of my time. The sessions seemed very unfocused and "chatty" rather than specifically helpful. However, they took a dramatic turn for the better as they progressed, and I found the overall experience very positive. My coach helped me to clarify

my career and life needs and goals, and helped me recognize when I was living my values and when my actions were torpedo-ing them. This reduced my stress level considerably and made me more effective.

Helpful in getting me to set priorities and to stop procrastinating about accomplishing an important work goal. Also my coach held me accountable to move ahead with my mentoring committee meeting which turned out to be very helpful.

My coaching sessions were much like what I would expect "therapy" to entail. I basically ran down the list of all the challenges and successes that had occurred since our last session. Since I am going through a pretty intense time in my personal and professional life, this pretty much filled up the time. It helped me, in any case, tell someone the unabridged and uncensored version of my transition into the academic environment at Case.

My coach has been very effective in directing me to communicate with my colleague and chair.

[*My coach*] was a huge source of support

Overall this was a good experience. The one downside is that the sessions did raise issues about gender inequity that I have managed to suppress over the years in order to survive. So in a way this experience has opened a "Pandora's box" and I am more aware and angered by these inequities. It is now a matter of finding some balance in identifying some issues that can be realistically addressed and putting the others back in the box. I think it is difficult to achieve success if you only focus on the negative aspects of the culture. Admittedly sometimes it is easier if you pretend they don't exist.

Did you feel encouraged to make improvements based on your coaching sessions?

Coaching really helped me to make a decision about issues that I would have continued to hem and haw about if I was left to my own devices.

Absolutely.

Yes, very much so. The coach was helpful between sessions by sending follow-up emails reminding me of things I had said I would do prior to the next session.

I was encouraged to find creative ways to achieve more balance in my life, but after several months, I am back to my old ways!

Somewhat. My coaching sessions have reinforced my appraoch to attain success in my career. So this is encouraging.

Yes, but improvements were impossible for reasons beyond my control. There is no room in basic academic research for primary caregivers to children and those that cannot relocate.

Yes.

Please describe ways in which your coaching experience met or did not meet your expectations.

At first [*my coach*] didn't seem all that familiar with the academic environment, but she was a quick learner.
Her ability to work with me on concrete action steps in a compassionate way that helped me to feel less overwhelmed really exceeded my expectations.

Absolutely.

Toward the end, I did not have as much to talk about.

My coach made it clear that she was not hired to "fix the women" at Case. In some ways, I wish she had acted more like a consultant, who could e.g. make basic suggestions about "dressing the part" or learning to speak up and be assertive (rather cut and dry examples, but it is surprising how many women do not know these basic things and what an impact such "small changes" can make). My coach did give me some real world advice from her industry experience, where "made up shit" was pretty standard and where certain survival strategies are necessary.

This is difficult to say as I did not have any expectation at all. Nevertheless, I would say this coaching experience is worthwhile, especially in helping me with interacting with my colleagues.

[*My coach*] was as good a coach as possible to me, but for my situation coaching cannot provide substantial improvements.

The coaching reminded me that I am the master of my own fate. It also provided female comraderie that I do not otherwise have, and I had forgotten how important that is. This has encouraged me to re-connect with my female colleagues in other department despite evryone' time constraints. We are trying to organize a monthly chalk talk to share science for starters, building on Mary Beckerle's advice to be optimistic. On the downside, I can change and my chair can change, but progress will still be very slow without changes in adminstrative attitude ranging from deans to support staff. For example, it has been very discouraging to see the shift to evening faculty meetings in the medical school, which I think is a major step backwards.

Baseline - Individual data questionnaire comments - women:

I compromised my postdoctoral training to remain living with my husband and now I think my career prospects are bleak.

Mid coach eval comments – chairs (N=2):

Provided insights into your career and performance.

Provided assistance in the development of your career goals and action steps.

Listened carefully to questions and comments.

Appropriately focused discussion on academic and/or personal objectives.

I was surprised that my coach addressed balancing personal and professional goals, but clearly this is an important thing to do.

Used effective coaching style and interpersonal skills.

Overall coaching effectiveness.

Please describe your overall coaching experience.

My experience was outstanding. This was a difficult stage in my career of decision making about my future and that of the department. The coaching helped me focus on steps needed to come to the right decisions.

[*My coach*] is terrific.

Did you feel encouraged to make improvements based on your coaching sessions?

As is normal human behavior, we don't always follow up on "what we should do", but at least the initial encouragement was there.

Absolutely.

Please describe ways in which your coaching experience met or did not meet your expectations.

It exceeded my expectations. I am a more aware and communicative leader as a result of this coaching.

I wish I started much earlier.

Mid coach eval comments – women (N=11):

Provided insights into your career and performance.

While I enjoy our discussions, I wouldn't necessarily say that [*my coach*] has provided much insight - at least any more than I already had. I certainly would not fault her for that, however.

She gave me a different perspective of my impact and leadership. Though I have no

interest in leadership beyond what it takes to succeed in science.

Provided assistance in the development of your career goals and action steps.

We've more discussed current situations in the workplace. Our discussions about career goals tend to be brief as I feel "on track". Perhaps "fair" is an unfair ranking as perhaps this type of assistance was not a priority for our sessions.

I have not been very good about following up on her homework assignments. and she hasn't pushed me. However, she has made me think about it and I am inthe process of setting action items.

Listened carefully to questions and comments.

Wonderful person to talk to, very insightful. She gets it quickly.

Appropriately focused discussion on academic and/or personal objectives.

[*My coach*] is very good at bringing the focus to the important aspects of the disussion.

We have so much fun discussing women in science, ACES, etc that we sometimes do not focus on objectives. I'm as much to blame for this as she.

Used effective coaching style and interpersonal skills.

