

Annual Report for Period:09/2009 - 08/2010**Submitted on:** 08/27/2010**Principal Investigator:** Borman, Kathryn M.**Award ID:** 0930220**Organization:** U of South Florida**Submitted By:**

Borman, Kathryn - Principal Investigator

Title:

Partnerships for Adaptation, Implementation, and Dissemination (PAID): Collaborative Research-Alliance for the Advancement of Florida's Academic Women in Chemistry & Engineering

Project Participants

Senior Personnel

Name: Borman, Kathryn**Worked for more than 160 Hours:** No**Contribution to Project:**

Dr. Borman is a professor of Anthropology and affiliated with the Alliance for Applied Research in Education and Anthropology (AAREA) at the Department of Anthropology at the University of South Florida. She has taken the lead role in coordinating and implementing the collaborative efforts of the ADVANCE PAID award as well as the ongoing program activities at USF.

Name: Thomas, Sylvia**Worked for more than 160 Hours:** No**Contribution to Project:**

Dr. Thomas is the Assistant Dean for Diversity and External Programs in the USF's College of Engineering and is on faculty in the Department of Electrical Engineering. She has taken the lead role supervising the ongoing program activities in the College of Engineering and other STEM disciplines at USF.

Name: Tyson, Will**Worked for more than 160 Hours:** No**Contribution to Project:**

Dr. Tyson is an assistant professor in the Sociology department. He modified and administered the online faculty climate survey in spring of year one. He analyzed the preliminary results of the survey which is included in the Finding section of the annual report. This analysis will be used to identify the topics of relevance to women faculty which will be incorporated into the mentorship and recruitment practices workshops implemented on campuses.

Name: Fernandez, Eva**Worked for more than 160 Hours:** No**Contribution to Project:**

Ms. Fernandez is the Director of Engineering Experiential Learning at USF College of Engineering. She is well known in the STEM disciplines on the USF campus. She has participated in the recruitment practices and mentorship workshops and will take a leadership in facilitating the development of the on campus workshops She has also had a pivotal role in collecting USF faculty data.

Name: Lewis, Jennifer**Worked for more than 160 Hours:** No**Contribution to Project:**

Dr. Jennifer Lewis is an associate professor of Chemistry at the University of South Florida. She has acted as a liaison with the USF Chemistry department.

Post-doc

Name: Smith, Chrystal**Worked for more than 160 Hours:** No**Contribution to Project:**

Dr. Chrystal Smith is a Postdoctoral Scholar at USF and is the project manager of the ADVANCE PAID award. She is responsible

for the overall day to day implementation the ADVANCE PAID award. She is in regular contact with collaborators on other campuses. She supervises project activities and the USF budget as well as the USF on campus activities.

Graduate Student

Name: Martinez, Vanessa

Worked for more than 160 Hours: Yes

Contribution to Project:

As the Graduate Assistant on the ADVANCE Paid award, Vanessa Martinez is responsible for the organization and assistance with grant materials related to survey administration and the collection of faculty data. Her other responsibilities include creating the agenda, conference and meeting minutes, and poster and brochure development and design for publication and presentation.

Undergraduate Student

Technician, Programmer

Name: Davis, Jaime

Worked for more than 160 Hours: Yes

Contribution to Project:

Jaime Davis is the Administrative Specialist at USF. She assists in the administration of the Online Faculty Climate Survey and is responsible for organizing and reimbursing travel for ADVANCE PAID workshop facilitators and participants at workshop events.

Other Participant

Name: Smith, Dwayne

Worked for more than 160 Hours: No

Contribution to Project:

Dr. Smith is the Senior Vice Provost. He is our liaison to the USF Office of the Provost. He attends the weekly conference calls when his schedule permits and has attended one of the PI meetings. He also provides invaluable advice and support to the AAFAWCE activities.

Research Experience for Undergraduates

Organizational Partners

The University of Michigan

The University of Michigan STRIDE group has offered us the use of the ADVANCE PAID materials that they developed.

University of Wisconsin-Madison

University of Wisconsin staff put on a faculty recruitment workshop at University of Wisconsin-Madison based on their ADVANCE PAID findings.

Other Collaborators or Contacts

Kate Scantlebury is our external evaluator for program assessment.

Christine Reimers, formerly from UTEP, led the Mentoring Workshop held at FAMU.

Activities and Findings

Research and Education Activities: (See PDF version submitted by PI at the end of the report)

The Alliance for the Advancement of Florida's Academic Women in Chemistry and Engineering (AAFAWCE) NSF ADVANCE-PAID program is a consortium of five Florida state universities: University of South Florida (USF), Florida State University (FSU), the University of Florida (UF), Florida Agricultural and Mechanical University (FAMU), and Florida International University (FIU). USF is the lead institution of the AAFAWCE NSF ADVANCE-PAID collaboration.

USF offers 232 degree programs at the undergraduate, graduate, specialist and doctoral levels, including 89 bachelor, 97 master, two education specialist, 36 research doctoral, and four professional doctoral programs.

