

ADVANCE: Institutional Transformations for the Future of the Faculty

Annual Report June 2011

ADVANCE Faculty Affairs Office

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ADVANCE Institutional Transformation Award: For the Future of the UNC Charlotte Faculty – 2010-2011 Annual Report

I. Executive Summary

ADVANCE UNC Charlotte is a centerpiece of the university's efforts to transform itself into an institution where all faculty members perceive equity in the distribution of access to power, rewards, promotions and leadership opportunities.

Through its Institutional Transformation Award granted in 2006, UNC Charlotte has sought to create an inclusive sustainable climate to support the recruitment, retention and academic success of women faculty, including women of color, and especially those in Science, Technology, Engineering and Math – or STEM – disciplines. This report presents the program work for the academic year 2010-2011 and the summative program outcomes apparent in overall trends since the grant was awarded in 2006. Toolkit tables include data from the most recent year available, 2009-2010.

When the grant initially was awarded, UNC Charlotte had just completed four years of self-study that explored equity, diversity and inclusiveness issues. Its study found differences in perceptions among men and women and faculty of color on these issues, with women and faculty of color holding less positive views.

UNC Charlotte has framed its work within a construct that considers structural forces and psychological processes that can generate and perpetuate gender inequality. It also has considered the impact that inequitable access to institutional resources can have on academic careers. Decision-makers' assumptions, attitudes and stereotypes can significantly influence faculty success.

ADVANCE efforts have extended across the university, through our belief that a wide-scale initiative will result in the systemic change needed to ensure an inclusive, informed institution. Important progress has been made. However, in part because grant funds were not available until several months after the award was made, UNC Charlotte has significant initiatives under way, necessitating a request for a 12-month no-cost extension of the award. The award originally was scheduled to complete in August 2011.

ADVANCE has continued in the 2010-2011 timeframe to focus its efforts on policy reform work; university partnerships; and leadership, mentoring and professional development and equity programs for faculty. Institutional strengths include commitment to continue to:

- Build a sense of community among faculty cohorts participating in leadership and professional development programs;
- Institutionalize the examination of policies and advocate for changes in policies and practices if they are deterring progress on equity issues;
- Monitor faculty climate and conduct benchmarking against the university's and its colleges' strategic plans, including diversity goals; and
- Sustain continuous efforts to achieve and maintain gender and diversity equity.

Key questions driving ADVANCE initiatives include:

- Are we impacting the distribution of women faculty in STEM, including women of color?
- Are women recruited into STEM disciplines and retained and promoted?
- Are women in STEM disciplines advancing into leadership positions?

Successes:

We have improved the distribution of women in STEM disciplines, with positive trends since 2004. UNC Charlotte is promoting and awarding tenure to women consistently; 100 percent of the women seeking tenure were accepted each of the past four years, with the trend continuing in 2009-2010. Women in STEM discipline leadership roles have increased 7 percent since the start of ADVANCE, as the percentage of women in STEM full professorship and university leadership positions rose from 28 percent in 2006 to 35 percent in 2010.

Challenges:

While the economic recession has reduced the university's ability to hire faculty in general in recent years, we still have seen a disproportionate impact from the economic downturn in the recruitment of women faculty in STEM disciplines when compared to the decreases in recruitment of male faculty. Attrition has been low among women in STEM disciplines, but the loss of even one woman has significant impact, due to the low percentage of women in STEM disciplines compared to the percentage of men. The percentage of tenure track women who are women of color has declined from 12 percent in the 2004 baseline year to 9 percent in 2009-2010. The university periodically monitors salary equity, with the most recent study in 2008 revealing salary inequities linked to race and gender. Financial constraints in recent years likely have contributed to the continued presence of these disparities.

Notable Trends:

A summary table of evidence of institutional transformation from baseline year 2004 to 2010 is presented in this report. (Table 1.) The most notable trends in gender equity outcomes are:

- The number and percentage of female faculty in STEM disciplines remain low; however, steady increases are evident in the number and percentage of women in STEM tenure track faculty positions.
- All promotion and tenure package submissions by STEM women since 2006 have been granted. It is important to note that while this is a positive trend, actual numbers reflect that the numbers of women submitting promotion and tenure packages are low compared to male colleagues. 100 percent of women seeking tenure in 2009-2010 were awarded, with 50 percent of faculty seeking tenure being women. In the prior three years, 25 percent or fewer of those seeking tenure were women. This results in part from the disparity of women in STEM disciplines and the low numbers of women being hired in STEM. This perhaps also is tied to other psychosocial forces such as departmental climate.
- Movement among ranks has been steady and positive for women in STEM, but women's movement from associate professor to full professor remains a challenge.
- Voluntary attrition among tenured faculty women in STEM has remained consistently low. However, due to the low percentage of women in STEM overall, any attrition has a major impact on women in STEM. This factor will continue to prove challenging.
- Hiring of women in STEM has fluctuated since 2004. The bad economy has reduced overall hiring, which has had a disparate impact on the hiring of women in STEM in 2009-2010. Of the 10 faculty hired in STEM in that year, two were women, representing 20 percent of the hires.
- The number of women in STEM leadership roles has increased steadily, an encouraging factor expected to have widespread and long-term impact on campus gender equity.
- The percentage of tenure track STEM women who are women of color has declined over the years, from 12 percent in 2004 to 9 percent in 2009-2010.

Table 1. Summary of Evidence from Baseline Year 2004 to 2010

Institutional Transformation Essential Research Questions and Indicators*						
	Indicators					
Research Questions	2004 baseline	2005-06	2006-07	2007-08	2008-09	2009-10
What is the distribution of science and engineering faculty by gender, rank and department?	14% of Tenure Track STEM Faculty are women; (188 Men, 31 Women); 12% of Tenure Track STEM women are women of color	16% of Tenure Track STEM Faculty are women; (192 Men, 38 Women); 12% of Tenure Track STEM women are women of color	18% of Tenure Track STEM Faculty are women; (194 Men, 42 Women); 12% of Tenure Track STEM women are women of color	20% of Tenure Track STEM Faculty are women; (187 Men, 46 Women); 12% of Tenure Track STEM women are women of color	20% of Tenure Track STEM Faculty are women; (216 Men, 53 Women); 10% of Tenure Track STEM women are women of color	20% of Tenure Track STEM Faculty are women; (215 Men, 54 Women); 9% of Tenure Track STEM women are women of color
What are the outcomes of institutional processes of recruitment and advancement for men and women?	22% (2 out of 9) of STEM Tenure packet submissions from women; 50% women accepted	40% (4 out of 10) of STEM Tenure packet submissions from women; 75% women accepted	19% (3 out of 16) of STEM Tenure packet submissions from women; 100% women accepted	25% (3 out of 12) of STEM Tenure packet submissions from women; 100% women accepted	25% (4 out of 16) of STEM Tenure packet submissions from women; 100% women accepted	50% (6 out of 12) of STEM Tenure packet submissions from women; 100% women accepted
	28% (4 out of 14) of STEM faculty promotions were women; 75% women promoted	28% (4 out of 14) of STEM faculty promotions were women; 75% women promoted	25% (4 out of 16) of STEM faculty promotions were women; 100% women promoted	15% (2 out of 13) of STEM faculty promotions were women; 100% women promoted	46% (6 out of 13) of STEM faculty promotions were women; 100% women promoted	38% (6 out of 16) of STEM faculty promotions were women; 100% women accepted
	The percentage of women in STEM areas at the assistant professor rank has remained constant since 2004; the increase in women at the associate level has been due to hiring at this level; See the full report "Changing Patterns in STEM Faculty by Gender and Rank- Fall 2004 through Fall 2008."				For women hired at assistant level: 0-2 years most frequent(9), and 3-5 second frequent years in rank at associate level (4); For men hired at assistant level: 0-2 years most frequent (26), and 6-8 years second frequent(16)	For women hired at assistant level: 0-2 and 3-5 years most frequent years in rank at associate level (9); For men hired at assistant level: 0-2 years most frequent (26), and 3-5 years second frequent(19)
	0 women, 6 men voluntarily left STEM	0 women, 6 men voluntarily left STEM	1 woman, 4 men voluntarily left STEM	2 women, 6 men voluntarily left STEM	1 woman, 3 men voluntarily left STEM	2 women, 1 man voluntarily left STEM
	44% (7 out of 16) STEM new hires were women	27% (6 out of 22) STEM new hires were women	24% (5 out of 21) STEM new hires were women	31% (8 out of 26) STEM new hires were women	36% (5 out of 14) STEM new hires were women	20% (2 out of 10) STEM new hires were women

What is the gender distribution of science and engineering faculty in leadership positions in the institution?		28% of women in university leadership roles	28% of women in university leadership roles	30% of women in university leadership roles	35% of women in university leadership roles	35% of women in university leadership roles
*as outlined in the ADVANCE Toolkits submitted in each annual report. The women of color measure includes individuals that identify themselves as African-American, Native American, and Hispanic/Latina.						

II. Goals and Related Outcomes

When UNC Charlotte sought its grant in 2006, it established goals for recruitment, retention and advancement of women faculty in STEM, including women of color. Over the period of the grant, it became clear that to have long-lasting impact, the goals must also expressly encompass the systemic issues of climate, institutional transformation and dissemination. This is a summary of the current goals and the progress that has been made toward the goals.

Goal 1: Recruitment:

To increase the number of female faculty, including women of color, interviewed and hired in science, technology, engineering and math (STEM) disciplines at all ranks.

Desired Outcomes:

- Increased female and women of color applicants to STEM faculty positions
- Increased campus awareness about equitable recruiting practices

Outcomes Achieved:

Since 2004, the baseline year prior to the start of ADVANCE initiatives, the percentage of STEM faculty who are women has risen from 14 percent to 20 percent. Faculty search committee members from all colleges take part in mandatory recruitment training workshops. The ADVANCE team redesigned the training to address cognitive bias and to encourage more engagement by attendees in the sharing of their experiences and strategies. A recruiting study conducted in 2009 indicated that diversity language in faculty job ads has increased since the workshop revision. However, challenges remain in equitable hiring as evident in the fact that the percentage of women hired in STEM has fluctuated since 2004 and was down to 20 percent of hires in 2009-2010. The decline in the percentage of women in STEM who are women of color, from 12 percent in 2007-2008 to 9 percent in 2009-2010, also is troubling.

Goal 2: Retention and advancement:

To increase the number of female faculty, including women of color, retained and promoted in STEM disciplines at all ranks.

Desired Outcomes:

- Increased female faculty retained in STEM, including women of color
- Increased understanding of promotion and tenure requirements by women, including women of color, faculty in STEM
- Increased promotions for female faculty in STEM
- Increased support for research, teaching and service
- Increased number of women moving from associate to full professor and to university leadership positions

Outcomes Achieved:

The percentage of female faculty in STEM disciplines has risen since 2004, our baseline year. Additionally, women are being retained, as shown in our annual analysis of voluntary attrition (Table 1). However, challenges remain in retaining women of color as evident in the fact that the percentage of women of color in STEM declined in recent years. The percentage of women submitting promotion and tenure packets in 2009-2010 rose to 50 percent of the total STEM faculty submitting packages, with 100 percent approvals for the last 4 years. Faculty survey responses indicate that ADVANCE mentoring programs have had a positive impact on faculty's perceptions of the clarity and equity of promotion and tenure criteria. A 2009 faculty survey found a significant difference of opinion among women and men on whether promotion and tenure decisions are made fairly without influence by non-performance factors, yet a follow-up survey in 2010 did not find this disparity. In 2010, faculty who reported having a mentor to help them plan and prepare were significantly more likely to perceive that promotion criteria are clear. Increased support for women faculty for research, teaching and service has been provided through Bonnie Cone Fellowships awarded to 36 female faculty members, 6 of those in the 2010-2011 academic year. Fellows from previous years report they continue to gain benefits from those grants in the form of relationships, knowledge and ability to further their research. We have continued mentoring support for all new faculty – female and male – and for mid-career faculty in growing numbers, with new college-based cohorts added in 2010-2011. The percentage of women in STEM full professorship and university leadership positions has risen from 28 percent in 2006 to 35 percent in 2010.