Not sure I am qualified to answer this as I don't really know what an "effective coaching style" is. I might have responded better to a bit more of an agressive or critical attitude on her part.

Overall coaching effectiveness.

More effective on coaching about self-management and personal/family life effectiveness, because of her firsthand experience with that setting

I think our conversations have been beneficial to help me talk through current situations in the workplace. However, I had hoped to gain more from the sessions, although I am not exactly sure what was lacking.

Please describe your overall coaching experience.

[My coach] has been a tremendous source of support and encouragement. She has done a great job assessing what my problems and weaknesses are and suggesting and encouraging ways to overcome them. She has tailored her coaching to my own personal needs and it has been much more helpful than a more general, impersonal approach.

The experience has been very positive. I was "forced" to come up with a "gameplan", which I likely would not have done if "left to my own devices". In general, the greatest aspect was to have someone to talk to about my previous experiences and my hopes for the future, in particular someone who has talked with a number of women about their experiences and who could give feedback based on her understanding of issues particular to women.

I appreciate the value, and haven't taken proper advantage of it. Mostly because I'm so overcommitted. [My coach] has moved that to center stage, and I am in the process of disengaging from less essential activities.

I have gained more self-confident through this experience, and I am learning to communicate better with my chair. This coaching experience is positive.

[My coach] has been an excellent coach. She helps me to identify and focus my attention on my areas of weakness and encourages me to address issues that I have identified as being problematic. It's almost like being in therapy!!!!....or at least what I imagine therapy to be like, not having any personal experience!!!!

We focused on a particular issue that I wanted help with at the beginning of each session, and [my coach] asked questions to help me weigh pros and cons of different action options. (So far, we have discussed 1) how to manage RAs who are not meeting my expectations 2) how to approach my department chair about a request for resources and 3) how to protect my writing time and not be too hard on myself during the writing process.)Then she would initiate a wider conversation about other things I might want to be thinking ahead about.

It is pleasant but not terribly helpful, so far. My coach listens wonderfully and offers feedback when asked, but has only recently started contributing in a more original/thought-provoking way.

I am a very goal oriented planner. So, I don't know if this type of coaching experience was appropriate for me. Although I am not sure what types of discussions would have been more helpful. Perhaps I would have appreciated more of an "analysis of me" from her so that I could understand my own weaknesses better to avoid potential negative situations in the future. Nonetheless, the experience has given me the opportunity to talk things through with someone who has an objective standpoint, and I think that has helped me feel more sane!

I have thus far had two sessions with [my coach] and a third session is coming up. So far, I have found the sessions to have been enormously useful in helping me to establish a framework for deciding on a career path for the next 5 years. I am very much enjoying working with [my coach].

It has helped me to see the important things that I need to do and the important relationships I need to build.

Did you feel encouraged to make improvements based on your coaching sessions?

definitely. [My coach] has suggested solutions I would not have thought of or had the confidence to implement if left to myself. She has also facilitated their implementation by providing resources.

[My coach] made it clear at the first session that she was not coaching me in order to "fix my weaknesses". Sometimes I wished that she would just tell me, "You need to do 'x'", but it would be impossible to expect someone who doesn't know me extremely well to give such advice.

Very much so. I will be using her help to focus on improving the productivity of of my research group.

yes

Yes....although, the improvements I am attempting to make are not ones that are easily achieved or necessarily outwardly identifiable.

Simply taking the time to focus on one issue, and think it through so that I had a sense of how I wanted to proceed, was helpful. Without a coach, I often consider issues, but never settle on a chosen course of action, so I keep spinning around the issue intermittently over days and weeks.

[My coach's] style is also very affirming, and helped me build momentum and confidence, without feeling like I was a recipient of "fake praise".

Yes.

I certainly don't feel discouraged! But I would not say that my coaching sessions have given me any greater motivation to make "improvements" beyond what I may have done on my own.

We haven't talked much about "improvements". I'm more interested at this point in getting help on how to make informed decisions about the very diverse career paths availabe to me at this stage in my career.

Please describe ways in which your coaching experience met or did not meet your expectations.

I was relieved not to get lectured to about simple things like time management. I really wasn't sure how coaching was going to help, but it has been very helpful.

I really did not know what to expect from coaching initially, so there were no "expectations" to meet. [My coach] helped me to focus on what is important to me personally, as far as my career goals go, and to develop a long term plan to achieve my goals. Again, the most positive aspect of coaching was to have someone who was able to listen to my experiences and to give feedback based on her conversations with other women. This was of great value to me.

Fulfilled my expectations. I will probably continue at my own expense until I get out of the woods.

I did not have any expectation.

Not knowing what to anticipate.....I did not have any concrete expectations. It has been a much more useful experience though than I had originally anticipated.

While at first I was surprised at how much of the academic context I had to explain to her, later I realized that this helped me as well, because it opened me up to challenge my preconceived notions about how I "should" be working.

On the whole, the experience definitely was helpful and met my expectations.

I expected more "homework" -- more exposure to aspects of career development and day-to-day performance that I didn't already know about. I was hoping it would open my eyes to new things I could do to improve my effectiveness, and position myself better to achieve my career goals. So far, it's been driven almost entirely by me, to address what I already think needs improvement.

While I enjoyed my sessions, I am a bit disappointed that I don't feel a bit more "enlightened". In the beginning, I was very excited about coaching because I saw it as an opportunity to improve myself in ways I never would have thought up on my own. However, I am not sure we have found any new methods to use that I have not already tried in my life. Perhaps, I am just the type of person who is constantly re-evaluating and planning my career path in a way that keeps me on top of things. Or perhaps, I am simply that naive...

I think I would have preferred a longer timetable for the coaching (not more sessions, just spread-out over a longer time period). The short timetable makes it difficult to work on different strategies, enact them, see what is working and what is not, and then iterating on them. A minimum of three semeseters (maybe even four) would have been preferable.