FSU was founded in 1851 and is the oldest university in the State of Florida. FSU is a comprehensive university with graduate, undergraduate, and professional programs, including medicine and law, currently enrolling more than 41,000 students.

FAMU, a land-grant historically black university, was established in Tallahassee in 1887. FAMU has 12,261 students enrolled in 13 colleges and schools with a total of 640 faculty.

FIU is an urban, multi-campus, research university serving South Florida, the state, the nation, and the international community. The university emphasizes research as a major component of its mission and has attained Research 1 status within its short history.

UF is a major, public, comprehensive, land-grant, research university.

The state's most comprehensive university, UF, is among the nation's most academically diverse public universities.

OVERVIEW OF THE AAFAWCE COLLABORATION

AAFAWCE's primary goals and objectives are the recruitment of women faculty, mentoring and advising of academic women at the assistant and associate professor levels, and the development of leadership among academic women.

To that end, the project PIs and Co-PIs have engaged in activities collaboratively across the five universities and on each campus. The interuniversity collaboration-level activities coordinate the PIs using various means of communication, providing common information to all five campuses and disseminating information to the PIs, administrators, and faculty of each campus. Campus activities have been conducted at each campus with the PIs being the key points of contact. Many of the campus activities are common to all of the AAFAWCE campuses; however, true to the spirit of the PAID mission, several activities are unique adaptations for a specific campus. These multi-level activities are discussed below.

UNIVERSITY-WIDE COLLABORATION-LEVEL

Hosted by USF, the AAFAWCE team holds a weekly conference call with the representatives of the five collaborating Florida universities to discuss and plan ADVANCE-PAID activities. These weekly meetings are an essential element in developing our partnership and coordinating our collaborative efforts. The meetings serve as a tool to help us with any of the challenges we may be facing on our campuses, and to provide ideas for successfully completing the necessary tasks. Also during these calls, the collaboration timeline, the presentations to administrators, the faculty climate survey, and the workshop planning are discussed and developed.

The AAFAWCE team uses email and FSU Blackboard (a common, private platform for document sharing, discussion boards, email, and surveys) to communicate and to share documents.

Gilmer and Safron have developed a reference list and hyperlinks to books and research articles on women in the sciences and engineering, focused on AAFAWCE's goals. This resource has been made available to the AAFAWCE team on the AAFAWCE Blackboard site and on the public AAFAWCE Web site.

On December 17th, 2009, the USF AAFAWCE team hosted a meeting with the PIs and Co-PIs of the five collaborating Florida institutions. At this meeting, the AAFAWCE team discussed and developed the following items:

- 1) A mission statement that reflected AAFAWCE's goals.
- 2) Final PowerPoint presentation created by Tansel (FIU) to be presented to administrators on each campus.
- 3) Timeline of project activities for the next three years.

- 4) An online faculty climate survey was piloted by AAFAWCE team and revisions were made based on their comments and suggestions.
- 5) We started discussion of an AAFAWCE logo and brochure along with a press release. These were developed during subsequent conference calls. These documents are located on the Resources section of the AAFAWCE Web site.

Each of the institutions sent representatives to participate in the AAFAWCE Train-the-Trainer Faculty Recruitment workshop hosted by FSU on April 9, 2010, and to the Train-the-Trainer Mentoring workshop hosted by FAMU on May 12 and 13, 2010. These workshops are described later in the report. Web pages were created for each of these workshops and they are linked to the main AAFAWCE web page. On the afternoon before the start of the Mentorship workshop, an additional PI meeting was held for brainstorming, planning and timeline revision.

AAFACWE collaborated to create a poster that was presented at the JAM NSF conference in June 2010 by Borman and Smith (USF), Gilmer (FSU), Donnelly (UF).

The AAFACWE team collected faculty demographic data, which are analyzed at the end of the Activities section.

COMMON CAMPUS-LEVEL ACTIVITIES

During the past year, AAFAWCE PIs and Co-PIs have utilized several channels to promote the program to their campus communities:

- 1) Each campus published press releases about AAFAWCE and its goals, sent e-mails to appropriate administrators, and published information of the grant on the university's Web sites.
- 2) Each AAFAWCE campus team presented the NSF ADVANCE-PAID program goals and its project activities (using a common PowerPoint presentation) to Deans, chairs, and others. At these presentations, the AAFAWCE campus teams stressed the importance of their support in order to successfully implement project activities. Administrators were asked to help recruit and recommend representatives to participate in the mentorship and recruitment practices training workshops as well as to recommend senior faculty who would be suitable mentors.
- 3) Brochures developed by AAFAWCE have been disseminated to campus administrators, Deans, Department Chairs, and faculty in Chemistry, Physics and Engineering, informing them of the AAFAWCE mission, goals, and proposed activities.
- 4) In late Spring 2010, the online faculty climate survey was finalized and administered to chemistry, engineering, and physics faculty at the five collaborating institutions.

In addition to the activities listed above, several of the institutions engaged in activities that are unique to their campuses:

USF Campus activities:

USF-1) In June 2010, the data collected by the online faculty climate survey analyzed by Tyson. Each respondent was sent a \$20 money order for their participation in the survey. The analysis of the survey is reported in the findings section of this annual report.