Goal 3: Climate:

To improve and ensure gender equity in views on salary, workload, resources, and recognition at the university.

Desired Outcomes:

- Increased salary equity of women faculty in STEM
- Increased perception of equitable climate
- Increased perception of work and life balance

Outcomes Achieved:

The university's Institutional Research office monitors salary equity on a regular basis, and has taken into consideration the current economic context (e.g. university hiring and salary freezes instituted by the state legislature, the Governor through Executive Order and the UNC System, starting in 2008). The ADVANCE team in 2010 designed and implemented a faculty climate survey, which indicated positive opinion about equitable climate and sense of community. Responses also indicated a need for continued focus on work and life balance. ADVANCE reported out to college deans their college-specific results, to help align their diversity work with their strategic plans. Colleges indicate they are integrating those results into their plans. The faculty climate study has been institutionalized and will be implemented in alternate years to continue monitoring faculty perspective and adjust support, with the next survey in spring 2012. The Charting Your Path conference for North Carolina female STEM associate professors and their administrators, in spring 2011, included highly rated sessions on strategies for effectively seeking recognition and "branding" for women STEM faculty.

Goal 4: Institutional Transformation:

To act as a catalyst for organizational change that will intentionally attract, retain, support and advance women in science, technology, engineering and math (STEM) disciplines.

Desired Outcomes:

- Sustain ADVANCE efficacy
- Institutionalize ADVANCE partnerships and initiatives

Outcomes Achieved:

The ADVANCE initiatives and partnerships will be sustained through the institutionalization of the ADVANCE Faculty Affairs Office. This office provides infrastructure to maintain the programs and policy reforms initiated through the transformational grant. The office houses permanent staff who will continue to support faculty development programs, monitor and provide education on best practices in faculty recruitment, consider faculty equity overall (i.e. climate perceptions, gender and ethnicity composition across departments and colleges, and salary), and maintain effective campus, regional and national partnerships. For example, ADVANCE in the 2010-2011 year negotiated a partnership with the UNC Charlotte Crossroads Charlotte coordinator to collaborate on provision of Crossroads Charlotte programming to faculty as part of the broader Charlotte community's diversity efforts. This will expand what has been done with groups such as Leadership UNC Charlotte under the ADVANCE initiative, with the goal of addressing issues of access, trust and equity, and social justice throughout the work of the university, including areas such as hiring, retention and promotion. Crossroads Charlotte is a community wide initiative to develop and sustain an inclusive and equitable community in the Charlotte-Mecklenburg region. ADVANCE and UNC Charlotte Crossroads Charlotte conducted a pilot in spring 2011 with department chairs and will use feedback from that session to build programming for 2011-2012. The no-cost extension sought in summer 2011 will permit finalization of the institutionalization plans.

Goal 5: Dissemination: To communicate resources, findings and best practices of gender equity recruiting, retention, and climate initiatives, particularly among STEM disciplines.

Desired Outcomes:

- Increase national awareness of effective gender equity practices
- Serve as a model of best practices
- Promote an effective implementation and evaluation methodology
- Provide career development and support resources to women in STEM disciplines

Outcomes Achieved:

ADVANCE UNC Charlotte has disseminated publications on effective gender equity recruiting and faculty mentoring practices, including in national, statewide and local publications in the 2010-2011 year. We serve as a model of best practices for faculty mentoring and in spring 2011 hosted a Charting Your Path conference for faculty and administrators from North Carolina public and private universities and colleges on mid-career development. Through our mentoring programs and dissemination, we provide numerous resources to faculty and administrators in STEM fields. We will continue to disseminate our gender equity recruitment research, including information about the impact of including diversity language in recruitment advertisements, building on information presented via a poster at the NSF annual conference in November 2010.

III. Institutional Transformation Via Policy Reform

Several key policy reform initiatives have been implemented or are under way as of summer 2011. Key to this work is the Future of the Faculty Committee, appointed by ADVANCE PI Joan Lorden, UNC Charlotte provost and vice chancellor for academic affairs. The Future of the Faculty Committee is chaired by Mary Lynne Calhoun, dean of the College of Education, who took the position in September 2010, following over three years' service by Karen Schmalig, dean of the College of Health and Human Services. Membership consists of faculty and administrators, who identify and recommend to the provost policy or procedural changes to overcome barriers to faculty advancement, work and life balance and other faculty issues.

The Future of the Faculty committee in 2010-2011 focused its efforts on inter-disciplinary issues and also provided input into the faculty governance committees on issues related to alternate paths to promotion, including leadership through service. The committee in 2010-2011 added the Faculty President as a member of the committee, to broaden the direct connections with faculty governance infrastructure as a policy vehicle. In past years, influenced by the Future of the Faculty committee's advocacy, tenure clock extension rationales have been expanded to include delays in institutional commitments. The committee also has effectively raised the issues of childcare and the need for a faculty ombudsperson.

Professional development for faculty has been instituted through the Mid Career Mentoring program and the New Faculty Mentoring program, along with Leadership UNC Charlotte and the yearlong New Faculty Orientation, re-titled "New Faculty Transitions" for the 2011-2012 year to reflect the outcomes established for that program. UNC Charlotte has institutionalized practices related to diversity equity through the university-wide diversity planning, including consideration of issues raised by the 2010 campus-wide tenured and tenure-track faculty climate survey. Additionally, the institution is addressing structural equity issues through faculty search committee diversity training, new chairs orientations and annual faculty forums centered on reappointment, promotion and tenure issues and attended by the provost, all deans and associate professors. The Future of the Faculty Committee and the standing Faculty Welfare Committee of the Faculty Council represent policy structures. Through these policies, practices and structures, the UNC Charlotte ADVANCE initiative is moving toward institutionalization, enabling continuous and permanent equity enhancements through policy reform.

Table 2. UNC Charlotte Institutional Transformation as of June 2011

ADVANCE Institutionalization: Policies, Practices and Structures		
<u>Policies</u>	<u>Description</u>	<u>Status</u>
Tenure clock extension	Tenure clock extension: increased reasons for stopping clock	Approved by Faculty Committee
Committee composition	Faculty search committees	Committee members must have participated in diversity recruitment training within prescribed time period
Professional development	Institutionalized programs for faculty development: University campus wide mentoring (peer groups and one-on-one), New Faculty Year Long Orientation	These programs are open to all faculty
Collecting and monitoring gender equity data	College Diversity Plans	Institutional and College Diversity Scorecards disseminated Dec. 2010; to be continued bi-annually
<u>Practices</u>		
Incorporating equity issues	Faculty search committee training	Offered each term, committee members must have participated within prescribed time period

	Crossroads Charlotte	This effort provides inclusion training through the "lens" of the UNC Charlotte Crossroads Charlotte scenarios.
	Chairs Sessions	Academic year cohorts convene 2-4 times a year for topical discussions amongst chairs
Continual climate survey	HERI	Participate in triennial faculty surveys conducted by UCLA
	COACHE	Participate in triennial tenure-track faculty surveys conducted by Harvard's Collaborative on Academic Careers in Higher Education
	Internal Tenure-Track Faculty Survey with Diversity Scorecards by College	All faculty surveyed in 2010; will continue in years between HERI and/or COACHE
Continual salary equity studies	Part of Campus Diversity Plan	Institutional Research conducts salary equity analysis periodically for each college and reviews with Provost, Deans, Academic Affairs budget staff
Professional development	Leadership UNC Charlotte	Annual program consisting of faculty cohorts nominated by Deans and Department Chairs
	Year-Long New Faculty Orientation/Transitions	Annual program consisting of newly hired faculty cohorts
	New Chairs Orientation	New chairs participate in a summer orientation that was institutionalized starting in 2009
	Chairs Sessions	Academic year cohorts convene 2-4 times a year for topical discussions amongst chairs
	New Faculty Mentoring Program	Annual program offered to new faculty and ongoing mid-career mentoring program
	Mid-Career Mentoring Program	
Collecting and monitoring gender equity data	Campus Diversity Plan	Colleges report diversity data, including gender in strategic plans
Increased recognition of women's scientific accomplishments	Women's Speaker Series	Provided annually by the Center for Professional and Applied Ethics, with ADVANCE
On Campus Childcare	Site identified and planned	Pending funding and identification of private service provider

Regular Exit Interviews	Conducted as faculty terminate employment (voluntary and unapproved re-appointment)	Conducted by the Benefits Office
Structures		
Monitoring Structures	Future of the Faculty Committee	Permanent committee; works with the Faculty Council, Faculty Welfare Committee and the Faculty Employment Status Committee
	Faculty Welfare Committee	Permanent subcommittee of Faculty Council
	Ombudsperson	Position established
Administrative Support Structures	ADVANCE Faculty Affairs Office	Office established and staffed

IV. Summary of 2010-2011 Programming Initiatives

New Faculty Mentoring

For the fourth year, ADVANCE matched junior tenure-track faculty members in a one-to-one connection with senior colleagues who are outside the junior faculty members' home units. In the 2010-2011 year, 21 matches were established with 42 participants, bringing the total number of participants to 216 since the program's inception. This program is supplemental to mentoring within a discipline or program and is not a replacement for that mentoring. In particular, the program assists untenured faculty members to become socialized to their colleges and the university and to become aware of opportunities and resources. It integrates untenured faculty into the existing college structure through socialization to its norms and expectations. Finally, through the expanded interconnections of college faculty, the intellectual community is enhanced. The mentors and mentees receive training at the start of the effort, focused especially on expectations for both parties.

ADVANCE surveyed new faculty mentoring participants in November 2010 and in an end-of-the-year survey in April 2011. The response rate was 30 percent, and the responses reflected similar outcomes from previous year surveys. The survey asked participants about their satisfaction with the mentoring efforts and gathered information about issues the pairs discuss. The topics most often discussed are promotion, tenure, scholarly activity, and work and life balance. Satisfaction with the one-to-one mentoring program was very high, including positive reaction to the practice of mentors coming from outside the mentees' home departments. Comments from mentees show that mentoring helped them the most in navigating promotion and tenure requirements, providing a sense of community and collegiality and serving as a source of beneficial advice for career and campus topics. Mentors also reported having a sense of feeling connected and involved.

Respondents commented specifically on these topics:

Having a mentor:

- "Helped me navigate the politics of my dept; helped in difficult tenure process."
- "Some useful advice was received from my faculty mentor. I liked knowing that I had someone I could turn to for advice."

Being a mentor:

- “I enjoyed being involved... and I liked trying to provide information and guidance to my mentee.”
- “I was mainly helped by the broader cultural perspectives [my mentees] gave me.”