NSF-ACES
Executive Coaching Evaluation

ACES
ACADEMIC CAREERS IN ENGINEERING AND SCIENCE
NSF-ADVANCE

Please fill out your coach's name and evaluate your coaching sessions on the following items.

	Excellent	Very Good	Good	Fair	Poor
Coach's Name: _____					
Provided insights into your career and performance	○	○	○	○	○
Comments:					
Provided assistance in the development of your career goals and action steps.	○	○	○	○	○
Comments:					
Listened carefully to questions and comments	○	○	○	○	○
Comments:					
Appropriately focused discussion on academic and/or personal objectives	○	○	○	○	○
Comments:					
Used effective coaching style and interpersonal skills	○	○	○	○	○
Comments:					
Overall Coaching Effectiveness	○	○	○	○	○
Comments:					

Please describe your overall coaching experience.

Did you feel encouraged to make improvements based on your coaching sessions?

Please describe ways in which your coaching experience met or did not meet your expectations.

NAME_____(optional)

If you are filling out this form electronically, you can either save a copy and e-mail it to nsf-aces-evaluation@case.edu or click "Save Answers and Send" if you have a default e-mail program set up, such as Outlook, Eudora, or AOL.

If you are printing out this form, please mail it to:

Susan Perry
Dept. of Organizational Behavior
7235

or fax to Susan Perry at 216-368-4785

Thank you for your feedback!

Save Answers and Send

Reset Form

Appendix 7

NSF ACES
Summary of Current and Future Research and Evaluation Projects

Journal Articles

1. Bilimoria, Diana, Perry, Susan, Liang, Xiangfen, Higgins, Patricia, Stoller, Eleanor & Taylor, Cyrus. How Do Female and Male Faculty Members Construct Job Satisfaction? The Roles of Perceived Institutional Leadership and Mentoring and their Mediating Processes

Empirical study of faculty responding to Case's 2004 climate survey. Under review at Journal of Technology Transfer.

2. Bilimoria, Diana, Higgins, Patricia, Perry, Susan, Robson, Linda, Stoller, Eleanor, & Taylor Cyrus (co-author order is yet to be determined).

Paper to be submitted for the Special Issue on Women, Tenure, and Promotion of the National Women's Studies Association Journal. Paper reports on themes in the 2000 and 2003 faculty focus groups conducted at Case. Paper is in final writing stage. Submission due May 1.

3. Diana Bilimoria, Liang, Xiangfen, Perry, Susan, Gordon, Nahida, Higgins, Patricia, Stoller, Eleanor, Taylor, Cyrus, & Simy, Joy. Predicting Academic Career Success from Academic Process and Individual, Relational, and Organizational Perspectives: How Does Gender Matter?

Paper in early draft stage. To be submitted to Academy of Management Review or Review of Higher Education

Book Chapters

1. Diana Bilimoria, Hopkins, Margaret & O'Neil, Deborah A. Executive Coaching: An Effective Strategy for Faculty Development, for

Book chapter in Stewart, Abigail (Ed.), Learning from NSF ADVANCE, University of Michigan Press. Book chapter still to be written.

2. Greer Jordan & Diana Bilimoria. In Pursuit of "Good Science": How "Generative Interactions" Support Productivity and Inclusion in an Academic Science Department

Book chapter in Stewart, Abigail (Ed.), Learning from NSF ADVANCE, University of Michigan Press. Book chapter still to be written.

Conference Presentations

1. Bilimoria, Diana. June 2005. The Role of Research in Institutional Change: Evidence From ADVANCE Institutions.

Panel speaker at a session entitled Transforming Academia for Women (and Men) in Science at the National Council for Research on Women (NCRW) Annual Conference, New York.

2. Bilimoria, Diana (Chair). August 2005. Applying Theory to University Transformation: Advancing Women Faculty in Science and Engineering, Showcase Symposium at the Academy of Management Conference, Honolulu, Hawaii.

The symposium focuses on methodologies of institutional transformation across 5 ADVANCE institutions: Case, Georgia Tech, Hunter College, New Mexico State University, and Utah State University.

3. Bilimoria, Diana & Perry, Susan. August 2005. Transforming the Faculty Mindset, symposium paper at the Academy of Management Conference, Honolulu, Hawaii.

4. Bilimoria, Diana. August 2005. The Academic Glass Ceiling: Women Faculty in Science and Engineering, symposium paper at the Academy of Management Conference, Honolulu, Hawaii.

Work In Progress

1. Faculty survival analysis. A rank, promotion, and retention study using survival analysis methods over a 15-year period

In data acquisition stage. Lead: Nahida Gordon

2. Faculty salary study. Analysis of faculty salaries over time using the Paychecks methodology.

In data acquisition stage. Lead: Nahida Gordon

3. Relationship Between Women Faculty and International Students in S&E.

Data from focus groups and individual interviews are being analyzed. Leads: Susan Perry, Simy Joy, Xiangfen Liang

3. Collective best practices interview study. Interviews with PIs and Co-PIs from all 19 ADVANCE institutions to collect data to understand what works and what doesn't.

Awaiting IRB response. Leads: Diana Bilimoria and Susan Perry.

Reports and Presentations

1. Quarterly and Annual NSF ADVANCE reports.

Year-end reports available at www.case.edu/admin/aces

2. 2000 and 2003 Faculty Focus Group/Interview Reports. Focus groups of faculty about the status of women faculty at Case. The 2000 wave consisted of male and female faculty and administrators from across the campus. The 2003 wave consisted of chairs and male and female faculty from Year 1 ACES (test) departments.

Reports completed and available at www.case.edu/admin/aces

3. Offer-letter analysis. Summarizes results of Year 1 analysis of an on-going 5 year study of start-up offers for new faculty. Presents findings on each incoming groups demographics, starting salary comparisons, start-up package amounts, and total package (a combination of variables) information.