FIU Campus Activities:

FIU-1) Four faculty participated in training workshops offered by Quality Education for Minorities (QEM) network (April 9th, 2010). The workshops were conducted in Atlanta, GA and Las Vegas, NV to promote advancement of minorities in STEM fields. The emphasis was on best management practices that have been implemented at Hispanic serving institutions.

FIU-2) Faculty participated in the university-wide, day-long event on women: FIU Leadership Institute for Women Faculty 2010 (April 16, 2010). FIU's leadership institute is based at the College of Business Administration. The agenda for this event included sessions on successful negotiation, chairing and organizing meetings, leadership, career development, and moving into administration. Faculty experts on gender and leadership from universities across the country provided seminars and workshops.

FAMU campus activities:

FAMU-1) The FAMU AAFAWCE team with the Dean of Graduate Studies and Research identified faculty for the FAMU Campus Mentorship Committee. These individuals are seen as leaders and are also committed to the success of junior faculty.

FAMU-2) The team has discussed with the Provost a recognition program for faculty mentors. In these difficult economic times it is nearly impossible to provide a financial compensation for mentor participation; however, recognition of the mentors' efforts by the upper administration is an equally effective incentive in recruiting good mentors.

FSU campus activities:

FSU-1) On November 4, 2009, PI Gilmer attended the WISELI ADVANCE Workshop on Searching for Excellence & Diversity at University of Wisconsin-Madison campus, to learn about effective practices of faculty recruitment and about presenting the ideas to our faculty and administrators. In addition, Gilmer met on November 3, 2009 with two women faculty and two women staff to learn about the WISELI mentoring program, administered jointly by their ADVANCE-IT grant and the Provost's Office.

FSU-2) Presented a poster on AAFWCE at the FSU Honors General Chemistry Poster Session for the Department of Chemistry and Biochemistry and for the Dean of Arts & Sciences, April 2010 (Gilmer and Gorski).

FSU-3) PI Gilmer presented on the goals and programs that are part of AAFWCE for several groups of administrators and faculty leaders. Gilmer also recorded a Web cast on AAFWCE that is posted on FSU GEOSSET, for dissemination purposes.

FSU-4) Gilmer and Lopez arranged to web cast a number of talks on women in science and on science, given by women faculty. In addition, they posted a link to the afternoon session of the STRIDE presentation at the AAFWCE Faculty Recruitment Workshop on the Blackboard site.

UF campus activities:

UF-1) UF administrators and faculty participated in the AAFWACE Mentoring workshop. Subsequent planning meetings determined that through AAFWACE, UF will extend the mentoring available to pre-tenure and mid-career women faculty in engineering, chemistry, and physics through group mentoring. Advantages to group mentoring are that mentors may be more willing to commit to this format, mentees who might not willingly identify themselves as potential mentees may be more comfortable in a group setting and be more willing to participate, and groups may allow for peer-to-peer mentoring relationships to develop. UF hosts many nationally recognized leaders in seminars each year, and AAFWACE will arrange for ADVANCE-PAID cohort participants to have lunches with these speakers to broaden their professional networking.

UF-2) To disseminate this information from the AAFWACE recruiting workshop to the UF engineering, chemistry, and physics faculty, UF AAFWACE will host a recruiting workshop for Department Chairs in October 2010. UF has an on-line tutorial that search committee participants must take before serving, and department chairs will be asked to review this prior to the workshop. Additionally, it was determined that there are a set of questions that frequently comes up when interviewing female candidates (such as child care options) and that faculty members may not be aware of the options in these areas. Therefore, the UF Human Resources Office is preparing a Q. & A. list of the most frequently asked questions and is making these available to search committees.

TRAIN-THE-TRAINER WORKSHOPS

AAFWACE Faculty Recruitment Workshop (April 9th, 2010, FSU): 29 attendees from all five universities (15 FSU, 6 USF, 4 UF, 2 AMU, 2 FIU) plus the two presenters participated in the Train-the-Trainer Faculty Recruitment Workshop hosted by FSU on April 9, 2010 (<http://www.chem.fsu.edu/editors/gilmer/AAFWACE%20site/>). The FSU Department of Chemistry and Biochemistry hosted the workshop in its new Chemical Sciences Laboratory. The presenters, from the University of Michigan's ADVANCE-IT STRIDE program were: Dr. Pamela Raymond and Dr. Katherine Spindler. PI Gilmer arranged the hotel, meals, and meeting rooms; guided the development of the Web site for the workshop; and advertised to FSU faculty, administrators, and Human Resources staff. All the materials provided by the STRIDE team are available on the AAFWACE Blackboard site.

Gilmer and Safron (FSU) sorted the qualitative data from the survey we gave the participants with one question to answer: 'What is the one thing you learned today that you plan to incorporate into your efforts to recruit and evaluate job candidates?' These sorted data are posted on the AAFWACE Blackboard in Documents under Workshops.