Year-Long New Faculty Orientation

In addition to the one-to-one pairings, ADVANCE also leads a yearlong new faculty orientation effort to help new tenure-track faculty transition and build a sense of community. New faculty cohorts gather for monthly events including a welcome orientation and workshops on issues they will face. In 2010-2011, 15 new faculty members participated in sessions. All workshops were well received by the faculty members who attended. Of note, faculty regarded especially highly the Seasoned Assistant Professor Panel and the External Grant workshop; 100 percent of respondents rated these events as either excellent or good. The attendees indicated that the Seasoned Assistant Professor panel was very useful in helping them to become acquainted with the campus, as well as to discuss issues that they have encountered and ways to successfully navigate their new environment. The sessions in the 2010-2011 year were:

- August 16: Campus Resources Fair, Academic Affairs New Faculty Orientation and Lunch, including presentation by Lorden
- September 8: Open Forum with Seasoned Assistant Professors' Panel
- October 13, External Grant Program
- November 10: Reappointment, Promotion and Tenure process
- February 9: Communication Strategies: Using New Media, E-mail, the Internet and Other Tools
- March 2: Being a Good Graduate Mentor
- April 13: Plagiarism and Reflections on the Year

Mid-Career Mentoring and Faculty Forum

With UNC Charlotte ADVANCE's mid-career mentoring initiative, significant progress occurred in the 2010-2011 year.

We have organized our mid-career mentoring efforts around a six-step mid-career planning process used in several separate mid-career mentoring initiatives: a vertical-dyad mentoring program for women in STEM; a formal peer mentoring program for men and women within disciplines; and an informal peer mentoring program that spans disciplines and includes men and women.

ADVANCE offers one-to-one mentoring effort in three STEM and Social and Behavior Sciences departments with a paucity of women professors and invites all women to participate. We match associate professors with full professors, usually in the same discipline or department. All but one eligible woman has agreed to participate, and each was matched with a full professor mentor of her choice. Following mentor training provided by ADVANCE, the mentees were expected to work through the mid-career planning process with support and guidance from their mentors. These pairings have been operational throughout the 2010-2011 academic year.

With our peer mentoring efforts, we started with an informal peer mentoring initiative called Focus Energy Fridays, which were monthly meetings led by ADVANCE staff to which all associate professors on campus were invited. Our formal peer mentoring initiative emerged organically from Focus Energy Fridays, when a group of engineering faculty “regulars” in 2009-2010 expressed the need for a smaller, more dedicated group. As associates from other disciplines learned about the engineering group, in 2010-2011 associate professors in

behavioral sciences and the humanities asked us to start similar peer groups. These groups were active in 2010-2011, and we expect they will expand in the 2011-2012 year.

Although the focus of the mid-career planning and mentoring process is on the individual, its success requires strong institutional support. Of particular note is the need to continue to seek clarity around reappointment, promotion and tenure issues. In response to this need, ADVANCE sponsors a Faculty Forum for associate professors each year, at which the provost and all the deans publicly share their perspectives on the processes and expectations surrounding promotion to full professor. Members of departmental review committees also attend. Some units now offer workshops to associates on how to build and present a compelling case for promotion, and some have revised workload policies to help ensure that faculty members more equitably share service loads across rank.

In 2010, we surveyed all associate professors, with a response rate of 55 percent. We found that 28 percent of those responding had participated in at least one mid-career mentoring effort, and 8 percent had taken part in more than one. Those who participated in the programming were significantly more likely to have “a mentor who is helping me to develop my record in order to be promoted” and to report “it is important to me to be promoted at some time in my career.” We also found that when an associate professor (male or female) reported having a mentor, the faculty member was significantly more likely to perceive incentives in place for seeking promotion and to perceive that promotion criteria are clear.

The 2010 survey was a follow-up survey to our initial 2008 survey, which saw a 34 percent response rate (44 women and 52 men.) The 2008 survey had found that while both men and women agreed on the types of challenges facing associates, women were far more likely to report them as “preventing or delaying their own promotion”; 51 percent of men and 73 percent of women agreed with this survey item—a large and significant difference.

Furthermore, while the vast majority of males (87 percent) agreed with the item “I believe that decisions about promotion to full professor in my department are made fairly, and are not influenced by gender, race, or other non-performance factors,” 40 percent of women did not share this view. In the 2010 survey, we found no significant differences between men and women in their responses to this question, which suggests progress in this area.

Charting Your Path Conference

The success of UNC Charlotte’s mid-career faculty mentoring initiative and our desire to disseminate information and tools led to the development of a statewide mentoring conference, funded by the provost’s budget and coordinated by ADVANCE. Over 50 faculty and administrators attended the March 16, 2011 conference, “Charting Your Path -- Strategies for Success in Academe: A Conference for STEM Women Associate Professors and Their Administrators.” Associate professors from public and private North Carolina universities and colleges learned strategies for career advancement, and administrators gained insights into ways they can help mid-career faculty succeed. Attendees heard from UNC System provosts, deans, department chairs, center directors and faculty members -- all of whom offered practical ideas and experiences to help their colleagues. The conference design was intended to provide information for faculty and administrators, so they can work as a team.

Overall the conference was highly rated.

- 95 percent of those responding would recommend it to others.
- 89 percent agree it was a good use of their time.

- All who responded agree the workshop provided ideas and insights to establishing successful mentoring or other faculty support programs.
- Faculty plan to implement career plans and self-branding.
- Administrators plan to implement mentoring across departments and mid-career start-up funds.

The conference program, copies of remarks, speaker biographies, and topics are available at http://advance.uncc.edu/index.php?option=com_content&view=article&id=119:advance-to-host-mid-career-conference&catid=47&Itemid=121.

Diversity Recruitment Training

Campus search committees continue to receive diversity recruitment training through the ADVANCE initiative, which added content to the existing seminars, including case studies, enhanced training on cognitive bias in committee discussions and diversity recruitment solutions, such as how to write job advertisements for diversity recruiting. In the 2010-2011 year, 110 faculty members participated in diversity recruitment training.

Competitive Awards

When the Competitive Awards effort began in 2007-2008, ADVANCE had formed two distinct competitive awards programs: the Solutions Team Awards and the Bonnie Cone Fellowship Awards. In 2010-2011, ADVANCE made six additional awards in the Bonnie Cone Fellowship program and supported the expansion of initiatives that previously had been funded by the Solutions Team Awards program. No new Solutions Team Awards were made, as has been the case since ADVANCE stopped new funding for this effort in 2009 in response to recommendations resulting from the NSF site visit review. Solutions Teams Awards had previously been made to departments or colleges, as an effort to support systemic work.

The Bonnie Cone Fellowships are designed to support activities that enhance the careers of individual STEM and Social and Behavioral Science female faculty. In 2010-2011, the fellowships initiative awarded \$25,000 in six grants, bringing to 36 the total recipients in the four years of operation. Dr. Cathy Blat, ADVANCE steering committee member from the College of Engineering, has coordinated the grant activities in the past two years.

The 2010-2011 recipients were:

- Anita N. Blowers, associate professor, Department of Criminal Justice and Criminology
- Cheryl L. Brown, associate professor, Department of Political Science
- Julie Goodliffe, assistant professor, Department of Biology
- Jamie Payton, assistant professor, Department of Computer Science
- Adalira Sáenz-Ludlow, associate professor, Department of Mathematics and Statistics
- Lisa Slattery Walker, professor and chair, Department of Sociology

While it is too soon to determine the impact on the 2010-2011 cohort of these fellowships, ADVANCE surveyed previous cohort recipients in December 2009, and again in Spring 2011, to measure reported career progress that the recipients attribute to the fellowships. The fellowships have enabled faculty to travel to conferences for networking and presentations, to reduce teaching loads in order to focus on research, to support research through hiring graduate assistants, and to support career development endeavors.

Also in 2010-2011, two previously awarded Solutions Team Award projects were adapted and expanded to other units. One award had gone to the Psychology Department, which evaluated faculty diversity climate locally; in the past year, the department has focused on implementing changes through a diversity committee. Another Solutions Team Award had been awarded in

2008-2009 to the College of Liberal Arts and Sciences. These two initiatives have had a profound influence on the work of the Academic Affairs division and several colleges, including the Colleges of Engineering, Education and Computing and Informatics.

The College of Liberal Arts and Sciences has made extensive progress in its diversity initiatives, with early support from the ADVANCE grant and continued leadership from the college's dean, Nancy Gutierrez. The college has established a diversity coordinator and department diversity liaison positions, created a diversity website, researched faculty retention issues and offered workshops and events for faculty. The college is considering that its 2011-2012 focus should include:

- Sustained support for the college diversity coordinator position and department diversity liaison program;
- Continued workshops and events for faculty, particularly at the intersection of teaching and diversity, including one event in September 2011 and another in first quarter 2012;
- Enhancement of the college's diversity website -- <http://clas-diversity.uncc.edu/> -- to serve as a resource and to showcase diversity efforts;
- Continued attention to addressing issues to increase recruitment and retention of faculty from historically under-represented groups and identification of barriers for retention of international faculty.

The grants also have informed the work of the ADVANCE Faculty Affairs Office specifically, as it builds tools to assist the university and its colleges with integration of the university's Diversity Plan goals into college strategic plans. The CLAS work on diversity has proven especially useful, and ADVANCE has considered this work as it has built college-specific scorecards. The scorecards make recommendations to the colleges related to their diversity challenges documented by the climate survey completed by tenured and tenure-track faculty. Presentation of the 2010 scorecards contributed to the expansion and deepening of the work by faculty diversity committees in the colleges of Education, Engineering and Computing and Informatics.

Leadership UNC Charlotte

The Leadership UNC Charlotte program concluded its fourth year of implementation in 2010-2011 with its cohort of 24 bringing the total to 98 faculty participants to date. Of those, 51 were women, and 31 were women in STEM disciplines. Chairs and Deans nominate faculty members to participate in the yearlong development program that hosts workshops each semester to engage the cohort in active discussion of academic leadership topics. Cohort surveys have consistently indicated that the workshops are beneficial to career development, leadership skill development and building a sense of community among faculty peers.

In the 2010-2011 year, session topics included Envisioning the Future; Principles in Leadership Management; Chilly Climates; Reappointment, Promotion and Tenure; and Group Dynamics. The top rated sessions were the sessions on Reappointment, Promotion, and Tenure; Group Dynamics; and Chilly Climates. Attendee comments regarding these workshops indicated that the topics and speakers were extremely informative and would prove useful if the sessions were made available to the entire UNC Charlotte community.

Women's Speaker Series

Four national speakers noted for their scientific research and their focus on practical solutions for a diverse set of issues came to UNC Charlotte in 2010-2011 as part of the ADVANCE Women's Speakers Series. UNC Charlotte ADVANCE and the Center for Professional and Applied Ethics, along with other sponsors, offer this series free to the public and encourage faculty, students, staff and the general public to learn from these national leaders and to gain

awareness of female scholars, especially those in the STEM disciplines. While on campus, the speakers also present a separate luncheon workshop for academic leaders on diversity and equity issues. Two of these sessions in 2010-2011 included Leadership UNC Charlotte participants, and one was part of the Charting Your Path conference. A total of 310 people attended these events.