Report complete. To be uploaded to www.case.edu/admin/aces

4. Neurosciences Department Case Study: "Creating Lives in Science: A Case Study of an Academic Science Department." Presents findings about the departmental and leadership conditions that foster full participation of women at all academic ranks. Collection of data from multiple sources, including existing documents (policies, guides, CVs, website info, etc.), direct observation, and interviews with and surveys of faculty within the department.

Report complete and available at www.case.edu/admin/aces

5. Coaching evaluation reports. Mid-intervention and final feedback from participants about their experiences with their year-long executive coaching.

Year 1 report complete.

6. Individual Pre- & Post-Intervention Data Questionnaire. Data collected about individual faculty members' and chairs' perceptions of their job performance, career development, and satisfaction.

Ongoing reports. Baseline data collected for Round 1 coaching participants, post-intervention data collection in progress as coaching participants finish up. Round 2 participants (10 additional departments) have received baseline questionnaire.

Upcoming Studies

1. Work/Family Survey. Web-based or phone-based survey about work/family with possibly a cohort institution.

In early thinking stage. Lead: Eleanor Stoller, possibly in collaboration with Sue Rosser.

2. Method comparison salary study. Comparing approaches to a salary study of all full-time Case faculty using Paychecks methods

In early thinking stage. Lead: Eleanor Stoller

3. Interviews with Round 1 (test department) women faculty coaching/mentoring participants to explore what has happened to them since the ACES interventions. Questions about outcomes: publications, grant applications, presentations, speeches.

In early thinking stage. Lead: Susan Perry

Appendix 8

NSF ACES
Coaching Template for Women Faculty

Pre-Reading: FAQ on Coaching
<http://www.coach-federation.org/aboutcoaching/about.asp>

Session 1 – Overview and Introduction

I. Introductions and Coaching Relationship
- Introductions
- Goals of NSF ACES grant
- Roles – who am I and how do we establish mutual trust? How can I support you? What is your experience with coaching?
- Mutual expectations – What can we expect of each other?
- Overview and broad agenda of future coaching sessions

II. Background Review
- Career history; experience with department and field
- Areas of work focus
- Contributions you make to your department
- What does your typical workday look like?
- Description of departmental work environment

III. Career Highlights
- What have been some of the high points of your career?
- What have been some of the disappointments of your career?
- Enjoyments/challenges in current work role
- Enjoyments/challenges outside current work role

IV. Current Areas of Interest/Concern – immediate, mid-term, long term
- Work performance issues – research, teaching, service
- Department or Chair issues
- Work-life balance issues
- Mentors you can count on for good advice

V. Assignments – Complete Prior to Next Session
- Describe your strengths – as a scientist, colleague, professor, leader.
- What distinguishes your specific work?
- Describe your current level of visibility and influence in your department? In your field? What are your desired levels?
- Read articles:
  - "Managing Oneself" by Peter Drucker, Harvard Business Review, March-April 1999
  - Multiple Mentoring in Academe: Developing the Professional Network (Janasz & Sullivan, 2002, *Academy of Management Proceedings*)

D. Bilimoria
Case Western Reserve University
January 2005

Session 2: Professional Excellence and Academic Success

I. Review Learnings from Homework Assignments

- What are the implications, and what new decisions or actions need to be taken?
- Priorities: personal/professional, life stage, time management, balance

II. Definitions of Academic Success

- How do you define academic success? What is successful science?
- Describe professional excellence. Explore all dimensions of the academic job.
- Whom do you know who is academically successful? Why do you admire them?

III. Indicators of Academic Success

- What are indicators of success for your position – personal and institutional?
- What are the most important measures of your effectiveness?

IV. Increasing Your Impact and Contributions to Your Department and Your Field

- What specifically brings visibility in your field?
- What would increase your influence and contributions?
- What would be the personal consequences of doing this?
- How can you effectively challenge the status quo?
- How can you take risk more effectively?

V. Creativity in Your Science

- What are the desired outcomes of your science? What would take your work into a higher league?
- How can you do your job more creatively? What would be some bold steps to take to increase the results of your work? New strategies/approaches to writing?
- What are some resources that you are not recognizing or under-utilizing?

VI. Mentoring Committee

- Begin a conversation with your Chair about 3 people that your Chair can invite to serve on your mentoring committee for the next 2 years: one departmental member, one university member (outside the primary department), one member from your field (outside the university)
- Begin creating an agenda for first mentoring committee meeting
- Plan to attend the ACES Mentoring Skills workshop that is coming up

VII. Assignments – Complete Prior to Next Session

- Pick a role model for leadership in your field/science. Observe this individuals' style, behavior, presence, influence. If possible, interview him or her about their journey, choices, advice, etc. Make a list of why you admire them.
- Identify personal vision of professional excellence based on identified role models
- Read articles:
  - Meyerson, D. E. & Scully, M. A. 1995. Tempered radicalism and the politics of ambivalence and change, Organization Science, 6, 5: 585-600.

D. Bilimoria
Case Western Reserve University
January 2005

Session 3 – Career Vision and Goals

I. Review Learnings from Homework Assignments

- What surprised you about your vision of professional excellence?
- What are the implications, and what new decisions or actions need to be taken?

II. Development Focus and Experience with Self-Directed Intentional Change

- What is your development focus: tenure, promotion, full professorship, leadership in your field, administration?
- When have you developed yourself successfully? What happened to make it work?

III. Career Aspirations and Challenges

- What are your career aspirations?
- Immediate career challenges? Long term career challenges?