AAFWACE Faculty Mentorship Workshop (May 13, 2010, FAMU):

FAMU hosted the AAFWACE Mentorship workshop at FAMU's Teleconference Center (<http://www.eng.fsu.edu/~peterson/AAFWACE/>). The goal of the workshop was to train participants to establish mentoring

programs on their own campuses for women junior faculty in Chemistry and Engineering. The workshop attendees were given instructions for, and participated in, activities designed to help them in all aspects of developing effective mentoring programs including:

- 1) Recruiting campus mentors.
- 2) Preparing campus mentors and mentees for their roles.
- 3) Establishing effective mentoring activities and formats that fit the context of the institution.
- 4) Troubleshooting difficult mentoring situations should they arise.
- 5) Evaluating/assessing the effectiveness of the mentoring programs established.
- 6) Including women senior faculty as not only mentors but also as mentees by developing leadership initiatives that prepare the ground for the assumption of leadership positions.

All participants were provided with a copy of Dr. Reimers' Mentoring Handbook with appendices that included Mentor and Mentee contracts, mentorship assessment forms, evaluation forms, activities planning sheets, and role playing activities. All of these materials are available in electronic form on the Blackboard website.

Dr. Tine Reimers, currently a Special Assistant to the Provost for Faculty and Program Development, University at Albany, State University of New York, was the Facilitator. Dr. Reimers and Dr. Evelyn Posey developed and directed the NSF ADVANCE-IT Mentoring Program at the University of Texas, El Paso (UTEP), and it is this work that will be adapted and implemented on the AAFAWCE campuses.

Nineteen representatives from the five AAFAWCE campuses participated in the Mentorship Workshop (FAMU-4, FIU-2, FSU-5, UF-3, USF-5), and four FAMU administrators attended portions of the workshop: Provost and Vice President for Academic Affairs, Assistant Vice President for Academic Affairs, Dean of Graduate Studies and Research, Dean of Arts and Sciences. The workshop was well received and the participant's average ratings of all areas of the workshop were between 5.5 and 5.9 (out of 6)

NEXT STEPS

- 1) AAFAWCE COACH Leadership Workshop (October 22, 2010, FSU) (http://www.chem.fsu.edu/~gilmer/AAFAWCE_COACH/):

The COACH team will present on Leadership for Women Academics at FSU for AAFAWCE participants on October 22, 2010. The workshop will also include with parallel sessions of local women leaders in science and engineering from our own institutions discuss their pathways to leadership. Each AAFAWCE participant will attend a half-day workshop by COACH and a two-hour panel by women leaders in science and engineering; COACH and the panel of women leaders will each present twice, so we can keep the number of participants to 25 in each session. We expect a total of 50 participants.

- 2) Led by faculty and administrators who participated in the AAFAWCE workshops, FSU, USF, UF, FAMU, and FIU will create recruiting and mentorship committees on their respective campuses. The recruiting workshops will target senior faculty and administrators who are involved in the hiring process in order to help them address their biases and develop a more diverse candidate pool. The mentorship committee will develop mentoring programs that pair junior women faculty with mentors and will host workshops that address their experiences.

ANALYSIS OF FACULTY DATA

In the academic year, August 2009 to May 2010, the AAFAWCE team collected faculty data from the chemistry and engineering departments at the five collaborating institutions. In total, there were 822 chemistry and engineering faculty. Of the 172 chemistry faculty, 101 (59 percent) were tenured, 30 (17 percent) were tenured track, and 41 (24 percent) were non-tenured track. There were 650 engineering faculty, 404 (62 percent) were tenured, 140 (22 percent) were tenured track, and 106 (16 percent) were non-tenured track. The analysis of these data found gender and ethnic disparities among the chemistry and engineering faculty. Attached to this Activities section is a file with the figures and tables that correspond to the analysis of these faculty data.

Tenure status and gender analysis of chemistry faculty

The faculty data collected by the five collaborating AAFACWE institutions show that there were lower percentages of women tenured in chemistry compared to men in the academic year, August 2009 to May 2010. A review of the tenured chemistry faculty found that tenured men represented 40 percent to 51 percent of the total faculty in the chemistry departments, with the exception of FIU, where tenured men were 73.3 percent of the total faculty. Notably, tenured women made up only 7.1 to 9.1 percent of the total faculty at USF, FSU, UF, and FAMU. At FIU, there were less than half as many tenured women (3.3 percent) as at the other four institutions. These data are illustrated in Figure 1.

Consistent with the inequality noted at the tenured level, the percentage of tenure track women faculty in chemistry at USF, FSU, UF, and FIU

was two to 3.3 percent, while the percentage of tenure track men was two to ten times higher, ranging from 6.7 to twenty percent. As an exception, FAMU had twice as many women chemistry faculty (14.3 percent) on the tenure track as men (7.1 percent) (see Figure 2). At USF, 28.6 percent of the total chemistry faculty was non-tenure track, while at FIU, 13.4 percent of the total faculty was non-tenure track, split evenly between men and women on each campus. Women non-tenure track faculty at FSU and FAMU ranged from 4.5 to 7.1 percent of the total faculty in chemistry, while non-tenure track men were 14.3 to 18.2 percent of the total faculty. The greatest disparity among men and women non-tenure track faculty was found at UF, where only two percent of the department's faculty were non-tenure track women, while 26.5 percent are non-tenure track men. As summarized in Figures 1-3, of the men and women faculty employed at the five universities, women are underrepresented in 12/15 categories, equal in 2/15, and overrepresented in only 1/15.