Speakers were: Dr. Nancy Tuana, Director of the Rock Ethics Institute at The Pennsylvania State University; Dr. Sally Haslanger, professor in MIT's Department of Linguistics and Philosophy; Dr. Rebecca Tushnet, law professor at the Georgetown University Law Center; and Dr. Rachelle Hollander, director of the Center for Engineering, Ethics and Society at the National Academy of Engineering.

COACH Workshop

ADVANCE brought to campus speakers from the COACH initiative to conduct an in-depth workshop on the issue of "Creating Balance and Value in Your Career Portfolio" for UNC Charlotte women faculty from all disciplines in January 2011. Senior women faculty in chemical sciences from across the U.S. in 1998 formed COACH with a common concern about the gender based obstacles women scientists face in trying to attain their career goals. It provides leadership training nationwide and has funding from the National Science Foundation, the National Institutes of Health and the Department of Energy, Basic Energy Sciences. While on campus, COACH also conducted that month's Leadership UNC Charlotte session and received very high marks from attendees at both sessions.

V. Research Initiatives

Faculty Climate

ADVANCE administered a faculty climate survey to tenure-track and tenured faculty in spring 2010, with a response rate of 33 percent [N=1044.] ADVANCE customized and tailored the internal survey to address questions about how staff and faculty feel about the university environment, specifically related to equity issues. The purpose was to help the institution and its colleges assess, monitor, and advance progress toward goals that are encompassed in the university's Diversity Plan and in the individual colleges' strategic plans. The survey was designed to measure the overall dimensions of job satisfaction, intentions to stay at the university, work/life balance, diversity equity climate, department chair satisfaction, and sense of community. Additional items were included to assess faculty perceptions of mentoring, promotion and tenure policy clarity, and general demographic information, such as gender and rank.

With a 33 percent response rate, we are interpreting results with caution. However, we note that findings are consistent with prior faculty climate surveys administered through the University of California at Los Angeles (HERI) and Harvard University (COACHE.) UNC Charlotte has participated in HERI and COACHE for over 10 years.

We provided an overall report for the institution to the provost and Academic Affairs in the fall of 2010. The deans and university librarian each received disaggregated reports in the form of diversity climate scorecards designed to align with the colleges' diversity strategic plans. The scorecards indicated strengths and areas for improvement. The ADVANCE Faculty Affairs Office will continue to administer the internal survey, alternating years with national surveys, such as COACHE. This internal survey will serve as a benchmark toward institutional diversity and strategic plan goals.

A summary is provided below; a complete report is available on the ADVANCE website at <http://.advance.uncc.edu>.

Top issues to address fell into two primary categories: human capital and capital expenditure, both of which are challenges to address in the current negative economic context at the state and university levels. Human capital issues that emerged from the survey were gender disparities in climate, need for clarity around promotion and tenure policy and practice, and expanded mentoring. Emergent capital expenditure issues were resources, benefits and space.

- Job satisfaction is good among faculty, yet different by gender and rank.
- Faculty expressed intent to stay at UNC Charlotte, although associate professors were less inclined to stay.
- Faculty perceive a positive diversity equity climate for gender, cultural diversity, age, sexual orientation, physical disability, religious views and political affiliations.
- Department chair satisfaction is good.
- Mentoring is part of the university culture, yet may be occurring disparately among women and men.
- Associate and full professors experience a sense of community more so than assistant professors.
- The need exists for tenure and promotion policies to be clear and communicated.

Campus Diversity Climate Scorecards

As a summative report, the Program Evaluation Team and Communications Director designed an institutional scorecard and college scorecards to indicate progress towards diversity goals. We presented the institutional scorecard to the provost and college deans, each of whom also received their college's specific scorecard. Scorecards present faculty demographics such as gender, ethnicity, and rank compositions by college, and faculty climate perceptions. Scorecards have been institutionalized and will be used to showcase internal climate survey results in alternate years.

ADVANCE Faculty Cohort Study

In the 2010-2011 year, ADVANCE conducted a cohort study of female STEM faculty who participated in its mentoring and leadership programs between 2007 and 2010 to determine the impact of this participation on their career success (N=26). Career success in this case refers to the attainment of promotion and/or tenure, or a leadership role. All STEM and Social and Behavioral Sciences (SBS) women who participated in Leadership UNC Charlotte have acquired leadership roles within or external to the university or have achieved scheduled tenure and/or promotion. Of the STEM and SBS women participants in the leadership program, all who have been able to seek promotion and/or tenure have been successful.

We also reviewed all submissions by women faculty for reappointment, promotion and tenure between 2007 and 2010 (N=115). Of these women, 26 had participated in one or more of ADVANCE programs (i.e. Leadership UNC Charlotte, mentoring); a total of 89 women had not participated in any ADVANCE programming. The overall approval rate for reappointments, promotion and tenure for the two groups of women were comparable at 96percent for ADVANCE participants and 97 percent for non-participants. However, the approval rate for reappointments, promotion and tenure among women in STEM and SBS was 100 percent for the 26 ADVANCE participants, compared to 96 percent for non-participants. This finding suggests that the leadership development and mentoring initiatives are providing the intended support for faculty women, and in particular among women in STEM and SBS disciplines.

Recruitment Equity Study

We conducted a comprehensive study of faculty recruiting outcomes for the years 2005-2009. Preliminary findings present interesting indications for STEM; a complete report of the UNC Charlotte study will be submitted for publication in Fall 2011. A content analysis review of faculty

job advertisements for diversity inclusive language found a gap in the use of diversity language between STEM departments and non-STEM departments. Approximately one-quarter of the STEM ads included diversity language. Meanwhile, a more equal split existed between the inclusion and lack of inclusion of diversity language in ads in non-STEM disciplines. Diversity language use in faculty job ads overall at UNC Charlotte has increased over time, suggesting that the diversity recruitment workshops are successfully communicating the need for equitable language and its use in recruitment postings. Findings from a joint study conducted by ADVANCE leaders at Case Western Reserve University and UNC Charlotte found that female candidates in STEM constituted greater proportions of the “short list” candidates and hires during a 5-year period (Bilimoria & Buch, 2010). A statistically significant linear relationship was found between the percentage of female and underrepresented minority applicants in the candidate pool and their degree of inclusion on the “short list.” The full report was published in *Change* magazine, July 2010.

VI. Organization

Program Overview

Much of the programming offered through ADVANCE is available to all faculty, with special emphasis on ensuring participation by women in STEM, including women of color. Specifically, the programming includes:

- 18 target STEM departments in the College of Computing and Informatics, the College of Liberal Arts and Sciences and the College of Engineering.
- Programs available to all colleges: Leadership UNC Charlotte, Faculty Mentoring and Networking for Mid-Career Faculty and New Faculty, Women’s Speaker Series, Diversity Recruitment Training, New Chairs Orientations, New Faculty Year Long Orientation
- Programs available to women in STEM: Competitive Awards, Customized Leadership Training

People

UNC Charlotte has established the ADVANCE Faculty Affairs Office, located in space provided by Academic Affairs and employing a professional staff consisting of a faculty director, a communications and project director, a part-time evaluator, an administrative assistant and a graduate assistant. This office will prove critical to maintaining a sustainable equitable climate at UNC Charlotte.

The ADVANCE “A” Team, or leadership team, provides the focus and strategy for the ADVANCE initiatives. The team comprises faculty and university leadership -- predominantly from the STEM disciplines. The leadership structure also encompasses a smaller sub-set of this group, which lends guidance to the work and makes recommendations to the leadership team. That smaller steering committee comprises program faculty chairs, the faculty director, the communications director and the evaluator. and the special assistant to the UNC Charlotte Council on University Committee. The Program Evaluation Team (PET) was composed of a half-time internal evaluator and a doctoral graduate assistant.

Partnerships

ADVANCE partners with Human Resources, UNC Charlotte Crossroads Charlotte, the UNC Charlotte Center for Professional and Applied Ethics, the UNC Charlotte Chancellor’s Diversity Initiative and the university’s colleges, among others.

ADVANCE partners with the Center for Professional and Applied Ethics to host a series of women speakers on research on gender and equity. The series brings to campus leading women academicians to speak on their research and network with faculty. This collaboration has provided opportunities to raise awareness of the ADVANCE goals and initiatives to students, faculty, and administrators from across the institution, as well as the community at large.

The ADVANCE Faculty Affairs Office shares contiguous office space with the Special Assistant to the Council on University Community. The Chancellor charged the Council, appointed in 2006, with leading diversity efforts at UNC Charlotte, and advising him on means to create and sustain an inclusive environment that values the presence of people with diverse backgrounds, experiences, and ideas. The Council is composed of members of the Chancellor's Cabinet and is chaired by Lorden. The Council launched the Chancellor's Diversity Challenge Fund and the Crossroads Charlotte Initiative Grants, grants programs to fund faculty, staff, and student initiatives to promote the value of diversity at UNC Charlotte. The Council has also completed the university Diversity Plan. Kerrie Stewart, special assistant to the Council, has drawn on the work of the ADVANCE Committee on the Future of the Faculty, in providing input to the Council for the Diversity Plan. She works with the ADVANCE staff to raise campus awareness around diversity and inclusiveness issues; to share data relevant to gender, race/ethnicity and equity; and to promote equity and inclusiveness in policy and climate.

The university Human Resources and Legal departments and the ADVANCE office, along with Stewart, have collaborated in the development and implementation of the diversity recruitment workshops held for faculty search committee members. This partnership enables the exchange of training expertise by tying together the process of recruiting and selection, diversity awareness and inclusive discussions.

In 2011, ADVANCE will work with Susan Harden, UNC Charlotte Charlotte coordinator, to provide Crossroads Charlotte programming to faculty, expanding what has been done with groups such as Leadership UNC Charlotte under the ADVANCE initiatives. The goal is to incorporate issues of access, trust and equity, and social justice throughout the work of the university, including areas such as hiring, retention and promotion. Crossroads Charlotte is a community wide initiative to develop and sustain an inclusive and equitable community in the Charlotte-Mecklenburg region. UNC Charlotte holds a leadership position in this initiative and has developed an internal program that touches faculty, students and staff, as a way of promoting the goals of the Campus Diversity Plan.

VII. Communications

The ADVANCE communications efforts play an important and strategic role in accomplishment of its mission and raising awareness and support. The goals of the UNC Charlotte ADVANCE strategic communications in the 2010-2011 year have been to execute clear, consistent and integrated communications designed to: 1) raise awareness of ADVANCE as an effective and influential advocate for advancing the careers of women in STEM and for other faculty, 2) increase awareness and support of ADVANCE initiatives and participation in those efforts, 3) improve efficiency through consistent and coherent communications, and 4) communicate the need for climate change and equip leaders to drive that change.

Efforts also have included bringing more consistency to internal operational communications, including more precision in minutes, agenda development and research with the Future of the Faculty committee to narrate and enable its work; and agendas, minutes and staff updates for the "A" Steering Team and Leadership Team to improve efficiency and effectiveness.

The communications efforts have resulted in over 50 internal and external media placements, including newsletters distributed campus-wide, articles in the *UNC Charlotte Magazine*, *Campus News* and on-line media including the university's and its colleges' websites, fliers distributed electronically and in hard-copy format, an article in the *Women In Higher Education* publication, frequently updated ADVANCE website materials, letters and other communications to college deans, marketing for the Charting Your Future conference, the Charlotte Research Institute's newsletters distributed to STEM and business leaders, publicity on the UNC Charlotte Facebook page, two posters presented at the November 2010 NSF meeting for ADVANCE, speeches by Lorden and Huet, notices on the colleges' plasma screens, student online and print newspapers and other pervasive media.