IV. Career Goals

- Short Term Goals
  i. Writing/research/grant commitments that need to be addressed
  ii. Dealing with co-authors to confront needs that are not being met
  iii. Getting reenergized about ongoing projects
  iv. Managing performance problems in the classroom or lab
  v. Increasing department receptivity to your ideas
- Mid Term Goals
  i. Target advisory/management skills
  ii. Motivate graduate students, post-docs, and colleagues to achieve your goals
  iii. Prioritize own development – progress in summer is crucial
- Long Term Goals
  i. Clarify scientific leadership vision – where want to be and what does it look/feel like?
  ii. Departmental leadership

V. Mentoring Committee Follow Up - Finalize committee members

VI. Assignments – Complete Prior to Next Session

- List your personal goals – immediate, short term, mid-term, long term
- Determine what you need to change/improve to reach your goals
- Follow up on short term goals; i.e., meet with co-authors, create timeline, prioritize tasks, revisit project goals, speak with graduate students/postdocs
- Follow up with your Chair and the ACES representative working with your department regarding your Mentoring Committee members.
- Read article on emotional intelligence for next session:
  - "What Makes a Leader?" Daniel Goleman, *Harvard Business Review*, November-December 1998.

D. Bilimoria
Case Western Reserve University
January 2005

Session 4 – Emotional Intelligence

I. Review Learnings from Homework Assignments

- What are the implications, and what new decisions or actions need to be taken?

II. Emotional Intelligence

- Concept of emotional intelligence
- Personal triggers
- Examples of stress-inducing situations
- EI competencies – self awareness, self management, social awareness, relationship management skills

III. Strategies and Tools

- Define effective behaviors related to competencies
- Identify people who demonstrate these behaviors consistently and reflect on how they do this.

IV. Discussion/Role Plays of Frequent Problem Areas

- How to handle work and work-life balance stressors
- Emotional self-control
- Conflict management
- Taking initiative and risk
- Optimism in the face of administrative constraints
- Strategic thinking

V. Assignment – Complete Prior to Next Session

- Self assessment of emotional intelligence competencies.
- Consider 360 ECI for senior women
- Search the web for insights about the development of particular competencies of interest. For example, conflict management or emotional self-control or initiative or leadership.
- Practice new behaviors related to targeted competencies.

Session 5 – Achieving Goals

I. Review Learnings from Homework Assignments

- What are the implications, and what new decisions or actions need to be taken?

II. What is Needed to Achieve Your Goals?

- Tenure/promotion package requirements
- Networking within/without department
- Professional/personal balance

III. Identification of Professional Strengths

- Discussion of EI competencies
- Other strengths
- Personal balance sheet

IV. Professional Development Needs in Light of Goals (immediate, short-term, mid-term, long term)

- Discussion of competency gaps
- Opportunities for development

V. Creating an Action Plan

- Tasks/actions to achieve goals – immediate, short term, mid-term, long term
- Time log/allocation

VI. Assignments – Complete Prior to Next Session

- Create your Personal Development Plan (use template provided)
- Read articles:
  - "Nice Girls Don't Ask" by Linda Babcock, Sara Laschever, Michele Gelfand, Deborah Small. *Harvard Business Review,* Oct 2003.
  - "Leadership That Gets Results" by Daniel Goleman, *Harvard Business Review*, March-April 2000.

Session 6 – Leveraging Professional Impact and Contributions

I. Review Learnings from Homework Assignments

- What are the implications, and what new decisions or actions need to be taken?

II. Negotiating Effectively

- Role play/practice asking for resources

III. Learning to Deal with Different Styles

- Concepts around personal styles
- Consider doing Learning Styles Inventory (LSI) or Myers-Briggs Type Indicators (MBTI) instruments

IV. Closing Down the Coaching Relationship

V. Future Assignments

- Continue implementation of Personal Development Plan
- Read article:
  - "A Modest Manifesto for Shattering the Glass Ceiling" by Debra E. Meyerson & Joyce K. Fletcher, Harvard Business Review, January-February 2000.

References for Women Faculty

Blakemore, J.E.O., Switzer, J.Y., DiLorio, J.A., Fairchild, D.L. 1997. Exploring the campus Climate. Pages 54-71 in N.J. Benokraitis (Ed.), *Subtle Sexism: Current Practice and Prospects for Change*, Thousand Oaks, CA: Sage Publications.

Chao, G. T., Walz, P. M. & Gardner, P.D. 1992. Formal and informal mentorships: A comparison on mentoring functions and contrast with nonmentored counterparts. *Personnel Psychology,* 45: 619-621.

Cialdini, R. B. 1995. Principles and techniques of social influence. In A. Tesser (Ed.), *Advanced social psychology* (pp. 257 – 281). Boston, MA: McGraw Hill.

de Janasz, S. C., Sullivan, S. E., & Whiting, V. 2003. Mentor networks and career success: Lessons for turbulent times. *Academy of Management Executive, 17*(4), 78-91.

Eagly, A. H., Johannesen-Schmidt, M.C., & van Engen, M. L. 2003. Transformational, transactional, and laissez-faire leadership styles: A meta-analysis comparing women and men. *Psychological Bulletin, 129* (4), 569 – 591.

Etzkowitz, H., Kemelgor, C. & Uzzi, B. 2000. *Athena Un:bound: The advancement of women in science and technology.* Cambridge, UK: Cambridge University.

Evetts, J. 1996. *Gender and Career in Science and Engineering*. London: Taylor and Francis.

Fox, M. F. 1991. "Gender, Environmental Milieu, and Productivity in Science." In *The Outer Circle: Women in the Scientific Community*, edited by H. Zuckerman, J. Cole, and J. Bruer. New York: W. W. Norton.

Fox, M. F. 1998, Autumn. "Women in Science and Engineering: Theory, Practice, and Policy in Programs." *Signs: Journal of Women in Culture and Society* 24: 201-223.

Gibson, S. K. 2004. Being mentored: The experience of women faculty. *Journal of Career Development, 30*(3), 173-188.