Tenure status and gender analysis of engineering faculty

Consistent with the data collected by AAFAWCE from its chemistry departments, data collected from the colleges of engineering at all four institutions revealed a disproportionately low number of women faculty versus the number of men faculty. Please note that FSU and FAMU have a joint engineering college. As displayed in Figure 4, the greatest disparity between men and women was found at the tenured level at all four colleges of engineering. Over half of the total engineering faculty (52.2 to 58.3 percent) at USF, FAMU-FSU, and FIU was tenured men. However, 61.5 percent of UF's engineering faculty were tenured men. Tenured women faculty made up only 4.4 to five percent of the total engineering faculty at all institutions. At the tenure track level, women continued to be underrepresented at all four colleges of engineering: USF, UF, FAU/FAMU, and FIU. Tenure track women made up only three to 7.1 percent of the total engineering faculty, compared to tenure track men who accounted for 14.6 percent to 23.9 percent, as displayed in Figure 5. Figure 6 indicates that at the non-tenure track level, men continued to be represented in substantially higher numbers than women at all four colleges of engineering. Of the total faculty in the college of engineering at these institutions, non-tenure track men were 9.7 to 15.9 percent of the total faculty, while women were four percent or less.

Ethnic analysis of chemistry faculty

Tables 1 to 5 indicate that at FIU, UF, USF, and FSU, white tenured men made up the greatest percentage of the total faculty in chemistry, 28.6 percent to 60 percent. White tenured women only accounted for zero to 8.6 percent of these departments' faculty. The percentages of ethnic minority women, whether tenured, tenure track, or non-tenure track, also continued to be underrepresented at all levels: black women 3.3 percent, Hispanic women 3.3 percent, and Asian women 4.5 percent. The percentages of black and Hispanic men at all levels in the departments of chemistry of these four institutions were only slightly higher: black men 2.9 percent, and Hispanic men 5.8 percent. In contrast, Asian men accounted for 14.3 percent of the faculty. Notably, FIU, which is a Hispanic serving institution, had no tenured or tenure track Hispanic women faculty (see Table 4). Table 5 shows that FAMU, a historic black university, had the highest percentage (49.9%) of minority chemistry faculty with tenure. FAMU was the only institution with black tenure track and non-tenure track women faculty (7.1 percent for each) and the only institution with black tenured women (7.1 percent). Additionally, black tenured men made up 36% of the FAMU chemistry faculty. These data indicate that despite a higher representation of ethnic minority chemistry faculty at FAMU, the disparity between men and women was still great.

Ethnic analysis of engineering faculty

Tables 6 to 9 show that white tenured men made up 20.4 to 41.5 percent of the total faculty in engineering at these four institutions, while white tenured women made up only 1.8 to 2.7 percent. At USF, UF and FIU, black and Hispanic tenured men each made up 7.1 percent or less of the faculty, while black and Hispanic tenured women each made up only 1.8 percent or less of the faculty. Notably, the FAMU-FSU College of Engineering had a higher percentage of black tenured men (13.5 percent). Nonetheless, as illustrated in Table 8, the percentage of black tenured women engineering faculty at this institution remained as low as at the other institutions (1 percent). The total percentage of tenured and tenure track Asian men in engineering was greater than or equal to the total percentage of tenured and tenure track white men in engineering at both FAMU-FSU and FIU. However, the percentage of tenured and tenure track Asian women engineering faculty again remained as low as at any other institution, ranging from 3.1 to 3.6 percent.

The analysis of these data reveal a large disparity between women and men faculty at the tenure level, and disproportionately lower numbers of ethnic minority faculty overall, especially of ethnic minority women. This analysis of the faculty data further supports the need for the activities and goals of the ADVANCE-PAID award.

Findings: (See PDF version submitted by PI at the end of the report)

FACULTY CLIMATE SURVEY ANALYSIS

INTRODUCTION

The goal of this faculty climate survey and analysis is to assess recruitment, mentorship, departmental climate, and overall faculty satisfaction in engineering and the physical sciences. This social science component adapted Wave 1 and 2 of UW-Madison ADVANCE-IT climate surveys (2003 and 2006) to examine factors that influence satisfaction with recruitment and mentorship efforts at each institution. The main changes to the original measures included removing specific references to UW-Madison and their programs in order to generalize the measure to all five participating institutions. The file with the graphs accompanying this survey analysis is attached to the Findings section of this annual report.