VIII. Evaluation

Evaluation has been a critical component of ADVANCE, to assess program impact and to inform the community of best practices that can be successfully applied within the respective communities. Daniel Stufflebeam's Context, Input, Process, Product (CIPP) model [Stufflebeam, 2000] is the theoretical basis of assessing the program initiatives. The ADVANCE Program Evaluation Team (PET) was comprised of a part-time internal university evaluator and a doctoral graduate assistant, and the team was advised by the "A" Team. PET established online data collection tools and conducted individual interviews to collect formative and summative information on an ongoing basis throughout the academic year. Evaluation communication has consisted primarily of annual reports produced each June, which are available online (<http://advance.uncc.edu>). Annual reports have been produced each June, providing summaries of activities and participation levels for each academic cycle. These reports include the benchmarking Toolkit Tables, as required by the National Science Foundation. Formative information was provided to program administrators throughout the year via "A" Team and Steering Committee meetings and distribution lists. Summative information was made available to constituents throughout the year on an ad hoc basis. The PET and the Communications Director developed slides and talking points for ready-made 'road-shows' of the ADVANCE impact to campus and community constituents. Topical reports have included the Institutional 2010 Faculty Climate Report and corresponding College Faculty Climate Scorecards, which were disseminated to the Provost, Deans, Chancellor's Cabinet and Faculty Council in the form of reports and presentations.

Logic Model

The logic model serves in two capacities, the first being to depict the ADVANCE activities, the second being to represent the hypothesis of program impact. The project components, or activities, provide input to the campus with the expectation they would raise awareness of gender disparity and inequity, inform policies and practices, and impact decision maker awareness, search and research, and the policies around reappointment, promotion and tenure, which correlate with an equitable gender climate and conditions. These elements are known to influence female STEM faculty productivity and advancement, RPT and advancement into leadership. There is reciprocal impact between female faculty productivity and advancement and climate. The logic model employed by ADVANCE UNC Charlotte is provided in Appendix A.

Evaluation Methodology

The PET collaborated with the Institutional Research office and Academic Affairs to obtain information regarding faculty demographics, hiring, retirement and attrition, reappointment, promotion, tenure, and leadership positions. The PET received the data in spreadsheet formatting, which was analyzed using Statistical Package for Social Sciences software. PET reports data on an academic cycle, from August to July, e.g. August 2010-July 2011 for the academic year 2010-2011. Academic year data is available one year in arrears due to the Institutional Research reporting cycle ending in the fall of each year. Formative evaluation for

ADVANCE programs, such as mentoring, was conducted primarily via online survey. An external survey tool, Student Voice, was used to create and conduct surveys with faculty and other program participants. Faculty interviews were also conducted as needed. For example, a qualitative study of interdisciplinary faculty was under way at the time of this report, with the goal of informing employment policy and practices for interdisciplinary and joint faculty appointments through the work of the Future of the Faculty committee. All evaluation studies were conducted with prior approval from the Institutional Review Board of the Research Compliance Office. Appropriate confidentiality procedures and considerations were employed throughout the evaluation.

In compliance with the NSF ADVANCE Toolkit, PET conducted and reported the required evaluation in accordance with the recommended schedule. Table 3 below shows the reporting timeline.

Table 3. ADVANCE Reporting Timeline

Research Questions	Annual or Periodic	Data Required	Reported
What is the distribution of science and engineering faculty by gender, rank and department?	Annual	Number of men and women tenured and tenure-track faculty by department, rank and gender	All Annual Reports
	Periodic	Number of non-tenured men and women faculty (e.g., Instructional, Research, Clinical, Postdoctoral)	2011 Final Report
What are the outcomes of institutional processes of recruitment and advancement for men and women?	Annual	Number of faculty who submit tenure packets, and number awarded tenure, by gender and department	All Annual Reports
	Annual	Number of faculty who apply for promotion, and number promoted, by gender, department, and promotion transition (assistant to associate; associate to full)	All Annual Reports
	Annual	Number of tenured associate professors by department and gender with years-in-rank (in 6, 3-year categories)	All Annual Reports
	Annual	Number of faculty who leave their departments, excluding those who died or retired, by rank, gender, and department	All Annual Reports
	Annual	Number of faculty hired by rank, gender, and department	All Annual Reports
	Periodic	Cohort analyses of tenure and promotion, including to full professor	2011 Final Report
What is the gender distribution of science and engineering faculty in leadership positions in the institution?	Annual	Number of men and women scientists and engineers in leadership positions	All Annual Reports

What is the allocation of resources for science and engineering faculty by gender at the institution?	Periodic	Study of salaries of men and women faculty (with additional controls such as department, rank, years in rank)	2009 Report
	Periodic	Study of space allocation of STEM faculty by gender (with additional controls such as department, etc.)	2009 Report
	Periodic	Study of start-up packages of newly hired faculty by gender (with additional controls such as field/department, rank, etc.)	2009 Report

IX. Challenges

UNC Charlotte faces three major challenges, on which little progress has been made through the Institutional Transformation initiative.

1. **Gender parity in STEM** – The state and its universities are dealing with a deep, long-lasting recession, meaning economic resources for hiring have been limited, preventing the successful recruitment of women into faculty positions. The institution has operated under various university hiring and salary freezes instituted by the North Carolina Legislature, the Governor through Executive Order and the UNC System, starting in 2008 and making it difficult to mitigate the historical gender disparity.
2. **Salary Equity** – The economic state of the institution is such that equity raises are not possible at this time. However, Academic Affairs continues to monitor salary equity and plans follow-up studies. The institution is aware that no progress has been made, and is sensitive to the concerns highlighted across multiple faculty surveys presenting dissatisfaction with salary and salary studies showing gender disparity.
3. **Faculty Climate** – Repeated faculty climate studies over the last decade have consistently shown gender and rank issues, particularly related to salary, job satisfaction, and work and life balance. The internal climate survey in 2010 showed some positive indicators with department chair satisfaction, intent to remain at the university, and gains in women being mentored. However, faculty climate perceptions are closely linked to the faculty demographic composition and to salary. Therefore, the third challenge is related to the two preceding issues.

Although progress is expected to be slow, UNC Charlotte is striving in significant ways to address these challenges. In one essential development, UNC Charlotte is committed to the institutionalization of the ADVANCE initiatives via the permanent ADVANCE Faculty Affairs Office. The office will continue to serve as a catalyst for faculty equity and development and a voice for underrepresented faculty. Second, the Academic Affairs division is monitoring salary and gender concerns, via ADVANCE, and plans to continue requesting and reviewing salary and hiring equity reports. The division ensures that accountability will be maintained at the university, college and department levels. Additionally, the Future of the Faculty Committee is an effective policy structure in place to provide recommendations for policy changes and increasingly has built linkages with the Faculty Council and its committees, to strengthen its influence.

X. Future Directions: Institutionalization of ADVANCE Initiatives

Over the next year, the ADVANCE Faculty Affairs Office and the leadership teams for the Institutional Transformation Award will focus on issues that will facilitate the institutionalization of the work. Because we have significant work under way to accomplish the goals and because the grant funds were not available to us immediately upon the award of the grant, we have requested a no-cost extension for one year.

Specifically, these issues include: Expansion of the role of the ADVANCE Faculty Affairs Office as a partner in the delivery of diversity and inclusion sessions for faculty, as part of the university's participation in the Charlotte community wide effort known as Crossroads Charlotte; outreach to the other campuses of the UNC System by executing a targeted dissemination plan, building on the successful Charting Your Path conference; expansion of faculty diversity recruitment workshops to incorporate coursework for faculty who previously participated; continued development of an effective evaluation and monitoring practice; completion of best practices documentation of successful programming; and culmination of a qualitative study of interdisciplinary faculty in fall of 2011, to determine and make recommendations on issues that exist for faculty with informal appointments related to career advancement and review.

After the Grant

The ADVANCE Faculty Affairs Office has been established and will be responsible for creating and facilitating initiatives to enable the recruitment and growth of UNC Charlotte's diverse faculty, as they move into their roles as faculty and as leaders. The ADVANCE initiatives are folding into this office, as are other activities that have been historically dispersed throughout the university's infrastructure. The Office will direct initiatives including:

- Campus-wide mentoring efforts, encompassing training, coaching and provision of resources for new faculty and mid-career faculty members;
- New faculty year-long transition sessions around institutional issues;
- Faculty leadership development, including Leadership UNC Charlotte, chairs' workshops and targeted workshops on specific identified issues of cross-cutting concern;
- Coordination of research and the dissemination of recruitment best practices, including diversity recruitment training, and development of toolkits of best practices, in partnership with Legal, HR and others;
- Analysis of data on hiring, retention and promotion related to diversity, including development of recommendations for action;
- Support for searches, including training of committees, review of advertisement wording, research on job posting options, and other areas as needed;
- Development of resources for new faculty, including brochures, web-based materials and other information to help them assimilate;
- Development of toolkits in response to results from climate surveys and dissemination of results from the surveys, to help Deans and other leaders respond in a coordinated, targeted fashion;
- Advocacy on policy issues, whether based in Academic Affairs or elsewhere, including coordination of the Future of the Faculty Committee and research support for faculty governance committees and councils;
- Advocacy on work and life balance issues and communications around the university's efforts, in partnership with HR and the Faculty Welfare Committee;
- Workshops and resources to assist with Reappointment, Tenure and Promotion, including faculty sessions with Deans and the Provost;
- Identification and dissemination of best practices that are developed within a college or other sub-unit and for replication or adaptation elsewhere on campus;
- Coordination of resources and research for the University Ombudsperson and the Mediation

Coordinator;

- Management of a speakers' showcase that would provide a venue for UNC Charlotte faculty to gain experience, positioning and collaboration by speaking before a broad audience;
- Coordination on Academic Affairs' behalf of faculty-centered issues and initiatives related to the work of the Committee on University Community and Crossroads Charlotte;
- Communications and stakeholder management around these institutional issues, including development and execution of plans.

Studies Planned

In addition to the institutionalization of the ADVANCE mission, major studies are planned and under way. ADVANCE has completed a faculty recruitment study examining gender and ethnicity disparities among faculty, particularly among the STEM disciplines. A publication submission over the next few months will present comprehensive findings of diversity language in recruitment ads, candidate pool diversity, and finalists' diversity and present recommendations regarding recruitment training and practices for Academic Affairs.

As the economy recovers, a comprehensive salary equity study will be repeated to document the status and progress of gender salary equity among STEM faculty. This report is expected to provide a benchmark for continued campus engagement in gender equity initiatives beyond the lifecycle of the Institutional Transformation Award. The most recent study was in 2008, with a repeat study postponed due to constraints on the university's ability to hire and provide salary increases.

A qualitative study of interdisciplinary faculty is in progress, expected to be complete in fall of 2011. The study is aimed at determining what issues exist for faculty members who have informal appointments between two departments or program offices. A preliminary report of emergent themes has been presented to the Future of the Faculty Committee, which revealed that a formalized framework for jointly evaluating reappointment, promotion and tenure between departments might be needed.