Jacobs, J. A. & S. E. Winslow. 2004. The academic life course, time pressures and gender inequality. *Community, Work and Family 7 (2):* 143-161.

Long, J. S. 1992. "Measures of Sex Differences in Scientific Productivity." *Social Forces* **71**(1): 159-178.

Lorber, J. 2000. The social construction of gender. In T. Ore (Ed.) *The Social construction of difference and inequality: Race, class, gender and sexuality:* 106-113. Mountain View, CA: Mayfield.

D. Bilimoria
Case Western Reserve University
January 2005

Lorde, A.. (1984) 1997. "The master's tools will never dismantle the master's house." In *Feminist Frontiers IV*, eds. Laurel Richardson, Verta Taylor, and Nancy Whittier, 26-28. New York: McGraw Hill.

Meyerson, D. E. & Fletcher, J. K. 2000. a modest manifesto for shattering the glass ceiling. *Harvard Business Review*: 127-136.

NSF 2002. National Science Foundation "General Information: Program Title – Advance" http://www.nsf.gov/pubs/2002/nsf02121/nsf02121.htm (Retrieved Dec. 20, 2004).

Raabe, P. H. 1997. "Work-Family Policies for Faculty." In *Academic Couples: Problems and Promises*, edited by M. A. Ferber and J. W. Loeb. Urbana, Illinois: University of Illinois Press.

Rapoport, R., Bailyn, Lotte, Fletcher, J. K. & Pruitt, B. H. 2002. *Beyond work-family balance: Advancing gender equity and workplace performance*. San Francisco: Jossey-Bass.

Reskin, B. 1978. "Sex Differentiation and Social Organization of Science." *Sociological Inquiry* 48: 491-504.

Rosser, S. & Zieseniss, M. 2000. "Career Issues and Laboratory Climates." *Journal of Women and Minorities in Science and Engineering* 6: 1-20.

Sandler, B.R. & Hall, R. M. 1986. *The Campus Climate Revisited: Chilly for Women Faculty, Administrators, and Graduate Students*, Association of American Colleges and Universities, Washington, D.C.

Tesch, B. J., Wood, H.M., Helwig, A. L., & Nattinger, A. B. 1995. Promotion of women physicians in academic medicine. Glass ceiling or sticky floor? *Journal of the American Medical Association,* 273 (5), 1022 – 1025.

Valian, V. 1999. *Why So Slow? The Advancement of Women*, Cambridge, MA: The MIT Press.

Valian, V. 2004. Beyond gender schemas: Improving the advancement of women in academia. NWSA Journal, *16*(1), 207-220.

Coaching Questions

If you could design your ideal world, both professional and personal, what would it look like? Where would you spend your time? Create 2 pie charts 1) how you currently spend your time and 2) how you would like to spend your time

How will you balance your professional and personal life? What resources do you need to make this balance possible? From whom? What can you do to create the desired balance?

What do you hope to achieve through your research? Your teaching? Your service? Create two statements 1) of your research philosophy and 2) of your teaching philosophy.

What would be the ideal scenario here for you at Case? (Dream big, don't censor your answers based on practicality or plausibility.)

What can you do to make this an excellent place for you to do your 'best' science?

What would the department leadership need to provide for you to be happy here?

What can you do to maximize your research productivity?

What would encourage you to make your career at Case?

Rank your professional priorities - what is most important to you, next most important? etc. What won't you live without professionally?

What is your short term plan in the next 6 months? How will you move your research agenda forward? What are your plans for your lab? For funding? How will you manage your students/post-docs? What are your goals for your students/post-docs?

What do you hope to have accomplished 1 year from now? 2 years from now?

What resources do you currently have to draw on? What resources do you need to develop in order to attain your 1 year and 2 year goals?

D. Bilimoria
Case Western Reserve University
January 2005

Personal Development Plan Template

The objective of this assignment is for you to create a living document that motivates and guides your actions as you embark on your journey of career and personal development.

Here is a description of the major components to include in your plan:

Part 1: Statement of your Personal Career/Life Vision

- Your career and life vision or goal over the next 5-10 years – Where will you be in your career? What will be your responsibility? What will you find exciting and challenging in your career? What kind of results will you be achieving?
- Describe the relationship between your vision and your values

Part 2: Discussion of your Strategy to Develop your Emotional Intelligence Competencies

Using what you have discovered about your abilities through the Emotional Competence Inventory, describe which competencies are important to you as you create your desired future.

- Identification of abilities that have high developmental priority for achieving your career and life goal
- Discussion of overall strategies for developing chosen abilities—how do you plan to learn and develop these abilities?
- Linkage of these abilities and strategies to the goals and sub-goals in Section 4—how will your development plan provide you with opportunities to develop the high priority abilities?

Part 3: Goals, Sub-Goals, and Action Steps (SMART)

This section can be written in outline form. Remember to construct goals, sub-goals, and action steps that fit the SMART criteria: Specific, Measurable, Attainable, Relevant, and Time-bound.

- 2-4 Goals: In one sentence, describe an outcome that is concrete, specific, personally meaningful, affirmative, challenging but attainable, and tied to a timeframe.
- Sub-goals (2 or more per goal only if your goal is more than 5 years into the future), using the same criteria as above for goals.
- Action Steps (2 or more per goal or sub-goal): In one sentence, these should be concrete and specific and address the "when, how, who, what, and where" of the action. These are the steps that you will complete to accomplish each sub-goal/goal.
- For each sub-goal (or goal if you don't have sub-goals), discuss how you will monitor your progress along the way towards accomplishing it.
- Potential helping and hindering forces for achieving your goals (what will help you get there? what might stand in your way?)