The survey was administered to engineering, chemistry and physics faculty at the five AFAWCE institutions. In total, the survey was sent via email to 1088 of these faculty members, 461 responded which resulted in a 42 percent response rate. E-mails from the project team and additional encouragement from department deans of the engineering, chemistry, and physics programs at each university were sent to encourage faculty to respond to the survey. Faculty members who responded to the survey were sent a \$20 money order.

This report shows how gender, ethnicity, and tenure status influenced how faculty members described their experiences in their department.

Figure 7 shows the ethnicity, gender, and tenure status breakdown of the 461 respondents to this survey. Around 73 percent of respondents were men and 19 percent were women. Another 8 percent of respondents did not indicate their gender. White men made up almost half (47 percent) of all respondents. The next largest group was Asian men at 17 percent. White women were the next largest group at 11 percent followed by Asian women at 4.6 percent. Black and Hispanic faculty made up three percent and five percent, respectively. Ten percent of respondents did not indicate their ethnicity.

Half of all respondents earned tenure at their current university and an additional four percent earned tenure at a previous university. Five percent did not indicate their tenure status. A quarter of respondents were tenure track faculty, and 16 percent were in non-tenure track positions. Tenure status differed greatly by gender. Only 38 percent of women respondents earned tenure at their current university compared to 56 percent of men respondents. A great disparity was also found among non-tenure track faculty. Only 13 percent of men respondents were in non-tenure track positions compared to 27 percent of women. Given the vast difference in experiences between tenured faculty and non-tenure track faculty, possible gender differences in survey responses may have been due to tenure status. We used linear and ordinal regression analyses to determine the impact of gender, ethnicity, and tenure status on faculty experiences.

MEASURES

We constructed 14 scales about faculty perspectives on the hiring process, tenure process, resources, department fit, management of work-life conflict, climate for women faculty, and climate for minority faculty. We conducted factor analysis on sets of survey items in order to determine which items captured what we intended to measure. After using factor analysis to group items, we conducted reliability analysis to determine the reliability of the groups of items and turned them into scales. Figure 9 shows the items that make up each scale and Cronbach's alpha for each scale. Cronbach's alpha represents the internal consistency of the scale. Higher scores indicate the items form a reliable scale.

Figure 8 shows the mean scale scores by gender. Respondents answered each question strongly disagree, somewhat disagree, agree somewhat, to strongly agree on a scale of 1 through 4. Items were reverse coded as necessary to correspond with similar measures. Item groups missing any variable were not scaled.

Average scale scores were 'agree somewhat' for most positive items such as hiring resources, tenure satisfaction and support, and department fit and communication. Faculty experience with isolation and their work-life experience ranged between 'disagree somewhat' and 'agree somewhat.' Climate measures show that faculty generally agreed that there were too few women and minorities on the faculty and in faculty leadership positions. Faculty perspectives on climate for women and minorities ranged from disagree to agree, particularly for men. Figure 8 seems to indicate several gender differences in faculty perspective, particularly on tenure satisfaction, isolation, department fit, and climate measures.

We also asked faculty to specifically rate the climate in their department and their satisfaction with their job and their progress. In addition, we asked faculty if they would re-accept their current position if given the option, if they would recommend their department to a prospective hire, and if they had considered leaving the university. Overall, women regarded their departments less favorably than men. However, there were no gender differences in how they would advise a job candidate. A larger percentage of women did consider leaving their institution than men. As with the scale responses above, variance could be due to tenure status. For example, non-tenure track faculty considered leaving more than tenured faculty.

The regression analyses below show how tenure status accounts for gender differences in faculty experiences.

ANALYSES

We ran three sets of linear regressions on the 14 scale items to determine gender differences and how ethnicity effects and tenure status effects account for gender differences. Analyses showed no significant gender, ethnicity, or tenure effects on perspectives about hiring, tenure, or resource allocation.

Isolation and Lack of Department Fit

Initial regression models revealed that women were more likely to experience isolation in their departments as measured by their agreement with statements such as 'I feel excluded from an informal network in my department', 'I feel isolated in my department', and 'I feel isolated on my university campus overall' (Cronbach's alpha = .798). These effects remained when ethnicity and tenure effects are added to the model even though the primarily female non-tenure track faculty felt more isolated compared to their tenure track peers.

Analyses of department fit showed similar results. Women and non-tenure track faculty reported lower agreement than men and tenure track faculty, respectively, on items such as 'I feel like I 'fit' in my department,' 'In my department, I feel that my research is considered mainstream,' and 'I feel that my colleagues value my research'(Cronbach's alpha = .806). Black faculty also showed less agreement with these statements, indicating that black faculty do not believe they fit as well in their departments.

Women also had a less favorable view of communication within their departments as evidenced by disagreement with statements such as 'I have a voice in how resources are allocated' and 'My department chair involves me in decision-making'(Cronbach's alpha = .882). Adding tenure to the model showed gender differences occur because disproportionately female non-tenure track faculty had a less favorable opinion of department communication. There were no gender differences between tenure track and tenured faculty.