XI. Conclusion

While positive indicators suggest movement forward in advancing women in STEM faculty positions and leadership roles at UNC Charlotte, parity remains a challenge. The gains made are notable, and must continue if gender parity is to be achieved. The ADVANCE initiative forms a solid foundation on which UNC Charlotte can build its focus toward gender equity. The momentum gained by the efforts made through the initiative will continue beyond the grant lifecycle through the work of the ADVANCE Faculty Affairs Office. The establishment of the permanent office demonstrates the university's commitment to gender equity among faculty in STEM disciplines and to overall faculty equity and support. The office will provide infrastructure to continue monitoring and serving the faculty in the areas of policy, faculty development and equity programming and strong formalized partnerships to monitor equity issues and provide recommendations to academic leadership. This structure will be essential for UNC Charlotte to achieve the goals of transformation into an institution where all faculty members perceive equity in the distribution of access to power, rewards, promotions and leadership opportunities.

Reference

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XII. Appendices

Appendix A- Logic Model

Appendix B. Toolkit Tables 2009-2010

Data Collection Methodology: The data used for the evaluation of the position of women in STEM and SBS fields for the annual report was collected in the Fall of 2010. The time period covered by the annual report charts in Appendix B is the 2009-2010 academic year, as this is the most currently available data. All of the appropriate faculty are included in the charts. The faculty who retired at the end of the 2009-2010 school year are included in the total number of faculty since they were still part of the departments and did represent the gender makeup of the department during the 2009-2010 academic year. At UNC Charlotte, Geography and Earth Science is one department, so these are included as a STEM field.

Explanations of Tables:

Table 1a displays the numbers and percentages of women tenured and tenure track faculty in STEM departments during the academic year 2009-2010 (the most current data available). This table shows that 19 percent of STEM tenured and tenure track faculty are women, which represents a continued increase since baseline year of 2004, where 14 percent were women. The numbers of women in STEM tenured and tenure track faculty positions remains disparate to men in comparable positions. Computer Science and Geography and Earth Science are leading the STEM disciplines in their percentages of women faculty, as a result of recent hiring efforts. Life Sciences have the largest number of women at the Associate level, many of whom are expected to achieve promotion to full professor rank in the near future. Gender parity is close to achievement in the SBS disciplines, with 43 percent women overall. Most of the SBS women are in the lower ranks and are therefore expected to achieve promotion. Future recruitment efforts will need to continue to focus on gender parity within STEM and SBS.

Tables 1b and Table 2 reflect the faculty gender composition for the most recent academic year and the baseline academic year of 2004-2005, prior to the start of the ADVANCE initiative. This data reveals that the preponderance of women in non-tenure track faculty positions in STEM and SBS disciplines remains disparate. The baseline data as compared to final year data (2009-2010) shows a slight increase in women in non-tenure track positions in both STEM and SBS faculty positions (43 percent in 2009-2010 of non-tenure track STEM faculty are women, compared to 40 percent in baseline year; 69 percent in 2009-2010 non-tenure track SBS faculty are women, compared to 61 percent in baseline year). This is undoubtedly related to economic challenges such as hiring freezes and departmental budget cuts. Unfortunately these fiscal challenges have disparately impacted women.

Tables 3, 4a and 4b show the tenure and promotion review outcomes by gender from the 2005-06 academic year to the 2009-2010 academic years. Trends are similar in STEM and SBS fields. The gender disparity in the faculty pipeline is evident in the overall patterns that show that men are applying for early tenure more often than women, and they are applying for tenure and promotion at all levels more than women. The number of reviews for promotion to associate increased slightly in 2009-2010, but remained lower than male numbers overall for STEM and SBS. The number of women in STEM applying for and receiving tenure and promotion has

remained fairly constant, and low compared to men, with one notable exception in 2009-2010 when more women applied and received tenure and promotion to associate than men in STEM. Although the gender gap remains, approvals are higher for women than men across both levels of promotion, from assistant to associate and associate to full.

Table 5 displays the years in rank at the associate level by gender. The pattern for women in STEM is slightly different from that of men, in that a greater proportion of women spend 0-5 years in rank than do males. This may be an indicator that women are being newly hired or that males are being promoted faster than females. Considering that the percentage of new faculty hires that are women is roughly one-third of male faculty hires (between 2004-05 and 2009-2010), it may be that the latter explanation is likely. It should be noted that UNC Charlotte only recently became a research-intensive university, prior to which a teaching track option existed for faculty. This could explain a large proportion of the faculty in 15 or more years in rank and the large proportions of both women and men with 6 or more years in rank at the associate level, especially for male faculty.

Table 6 shows the faculty attrition by rank and gender for 2009-2010, the most recent academic year available. Voluntary leave for all levels is comparable between women and men. However, when considered in conjunction with the lower representation of women in STEM, the attrition of even 1 woman has a greater impact on gender disparity than does the attrition of 5 men.

Table 7 displays new faculty STEM hires in 2009-2010 by gender. Men were hired four times as often as women were for STEM faculty positions (4 to 1 ratio), which is a reversal of an upward, hiring indication for women in STEM during 2008-2009.

Table 8 shows the faculty leadership gender distribution, and indicates that women are less represented than men. However, it should be noted that female leadership has continued to increase since baseline year, a positive force for the campus gender equity initiative. Women who have participated in ADVANCE programs have successfully achieved promotion, tenure and leadership roles as shown in the cohort study referenced.

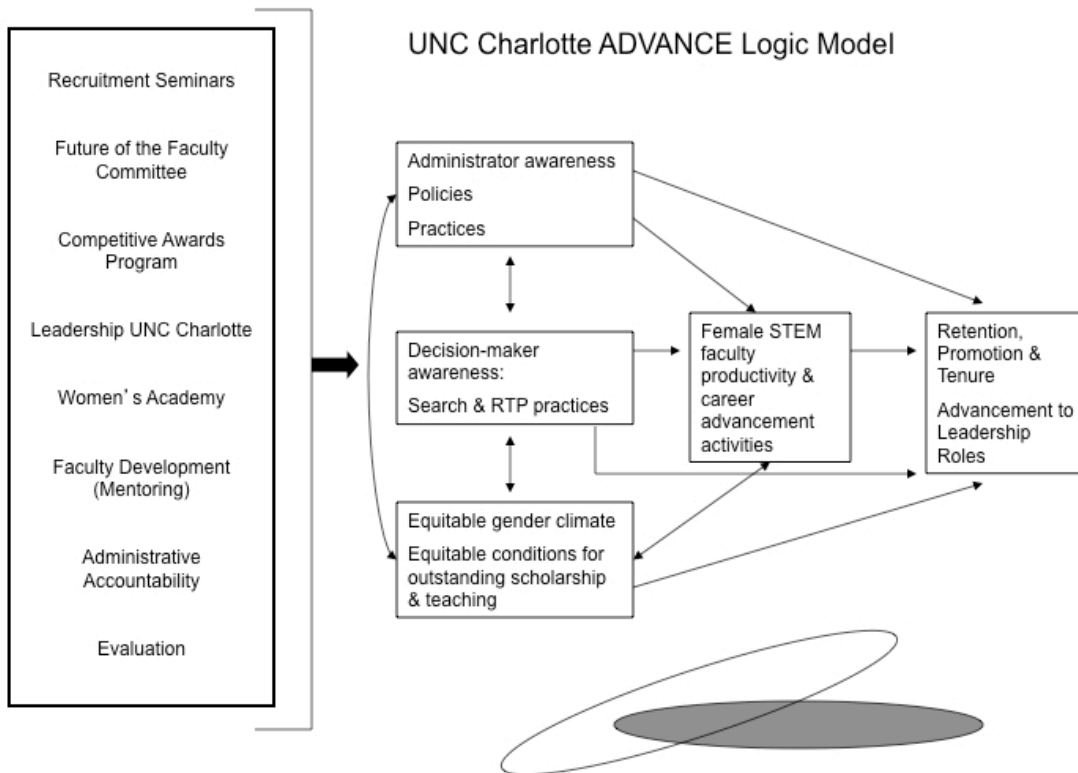


Table 1. UNC Charlotte, Number and Percent of Women Tenured and Tenure Track Faculty in Science and Engineering by Rank and Department. 2009-2010

	Females			Males			Percent Women				
	Full	Associate	Assistant	Full	Associate	Assistant	Full	Associate	Assistant		
STEM											
Engineering	2	8	3	26	38	20	7.14%	5.00%	13.04%		
Engineering	0	1	0	0	1	1	0.00%	50.00%	0.00%		
Civil Engineering	0	1	1	5	9	1	0.00%	10.00%	50.00%		
Electrical and Comp.	0	1	0	10	10	5	0.00%	9.09%	0.00%		
Engineering Technology	1	2	2	3	7	8	25.00%	22.22%	20.00%		
Mechanical Engineering	1	3	0	8	11	5	11.11%	21.43%	0.00%		
Physical Sciences	1	4	1	10	13	4	9.09%	23.53%	20.00%		
Chemistry	1	2	0	5	4	2	16.67%	33.33%	0.00%		
Physics and Optical Science	0	2	1	5	9	2	0.00%	18.18%	25.00%		
Mathematics and Statistics	1	3	1	22	9	10	4.35%	25.00%	9.09%		
Computer Sciences	1	2	6	6	12	9	14.29%	14.29%	40.00%		
Computer Science	1	1	4	4	6	5	20.00%	14.29%	44.44%		
Software and Information Systems	0	1	2	2	6	4	0.00%	14.29%	33.33%		
Life Sciences	1	9	3	9	4	6	10.00%	69.23%	33.33%		
Biology	1	6	1	8	3	2	11.11%	66.67%	33.33%		
Bioinformatics	0	3	2	1	1	4	0.00%	75.00%	33.33%		
Geography and Earth Science	0	3	5	8	5	4	0.00%	37.50%	55.56%		
TOTAL	6	23	19	19	81	81	53	215	6.90%	22.12%	26.39%
SBS											
Psychology	1	8	3	6	10	1	14.29%	44.44%	75.00%		
Social Sciences	10	14	8	22	17	8	31.25%	45.16%	50.00%		
Criminal Justice	2	3	1	3	3	0	40.00%	50.00%	100.00%		
Economics	0	2	1	8	4	2	0.00%	33.33%	33.33%		
Political Science	2	4	3	6	7	3	25.00%	36.36%	50.00%		
Sociology	5	2	2	3	3	2	62.50%	40.00%	50.00%		
Anthropology	1	3	1	2	0	1	33.33%	100.00%	50.00%		
TOTAL	11	22	11	44	28	27	9	28.21%	44.90%	55.00%	

Table 1b. UNC Charlotte, Number and Percent of Women Non-Tenure Track Faculty in Science and Engineering by Rank and Department. 2009-2010