D. Bilimoria
Case Western Reserve University
January 2005

NSF ACES
Coaching Template for Chairs

Pre-Reading: FAQ on Coaching
<http://www.coach-federation.org/aboutcoaching/about.asp>

Session 1 – Overview and Introductions

I. Introductions and Coaching Relationship
- Introductions
- Goals of NSF ACES grant
- Roles – who am I and how do we establish mutual trust? How can I support you? What is your experience with coaching?
- Mutual expectations – What can we expect of each other?
- Overview and broad agenda of future coaching sessions

II. Background Review
- Career history; experience with department and field, experience with leadership of department
- Areas of work focus as department chair
- What does your typical workday look like?
- Description of departmental work environment

III. Leadership Highlights
- What have been some of the high points of your leadership?
- What have been some of the disappointments of your leadership?
- Enjoyments/challenges in current work role
- Enjoyments/challenges outside current work role

IV. Current Areas of Interest/Concern – immediate, mid-term, long term
- Leadership issues
- Departmental management issues
- Resource creation and allocation issues
- Work performance issues – research, teaching, service
- Work-life balance issues

V. Assignments – Complete Prior to Next Session
- Describe your strengths as department chair. What distinguishes your specific leadership?
- What have you learned as the department's chair?
- Describe your current level of visibility and influence in your department? In the university? In your field? What are your desired levels?
- Read article:
  - "Leadership That Gets Results" by Daniel Goleman, *Harvard Business Review*, March-April 2000.

D. Bilimoria
Case Western Reserve University
January 2005

Session 2 – Academic Leadership Effectiveness

VIII. Review Learnings from Homework Assignments

- What are the implications, and what new decisions or actions need to be taken?
- Priorities: personal/professional, life stage, time management, balance

IX. Definitions of Leadership Effectiveness

- How do you define great leadership as a department chair?
- What do you expect from yourself? Explore all dimensions of your academic job.
- Whom do you know who is a successful leader? Why do you admire them?

X. Indicators of Leadership Success

- What are indicators of success for your position – personal indicators, departmental/institutional indicators?
- What are the most important measures of your effectiveness?

XI. Increasing Your Impact and Contributions to Your Department and School/College

- What would increase your influence and contributions?
- What would increase your effectiveness in junior faculty development?
- What would be the personal consequences of doing this?
- How can you effectively challenge the status quo?
- How can you take risk more effectively?

XII. Doing Your Leadership Job More Effectively

- How can you do your job more creatively? What would be some bold steps to take to increase the results of your leadership? New strategies/approaches?
- What are some resources that you are not recognizing or under-utilizing?

VI. Mentoring Committees For Your Women Faculty

- Meet individually with your women Assistant and Associate Professors about setting up Mentoring/Development committees. Brainstorm with each of them about 3 people that you can invite to serve on their mentoring committees for the next 2 years: one departmental member, one university member (outside the primary department), one member from your field (outside the university)
- Plan to attend the ACES Mentoring Skills workshop that is coming up

VII. Assignments – Complete Prior to Next Session

- Pick a role model for leadership in your field. Observe this individuals' style, behavior, presence, influence. If possible, interview him or her about their journey, choices, advice, etc. Make a list of why you admire them.
- Identify your personal vision of leadership excellence based on identified role models.

D. Bilimoria
Case Western Reserve University
January 2005

ACES
NSF-ADVANCE

Session 3 – Vision and Goals

I. Review Learnings from Homework Assignments

- What are the implications, and what new decisions or actions need to be taken?

II. Development Successes and Challenges

- When have you developed yourself successfully? What happened to make it work?
- What were the challenges you faced?

III. Leadership Vision and Aspirations over Your Career

- What are your aspirations for leadership over your career?
- What are the immediate challenges? Long term challenges?

IV. Goals

- Immediate Objectives
- Short Term Goals
- Mid Term Goals
- Long Term Goals

V. 360 Degree Feedback

- Overall process of 360 degree feedback data collection and feedback
- Feedback report will be provided in Session 5 but the data collection process should start now
- Contact feedback assessors to alert them about emails they will be receiving shortly
- Self-assessment deadline

XIII. Mentoring Committee Follow Up

- Have you worked with your women faculty (Assistant and Associate Professors) to finalize their mentoring committee members? Have you connected with the Full Professor women to offer them assistance for their development?

VI. Assignments – Complete Prior to Next Session

- Review your leadership vision.
- List your personal goals – immediate, short term, mid-term, long term
- Determine what you need to change/improve to reach your goals
- Complete online self assessment of 360 degree feedback.
- Read article on emotional intelligence for next session:
  - "What Makes a Leader?" Daniel Goleman, *Harvard Business Review*, November-December 1998.

D. Bilimoria
Case Western Reserve University
January 2005

Session 4 – Emotionally Intelligent Leadership

I. Review Learnings from Homework Assignments

- What are the implications, and what new decisions or actions need to be taken?

II. Leadership and Emotional Intelligence

- Concept of emotional intelligence
- Link to leadership
- Personal triggers
- Examples of stress-inducing situations
- EI competencies – self awareness, self management, social awareness, relationship management skills

III. Strategies and Tools

- How to handle stress
- Conflict management
- Taking initiative and risk
- Optimism in the face of administrative constraints
- Role plays

IV. Assignment – Complete Prior to Next Session

- Ensure that all deadlines have been met for completion of your 360 degree survey
- Read article:
  - "Managing Oneself" by Peter Drucker, Harvard Business Review, March-April 1999

Session 5 – 360 Degree ECI Feedback Report

I. Review Learnings from Homework Assignments

- What are the implications, and what new decisions or actions need to be taken?