Work-Life Adjustments

We added marital status, children, age of children and living situation to models of faculty assessments of their poor work-life balance, work-life conflict, and their department's approach to work-life conflicts. Analyses indicate no gender or ethnic effects on perceived work-life satisfaction (Cronbach's alpha = .603). Non-tenure track faculty were least likely to report work-life conflict, as evidenced by having to forgo professional activities or agreeing that personal responsibilities and commitments had slowed down their career progress (Cronbach's alpha = .705). Non-tenure track faculty were also least likely to report that their department was understanding and supportive of work-life conflicts (Cronbach's alpha = .705).

After controlling for age of children and living situation, marital status was not a significant predictor of perceived work-life balance or conflicts. Single faculty members were more likely to report their department responds well to faculty work-life conflicts than married faculty who lived with their spouse full-time.

Faculty with children were more likely than faculty without children to report that personal responsibilities conflicted with career success. Even greater conflict between personal responsibilities and career success was reported by respondents with preschool children not living with them, respondents with school age children living with them part time, and respondents with children 19 and older living with them full time.

Climate for Women and Minorities

As shown in Figure 8, men and women on average agreed that there were too few women in their department and in leadership positions Cronbach's alpha = .664). There was disagreement between men and women about the recruitment of women faculty in their departments and the climate for women faculty in their departments (Cronbach's alpha = .928). Men were tepid in their approval of the climate for women, and women generally disagreed that their departments were adequately recruiting women and providing a suitable climate for their development. Black faculty also had a more negative assessment of climate for women compared to white faculty.

Non-tenure track faculty did not believe there were too few women or too few minorities in comparison to tenure track faculty. Non-tenure track faculty also had a more favorable view of the recruitment of women and minorities and the climate for women and minorities in their departments. These effects may be because women who responded to the survey were disproportionately more highly represented in non-tenure track faculty positions compared to men. There is no evidence in this study that a higher percentage of minorities were disproportionately on the non-tenure track as well.

Women were more likely than men to report that there were too few underrepresented minorities in their departments (Cronbach's alpha = .780). Curiously, black faculty were least likely to report that there were too few underrepresented minorities in their department. This may be

because black faculty respondents were concentrated into departments than have a strong track record of recruiting minority faculty and placing minority faculty into leadership positions. Hispanic faculty reported the most discontent with the recruitment and climate for underrepresented minorities (Cronbach's alpha = .927).

Overall Satisfaction and Perception of Climate

Fewer men than women had a negative perception of department climate.

Only nine percent of men rated their department climate 'negative' or

'very negative' compared to 19 percent of women. By comparison, 74 percent of men rated their department climate 'positive' or 'very positive' along with 60 percent of women. Remaining responses were 'neutral.' Linear regression of this 1 to 5 climate scale reveals that women rate department climate significantly lower than men. Non-tenure track faculty had the lowest rating of climate. Non-US citizen faculty members rated department climate higher than US citizens.

We created a scale using agreement with statements about job and career satisfaction and whether or not faculty would accept their current position if given the option to re-accept it (Cronbach's alpha = .864). Faculty generally agreed that they were somewhat satisfied with their job and career progress and that they would re-accept their current position. There were no gender, ethnicity, or tenure effects on scores on this measure.

Faculty overwhelmingly reported that they would recommend a tenure track faculty candidate accept an offer from their department. Only six percent of respondents would not recommend their department while 55 percent would strongly recommend their department. Gender, ethnicity, and tenure status had no effects on this factor.

The final measures examined whether or not faculty had considered leaving the university and the extent to which they had considered leaving the university in the last three years. Logistic regression showed no significant gender difference among the faculty considering leaving their institutions even though 54 percent of women considered leaving compared to 63 percent of men. Faculty tenured at the university were most likely to state that they had considered leaving. Among faculty who had considered leaving, non-tenure track faculty reported looking most seriously.

Training and Development:

Dr. Chrystal Smith, the postdoctoral scholar, on this award has been mentored by Dr. Kathryn Borman (USF), Dr. Penny Gilmer (FSU), and Dr. Simone Hruda (FAMU). They have committed to guiding Dr. Smith's research and administrative skills as she acts as project manager. They have also provided mentorship about strategies to advance her academic career.

Vanessa Martinez, the undergraduate assistant, began pursuing her Master's degree in Anthropology at USF in Fall 2010. Under Dr. Smith's guidance, Ms. Martinez furthered her research skills by analyzing the AAFAWCE faculty data and creating the related graphs and tables.

Outreach Activities:

Journal Publications

Books or Other One-time Publications

Web/Internet Site

URL(s):

AAFAWCE Web site: <http://web3.cas.usf.edu/main/depts/ANT/advancepaid/>

Description:

The AAFWCE Web site provides information about its ADVANCE-PAID collaborative team, mission statement, project activities, and resources. The resources include a list of and hyperlinks to books and research articles on women in the sciences and engineering compiled by Gilmer and Safron at FSU.

The University of Michigan-STRIDE team allowed us to post the two-hour web cast of the afternoon session of the Train-the-Trainer Faculty Recruitment Workshop on our Blackboard AFAWCE Web site (not open to the general public).