	Female		Male		Percent Female	
	Lecturer	Other	Lecturer	Other	Lecturer	Other
STEM SCIENCE						
Engineering	2	0	11	1	15.38%	0.00%
Engineering	0	0	0	0	N/A	N/A
Civil Engineering	0	0	2	0	0.00%	N/A
Electrical and Comp.	0	0	0	0	N/A	N/A
Engineering Technology	2	0	5	0	28.57%	N/A
Mechanical Engineering	0	0	4	1	0.00%	0.00%
Physical Sciences	5	0	7	1	41.67%	0.00%
Chemistry	3	0	4	0	42.86%	N/A
Physics and Optical Science	2	0	1	1	66.67%	0.00%
Mathematics and Statistics	6	1	2	0	75.00%	100.00%
Computer Sciences	3	1	4	1	42.86%	50.00%
Computer Science	3	0	3	0	50.00%	N/A
Software and Information Systems	0	0	2	0	0.00%	N/A
Life Sciences	9	2	1	0	90.00%	100.00%
Biology	9	0	2	1	81.82%	0.00%
Bioinformatics	0	1	0	0	N/A	100.00%
Geography and Earth Science	2	0	4	0	33.33%	N/A
TOTAL	27	4	29	3	48.21%	57.14%
SBS Psychology and Social Science						
Psychology	2	0	0	0	100.00%	N/A
Social Sciences	7	1	4	0	63.64%	100.00%
Criminal Justice	2	0	1	0	66.67%	N/A
Economics	1	1	0	0	100.00%	100.00%
Political Science	0	0	1	0	0.00%	N/A
Sociology	2	0	2	0	50.00%	N/A
Anthropology	2	0	0	0	100.00%	N/A
TOTAL	9	1	4	0	69.23%	100.00%

Table 2. Fall 2004 STEM and SBS Departmental Faculty Gender

	Tenured and Tenure Track			All
	All	Women	% Women	
ENGINEERING	76	8	10.54%	8
Engineering	2	0	0.00%	1
Engineering Technology	19	2	10.53%	2
Electrical and Comp. Engineer	21	1	4.76%	0
Mechanical Engineering	21	4	19.05%	5
Civil Engineering	13	1	7.69%	0
PHYSICAL SCIENCES	33	7	21.21%	5
Chemistry	17	4	23.53%	5
Physics and Optical Science	16	3	18.75%	0
EARTH SCIENCE	19	1	5.26%	6
Geography and Earth Science	19	1	5.26%	6
MATHEMATICS AND STATISTICS	41	6	14.63%	8
COMPUTER SCIENCES	28	4	14.29%	8
Computer Science	18	3	16.67%	7
Software & Information	10	1	10.00%	1
LIFE SCIENCES	22	5	22.73%	7
Biology	22	5	22.73%	7
PSYCHOLOGY	26	9	34.62%	2
SOCIAL SCIENCES	68	27	39.71%	9
Criminal Justice	9	4	44.44%	2
Economics	15	3	20.00%	4
Political Science	21	6	28.57%	0
Sociology and Anthropology	23	14	60.87%	3

Table created 3/23/2010

Table 3: Tenure Review Outcomes by Gender 2005-2009 - STEM Fields									
	# of Reviews		# of Approvals		# of Denials		Early Tenure		
	Women	Men	Women	Men	Women	Men	Women	Men	
Pre-ADVANCE Year: 2005-2006									
Engineering	1	3	1	3	0	0	0	0	0
Physical Sciences	0	1	0	1	0	0	0	0	1
Earth Atmospheric, and Ocean Science	1	0	1	0	0	0	0	1	0
Mathematical and Computer Sciences	2	1	1	1	1	0	0	0	1
Biological/Agricultural Sciences	0	1	0	1	0	0	0	0	0
ADVANCE Year 1: 2006-2007									
Engineering	1	5	1	5	0	0	0	0	0
Physical Sciences	1	1	1	1	0	0	0	0	1
Earth Atmospheric, and Ocean Science	0	3	0	3	0	0	0	0	2
Mathematical and Computer Sciences	0	4	0	3	0	0	1	0	0
Biological/Agricultural Sciences	1	0	1	0	0	0	0	0	0
ADVANCE Year 2: 2007-2008									
Engineering	1	4	1	4	0	0	0	1	0
Physical Sciences	0	2	0	2	0	0	0	0	1
Earth Atmospheric, and Ocean Science	0	0	0	0	0	0	0	0	0
Mathematical and Computer Sciences	1	3	1	2	0	0	1	0	0
Biological/Agricultural Sciences	1	0	1	0	0	0	0	0	0
ADVANCE Year 3: 2008-2009									
Engineering	1	6	1	5	0	1	0	0	4
Physical Sciences	0	2	0	2	0	0	0	0	2
Earth Atmospheric, and Ocean Science	1	0	1	0	0	0	0	0	0
Mathematical and Computer Sciences	1	4	1	3	0	0	1	0	0
Biological/Agricultural Sciences	1	0	1	0	0	0	0	0	0
ADVANCE Year 3: 2009-2010									
Engineering	4	2	4	2	0	0	2	0	1
Physical Sciences	0	1	0	1	0	0	0	0	0
Earth Atmospheric, and Ocean Science	0	0	0	0	0	0	0	0	0
Mathematical and Computer Sciences	2	1	2	1	0	0	0	0	0
Biological/Agricultural Sciences	1	0	1	0	0	0	0	0	0

Table 3: Tenure Review Outcomes by Gender 2005-2009 - SBS Fields									
	# of Reviews		# of Approvals		# of Denials		Early Tenure		
	Women	Men	Women	Men	Women	Men	Women	Men	
Pre-ADVANCE Year: 2005-2006									
Psychology	0	1	0	1	0	0	0	0	1
Social Science	0	1	0	1	0	0	0	0	1
ADVANCE Year 1: 2006-2007									
Psychology	0	2	0	2	0	0	0	0	2
Social Science	1	0	1	0	0	0	0	1	0
ADVANCE Year 2: 2007-2008									
Psychology	1	1	1	1	0	0	1	0	1
Social Science	1	5	1	5	0	0	0	0	3
ADVANCE Year 3: 2008-2009									
Psychology	2	0	2	0	0	0	1	0	0
Social Science	1	1	1	1	0	0	1	0	1
ADVANCE Year 4: 2009-2010									
Psychology	0	0	0	0	0	0	0	0	0
Social Science	1	1	1	1	0	0	0	0	0

Table created 4/25/2011

Table 4a: Promotion Review Outcomes by Gender: Assistant to Associate 2005-2010 - STEM Fields									
	# of Reviews		# of Approvals		# of Denials		Early Tenure and Promotion		
	Women	Men	Women	Men	Women	Men	Women	Men	
Pre-ADVANCE Year: 2005-2006									
Engineering	1	3	1	3	0	0	0	0	
Physical Sciences	1	1	1	1	0	0	1	1	
Earth Atmospheric, and Ocean Science	0	0	0	0	0	0	0	0	
Mathematical and Computer Sciences	2	1	1	1	1	0	0	1	
Biological/Agricultural Sciences	0	1	0	1	0	0	0	0	
ADVANCE Year 1: 2006-2007									
Engineering	1	4	1	4	0	0	0	0	
Physical Sciences	1	1	1	1	0	0	0	1	
Earth Atmospheric, and Ocean Science	0	2	0	2	0	0	0	1	
Mathematical and Computer Sciences	0	4	0	3	0	1	0	0	
Biological/Agricultural Sciences	1	0	1	0	0	0	0	0	
ADVANCE Year 2: 2007-2008									
Engineering	1	4	1	4	0	0	1	0	
Physical Sciences	0	2	0	2	0	0	0	1	
Earth Atmospheric, and Ocean Science	0	0	0	0	0	0	0	0	
Mathematical and Computer Sciences	0	3	0	2	0	1	0	0	
Biological/Agricultural Sciences	1	0	1	0	0	0	0	0	
ADVANCE Year 3: 2008-2009									
Engineering	1	4	1	3	0	1	0	2	
Physical Sciences	0	2	0	2	0	0	0	2	
Earth Atmospheric, and Ocean Science	1	0	1	0	0	0	0	0	
Mathematical and Computer Sciences	1	3	1	2	0	1	0	0	
Biological/Agricultural Sciences	1	0	1	0	0	0	0	0	
ADVANCE Year 4: 2009-2010									
Engineering	4	2	4	2	0	0	2	1	
Physical Sciences	0	1	0	1	0	0	0	0	
Earth Atmospheric, and Ocean Science	0	0	0	0	0	0	0	0	
Mathematical and Computer Sciences	2	1	2	1	0	0	0	0	
Biological/Agricultural Sciences	0	1	0	1	0	0	0	0	

Table 4a: Promotion Review Outcomes by Gender: Assistant to Associate 2005-2010 - SBS Fields									
	# of Reviews		# of Approvals		# of Denials		Early Tenure and Promotion		
	Women	Men	Women	Men	Women	Men	Women	Men	
Pre-ADVANCE Year: 2005-2006									
Psychology	0	1	0	1	0	0	0	1	
Social Science	0	1	0	1	0	0	0	1	
ADVANCE Year 1: 2006-2007									
Psychology	0	1	0	1	0	0	0	1	
Social Science	1	0	1	0	0	0	1	0	
ADVANCE Year 2: 2007-2008									
Psychology	1	1	1	1	0	0	1	1	
Social Science	1	4	1	4	0	0	0	2	
ADVANCE Year 3: 2008-2009									
Psychology	1	0	1	0	0	0	0	0	
Social Science	1	1	1	1	0	0	1	1	
ADVANCE Year 3: 2009-2010									
Psychology	0	0	0	0	0	0	0	0	
Social Science	1	1	1	1	0	0	0	0	

Table created 4/25/2011

Table 4b: Promotion Review Outcomes by Gender: Associate to Full 2005-2010 - STEM Fields								
	# of Reviews		# of Approvals		# of Denials		Unscheduled Promotion	
	Women	Men	Women	Men	Women	Men	Women	Men
Pre-ADVANCE Year: 2005-2006								
Engineering	0	2	0	1	0	1	0	0
Physical Sciences	0	1	0	1	0	0	0	1
Earth Atmospheric, and Ocean Science	0	0	0	0	0	0	0	0
Mathematical and Computer Sciences	0	1	0	1	0	0	0	1
Biological/Agricultural Sciences	0	0	0	0	0	0	0	0
ADVANCE Year 1: 2006-2007								
Engineering	1	1	1	1	0	0	0	1
Physical Sciences	0	0	0	0	0	0	0	0
Earth Atmospheric, and Ocean Science	0	0	0	0	0	0	0	0
Mathematical and Computer Sciences	0	0	0	0	0	0	0	0
Biological/Agricultural Sciences	0	0	0	0	0	0	0	0
ADVANCE Year 2: 2007-2008								
Engineering	0	1	0	1	0	0	0	0
Physical Sciences	0	0	0	0	0	0	0	0
Earth Atmospheric, and Ocean Science	0	0	0	0	0	0	0	0
Mathematical and Computer Sciences	0	0	0	0	0	0	0	0
Biological/Agricultural Sciences	0	1	0	1	0	0	0	1
ADVANCE Year 3: 2008-2009								
Engineering	0	0	0	0	0	0	0	0
Physical Sciences	0	0	0	0	0	0	0	0
Earth Atmospheric, and Ocean Science	0	0	0	0	0	0	0	0
Mathematical and Computer Sciences	2	0	2	0	0	0	1	0
Biological/Agricultural Sciences	0	0	0	0	0	0	0	0
ADVANCE Year 4: 2009-2010								
Engineering	0	1	0	1	0	0	0	1
Physical Sciences								
Earth Atmospheric, and Ocean Science	0	2	0	2	0	0	0	2
Mathematical and Computer Sciences	0	1	0	1	0	0	0	1
Biological/Agricultural Sciences								