II. ECI Feedback Report

- Overview and explanation of Emotional Competence Inventory (ECI)
- Guidelines to analyze ECI feedback report

III. Discussion of Feedback

- Reactions to feedback
- What is confirmed for you? What surprised you?
- Overall patterns and trends in the data

IV. Assignments – Complete Prior to Next Session

- Review ECI feedback report following suggested guidelines for analysis of data
- Complete Self-Analysis Guidebook
- Read book:
  - Deryl R. Leaming, Academic Leadership: A Practical Guide to Chairing the Department (Anker, 1998)

Session 6 – Development Planning

I. Review Learnings from Homework Assignments

- What are the implications, and what new decisions or actions need to be taken?
- ECI Follow-up Activities – Interpretations of ECI feedback
- Implications in NSF ACES related areas (pertinent to the advancement of women faculty and the creation of a departmental climate of inclusion and respect)

II. Identification of Professional Strengths

- Discussion of EI competencies that are strengths
- Other strengths
- Create a personal balance sheet of competency assets and liabilities

III. Professional Development Needs in Light of Goals (immediate, short-term, mid-term, long term)

- Discussion of competency gaps
- Opportunities for development

IV. Creating an Action Plan

- Tasks/actions to achieve goals – immediate, short term, mid-term, long term
- Strategies for developing targeted competencies
- Time log/allocation

V. Assignments – Complete Prior to Next Session

- Create your Personal Development Plan (use template provided)
- Search the web for insights about the development of key competencies of interest. For example, conflict management or emotional self-control or initiative or leadership.
- Practice new behaviors related to targeted competencies
- Read ACES REC reports on website in preparation for discussion about gender issues in academia: http://www.cwru.edu/menu/president/resourcequity.doc

Session 7: Gender Implications for Department Leadership

I. Review Homework Assignments

- What new behaviors were experimented with, and with what results?
- What are the implications, and what new decisions or actions need to be taken?

II. Departmental Climate For Women

- What is the overall departmental climate for women faculty?
- How can you improve data gathering about the women faculty members' perceptions of the departmental climate and community
- Women graduate students?

III. Recruitment, Retention, and Advancement of Women Faculty

- Current issues and challenges
- Possible solutions

IV. Assignments – Complete Prior to Next Session

- Practice new behaviors related to targeted competencies
- Talk to your department's women faculty (as a group) about their experiences in the department. Initiate regular meetings with this group.
- Read:
  - Chapter 1 of Valian, V. 1999. *Why So Slow? The Advancement of Women*, Cambridge, MA: The MIT Press.
  - "A Modest Manifesto for Shattering the Glass Ceiling" by Debra E. Meyerson & Joyce K. Fletcher, *Harvard Business Review*, January-February 2000.

Session 8 – Leveraging Leadership Impact and Contributions as Department Chair

I. Review Learnings from Homework Assignments

- What are the implications, and what new decisions or actions need to be taken?

II. Departmental Vision and Goals

- Create a process for determining/revisiting departmental vision and goals
- Begin/revisit a process of strategic planning for the department – 7-10 years out
  - Utilize SOAR model: strengths, opportunities, aspirations, results
- Initiate process for examining key resources and key constraints in the future

III. Develop an Improved Departmental Communication Plan

- Does the departmental web site need new energy? How can you assist department faculty in improving their web pages?
- How can you improve on current methods to update faculty about events, activities?
- How can you improve on current methods for communicating with graduate students?
- How can you improve on current faculty and staff awards and recognitions?

IV. Departmental Culture

- Create a process to re-examine the departmental culture
- Create mechanisms to enhance the quality of the academic community.

V. Increase Your Impact in the School/College and the University

- What will increase your contributions to your school/college?
- What opportunities will help showcase your talents at the university level?
- What conferences/activities can your department host that will bring national attention to the university?

VI. Assignments

- Continue clarification and implementation of Personal Development Plan
- Practice new behaviors related to targeted competencies
- Read book:
  - Ann F. Lucas, Leading Academic Change: Essential Roles for Department Chairs (Jossey-Bass, 2000)

Session 9 – Enhancing Interpersonal/People Skills

I. Review Learnings from Homework Assignments

- What are the implications, and what new decisions or actions need to be taken?

II. Negotiating More Effectively With Higher Administration and other Funders

- Role play/practice asking for resources

III. Learning to Deal with Different Styles

- Concepts around personal styles
- Consider doing Learning Styles Inventory (LSI) or Myers-Briggs Type Indicators (MBTI) instruments

IV. Closure of Coaching Relationship

V. Future Assignments

- Continue clarification and implementation of Personal Development Plan
- Continue to practice new behaviors related to targeted competencies
- Read book:
  - Deryl R. Leaming, Managing People: A Guide for Department Chairs and Deans (Anker, 2003).

Resources for Chairs

Estela Mara Bensimon, Kelly Ward, and Karla Sanders, The Department Chair's Role in Developing New Faculty into Teachers and Scholars (Anker, 2000).

Mary Lou Higgerson, Communication Skills for Department Chairs. Anker 1996.

Ann F. Lucas, Leading Academic Change: Essential Roles for Department Chairs (Jossey-Bass, 2000)

Ann F. Lucas, Strengthening Departmental Leadership: A Team-Building Guide for Chairs in Colleges and Universities (Jossey-Bass, 1994).

Deryl R. Leaming, Academic Leadership: A Practical Guide to Chairing the Department (Anker, 1998)

Deryl R. Leaming, Managing People: A Guide for Department Chairs and Deans (Anker, 2003).

Susan A. Holton (ed.), Mending Cracks in the Ivory Tower: Strategies for Conflict Management in Higher Education (Anker, 1998).

Robert M. Diamond, Aligning Faculty Rewards with Institutional Mission: Statements, Policies, and Guidelines (Anker, 1999)

Robert M. Diamond, Serving on Promotion, Tenure, and Review Committees: A Faculty Guide, 2nd ed. (Anker, 2002).

Cathy A. Trower (ed.): Policies on Faculty Appointment: Standard Practices and Unusual Arrangements (Anker, 2000).