Table 4b: Promotion Review Outcomes by Gender: Associate to Full 2005-2010 - SBS Fields								
	# of Reviews		# of Approvals		# of Denials		Unscheduled Promotion	
	Women	Men	Women	Men	Women	Men	Women	Men
Pre-ADVANCE Year: 2005-2006								
Psychology	0	1	0	1	0	0	0	1
Social Science	0	1	0	1	0	0	0	1
ADVANCE Year 1: 2006-2007								
Psychology	0	0	0	0	0	0	0	0
Social Science	0	0	0	0	0	0	0	0
ADVANCE Year 2: 2007-2008								
Psychology	0	0	0	0	0	0	0	0
Social Science	1	1	0	1	1	0	1	0
ADVANCE Year 3: 2008-2009								
Psychology	0	0	0	0	0	0	0	0
Social Science	0	2	0	2	0	0	0	2
ADVANCE Year 3: 2009-2010								
Psychology	0	0	0	0	0	0	0	0
Social Science	2	0	2	0	0	0	0	0

Table created 4/25/2011

Table 5. Years in Rank at the Associate Professor Level for STEM and SBS Faculty Hired as Assistant Professor and Associate, 2009-2010

Years in Rank	STEM				SBS			
	Women		Men		Women		Men	
	Number	% of Women	Number	% of Men	Number	% of Women	Number	% of Men
0-2	9	39.13%	15	18.99%	4	19.05%	2	9.09%
3-5	6	26.09%	27	34.18%	4	19.05%	8	36.36%
6-8	4	17.39%	9	11.39%	3	14.29%	6	27.27%
9-11	1	4.35%	12	15.19%	1	4.76%	0	0.00%
12-14	0	0.00%	4	5.06%	2	9.52%	1	4.55%
15 or more	3	13.04%	12	15.19%	7	33.33%	5	22.73%

15 or more years in rank	STEM		SBS	
	Women	Men	Women	Men
Range	7.00	15.00	5.00	14.00
Mean	20.67	23.50	17.86	22.75
Standard Deviation	6.03	6.59	2.19	5.80
Median	20.00	20.00	17.00	23.50
N	3	10	7	4

Note: Percents in columns refer to the percentage of men out of total men at each category of rank, so the percentage of men with years in rank of 0-2 is 18.99% out of the total of 100% of men in all rank categories.

Table 6. Voluntary, Non-Retirement Attrition, by Rank and Gender, 2009-2010

STEM	Assistant		Associate		Full	
	Women	Men	Women	Men	Women	Men
Engineering						
Engineering						
Civil Engineering				1		
Electrical and Comp.						
Engineering Technology						
Mechanical Engineering						
Physical Sciences						
Chemistry						
Physics and Optical Science						
Mathematics and Statistics	1					
Computer Sciences						
Computer Science						
Software and Information Systems						
Life Sciences						
Biology			1			
Bioinformatics						
Geography and Earth Science						
SBS						
Psychology	1		1	1		
Social Sciences						
Criminal Justice						
Economics				1		
Political Science		1		1		
Sociology						
Anthropology						

Table Created 4/22/10

Table 7. New Tenured and Tenure Track Hires in STEM and SBS, 2009-2010

	Assistant			Associate			Full		
	Men	Women	%Women	Men	Women	%Women	Men	Women	%Women
STEM									
Engineering									
Engineering									
Civil Engineering									
Electrical and Comp.							2		0
Engineering Technology	2	1	33.00%						
Mechanical Engineering									
Physical Sciences									
Chemistry	1		0.00%						
Physics and Optical Science	1		0.00%						
Mathematics and Statistics									
Computer Sciences									
Computer Science									
Software and Information Systems				1		0.00%			
Life Sciences									
Biology									
Bioinformatics	1		0.00%						
Geography and Earth Science		1	100.00%						
SBS									
Psychology									
Social Sciences									
Criminal Justice									
Economics									
Political Science									
Sociology									
Anthropology									

Updated May 13, 2011

Table 8. Faculty Leadership Positions

	Number of Women Faculty			
	All Faculty	All	STEM	SBS
Tenured Full Professors	216	44	5	11
Full Professors	234	29	6	11
STEM Department Heads	12	1	1	0
SBS Department Heads	5	3	0	3
Deans	9	3	0	0
Associate/Assistant Deans	24	12	2	0
Center Directors	9	5	0	0
President, Vice-Presidents, Provost, Vice-Provosts	9	4	0	0
Endowed/Named Chairs	3	1	0	0
Promotion and Tenure Committees				
	521	102	14	25
Table created 4/25/2011	+16	-2	-2	+3

No current mechanism for tracking committee demographics; recommendation made to Provost to do so in 2012.

Papers

Bilimoria, D. & Buch, K. (2010). The search is on: Engendering faculty diversity through more effective search and recruitment. *Change: The Magazine of Higher Learning*, 42(4), 27-32.

Buch, K., Huet, Y., Rorrer, A., & Roberson, L. (Accepted Pending Revisions). Removing the barriers to full professor: A comprehensive mid-career mentoring program for associate professors. *Change The Magazine of Higher Learning*.

Daneshvar, K., Khan, A., & Goodliffe, J. (Accepted Pending Revisions). Myc localizes to histone locus bodies during replication in drosophila. *PLoS ONE*.

Lu, N. (2011). A study of surface morphology and flexural strength of hemp fiber reinforced composite with recycled high density polyethylene matrix. *Journal of Applied Mechanics and Materials*, 71-78, 4416-4420.

Lu, N., & Bhogaiah, S.M. (2011). Effect of physical and chemical surface treatment on the thermal stability of hemp fibers as reinforcement in composite structures. *Journal of Applied Mechanics and Materials*, 71-78, 616-620.

Lu, N., Swan, R., & Ferguson, I. (Under Review). Composition, structure and mechanical properties of hemp fiber reinforced composite with recycled high density polyethylene Matrix. *Journal of Composite Materials*.

Stearns, E. (2010). Long-term correlates of high school racial composition and race relations. *Teachers College Record*, 112(6), 1654-1678.

Awards

Webb, J.B. (2010-2013). NIH National Institute of Diabetes and Digestive and Kidney Diseases R15 AREA Award (\$451,795): Biopsychosocial determinants of weight gain in black first year college women (Principal Investigator).

Theses

These theses were written under the guidance of Bonnie Cone Fellowship recipient Dr. Anne Jefferson.

McGee, R. (2011). *Hydrogeomorphic processes influencing ephemeral streams in forested watersheds of the southeastern piedmont U.S.A.*, Unpublished master's thesis, UNC Charlotte, Charlotte, NC.

Moore, C. (2011). *Surface/groundwater interactions and sediment characteristics of headwater streams in the piedmont of North Carolina*. Unpublished master's thesis, UNC Charlotte, Charlotte, NC.

Posters

Lorden, J., Huet, Y., Rorrer, A., Wemlinger, E., & Thacker, K., (2010). Diversity language inclusion in STEM vs. non-STEM faculty recruitment. Poster presented at the National Science Foundation 2010 ADVANCE Program Workshop, Alexandria, VA.

Lorden, J., Huet, Y., Rorrer, A., Roberson, L., & Doer, S., (2010). Linking faculty climate perceptions to campus diversity strategic plans. Poster presented at the National Science Foundation 2010 ADVANCE Program Workshop, Alexandria, VA.

Webb, J.B., (2010). Ethnicity and first-semester changes in obesigenic risk factors in college women. Poster presented at the annual meeting of the Society of Behavioral Medicine, Seattle, WA.

Conference Presentations

Buch, K. (2010, May). Mid-career mentoring. Presented at ADVANCE Auburn "Small Wins" Workshop on Post Tenure Pathways, Auburn, AL.

Buch, K., Sass, R., & Blowers, A. (2011, March). Charting your path at mid-career: choosing your path. Presented at Charting Your Path conference, Charlotte, NC.

Coger, R. and Dahlberg, T. (2011, March). Self promotion and visibility. Presented at Charting Your Path conference, Charlotte, NC.

Gutierrez, N. (2011, June). Clarity for assistant and associate professors. Presented at 2011 COACHE leaders workshop, Cambridge, MA.

Huet, Y. (2010, June). UNC Charlotte faculty climate update. Presented at UNC Charlotte Chancellor's Cabinet, Charlotte, NC.

Huet, Y. (2011, April). UNC Charlotte faculty climate update. Presented at UNC Charlotte Faculty Council, Charlotte, NC.

Huet, Y. (2011, March). Unconscious bias. Presented at Charting Your Path conference, Charlotte, NC.

Jefferson, A., Abraham, J., Campbell, T., & Moore, C. (2009, October). Groundwater contributions to headwater streams on fractured rock in the North Carolina piedmont and blue ridge. Paper presented at the annual meeting of the Geological Society of America, Portland, OR.

Jefferson, A., McGee, R., Moore, C. & Caveny-Cox, C. (2010, March). Hydrogeomorphic controls on the expression of stream water in less than 1 km² piedmont watersheds. Paper presented at the annual meeting of the Northeastern/Southeastern Geological

Society, Baltimore, MD.

Lorden, Joan. (2011, May). Mid-career faculty planning process: Lessons learned/best practices from ADVANCE programs panel at ADVANCE retreat. Presented at North Carolina State's Friday Institute, Raleigh, NC.

Lorden, Joan. (2009, November). COACHE breakfast panel. Presented at the annual meeting of the Association of Public Land Grant Universities, Washington, DC.

Lorden, Joan. (2010, April). Diversity drives innovation: Attracting and retaining women and minorities in STEM. Presented at the North Carolina Technology Association Thriving in the New Economy conference, Charlotte, NC.

Lu, N. (2011, March). Engineering sustainable construction material: Hemp fiber reinforced composite with recycled high density polyethylene matrix. Paper presented at the International Conference of Sustainable Design and Construction, Kansas City, MO.

Lu, N. & Guo, Z. (2010, November). Surface treatment effects on the surface morphology and thermostability properties of hemp fiber reinforced composite with polypropylene matrix. Paper presented at the annual meeting of the American Institute of Chemical Engineers, Salt Lake City, UT.

Lu, N. & Swan, R. (2011, May). A study of flexural properties of hemp fiber reinforced composite with recycled high density polyethylene matrix. Paper presented at the Proceedings of ASME Applied Mechanics and Materials, Chicago, IL.

Lu, N., Swan, R., & Johnson, R. (2011, May). A study of tensile properties of hemp fiber reinforced composite with recycled high density polyethylene matrix. Paper presented at the Proceedings of Society of Advance Material Processing Engineering SAMPE Annual Technical Conference, Long Beach, CA.

Lu, N., Swan, R., & Wang, L. (2010, September). Mechanical properties of hemp fiber reinforced polymeric composite with reclaimed HPDE. Paper presented at the annual meeting of the American Society of Composite held jointly with 14th US-Japan Conference on Composite Materials, Dayton, OH.

McGee, R. (2010, November). Dynamics of ephemeral channels in humid, forested watersheds. Paper presented at the annual meeting of the Geological Society of America, Denver, CO.

Moore, C. & Jefferson, A. (2009, October). Sediment size distributions in forested headwater streams of the North Carolina piedmont. Paper presented at the annual meeting of the Geological Society of America, Portland, OR.

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