Other Specific Products

Product Type:

Audio or video products

Product Description:

FSU GEOSET: <http://mediasite.apps.fsu.edu/Mediasite/Viewer/?peid=8ed62d2b9d94470fac5c5cda48560ed4>

Sharing Information:

Global Educational Outreach for Science Engineering and Technology (GEOSET) at Florida State University is a video streaming Web site.

GEOSET AFAWCE Lectures:

- 1) Dr. Penny J. Gilmer, FSU, "NSF grant, Alliance for the Advancement of Florida's Academic Women in Chemistry and Engineering," February 2010
- 2) Dr. Penny J. Gilmer, FSU, on her research with the Science Collaboration: Immersion, Inquiry, Innovation project with rural K-12 teachers, "Research in Rural Settings," February 2010
- 3) Dr. Sheila Tobias sponsored by FSU Chemistry, "Women in Science: End-Running the Crowd," November 2009
- 4) Dr. Susan Lattuner, FSU, on her scientific research, "Growth of Magnetic Materials from Lanthanide-rich Fluxes," March 2010

Product Type:

External evaluation report

Product Description:

Kate Scantlebury, the external evaluator from the University of Delaware has submitted the year 1 evaluation report which is attached to this report.

Sharing Information:

The evaluation report will be disseminated among AFAWCE team members.

Contributions

Contributions within Discipline:

The findings of the online Faculty Climate survey administered by AFAWCE provided invaluable data about the experiences of faculty, particularly women faculty, at the five collaborating Florida institutions. The survey along with the mentorship and recruitment practices workshops further AFAWCE's mission to increase the representation and promote the advancement of academic women in chemistry and engineering by developing a more diverse science and engineering workforce.

Contributions to Other Disciplines:

The online Faculty Climate survey is the social science component of the NSF ADVANCE-PAID award. It has and will continue to contribute to both the disciplines of anthropology and sociology. Dr. Tyson who modified the survey is a sociologist in the Department of Sociology, University of South Florida. The PI, Dr. Kathy Borman is a sociologist and Dr. Smith is a Postdoctoral Scholar in the Department of Anthropology, University of South Florida. The analysis of the survey will be published in social science journals ensuring that other researchers in these disciplines have access to the results.

Contributions to Human Resource Development:

The mentorship and recruitment practices training workshops sponsored by AFAWCE contribute to the human resource development of junior women faculty at all collaborating institutions. The mentorship training workshop provided institutions with the techniques and best practices to provide mentorship to junior women faculty who want to advance their careers. The recruitment practices training workshop provided institutions with the techniques and best practices to train senior faculty and administrators to recognize their biases in hiring practices with the goal of creating a more diverse candidate pool, thereby increasing the hiring of women faculty in STEM disciplines.

Contributions to Resources for Research and Education:

Contributions Beyond Science and Engineering:

AAFAWCE's ADVANCE PAID activities have contributed to the wider society by raising awareness and recognition of historically underrepresented groups i.e., women and minorities who have traditionally been excluded from pursuing many disciplines in the sciences and engineering.

Conference Proceedings

Special Requirements

Special reporting requirements: None

Change in Objectives or Scope: None

Animal, Human Subjects, Biohazards: None

Categories for which nothing is reported:

Activities and Findings: Any Outreach Activities

Any Journal

Any Book

Contributions: To Any Resources for Research and Education

Any Conference

Annual External Evaluation Report, July 31 2010

For

ADVANCE PAID: Alliance for the Advancement of Florida's Academic Women in
Chemistry and Engineering (AAFAWCE)

Kathryn Scantlebury

Introduction

AAFAWCE is a consortium of five Florida institutions (University of South Florida, Florida State University, the University of Florida, Florida Agricultural and Mechanical University and Florida International University) and their main objectives in the project is "the recruitment of women faculty, the mentoring and advising of academic women at the assistant and associate levels, and the promotion of leadership among academic women" (Borman, Holbrook, & Thomas, 2009). The project plans to achieve these objectives by

- 1) providing opportunities, best practices and strategies for hiring women faculty in STEM fields.
- 2) providing opportunities, infrastructure, and resources for mentoring and advising assistant and associate professors.
- 3) increasing the number of women in chemistry and engineering by capitalizing on their leadership skills for career advancement and the attainment of leadership positions.

This report covers the project's activities from September 2009- June 2010. During this first year the project has focused on establishing collaboration and networks between the institutions. A survey to ascertain the climate for women in chemistry and engineering was developed, and two workshops were offered, one on mentoring and the other on recruitment using materials and resources from other successful ADVANCE projects (University of Wisconsin-Madison WISELI (recruitment), University of Michigan STRIDE (recruitment), SUNY- Albany (mentoring) and COACH (*Committee on the Advancement of Women Chemists*, on leadership and development).

This report provides an analysis of preliminary findings and a synthesis of the project's progress to date toward meeting its stated goal. It is divided into five sections: (1) Introduction; (2) Review and Synthesis of responses to a questionnaire by faculty participating in workshops; (3) Review and Synthesis of responses to a climate study questionnaire to STEM faculty at the five institutions; (4) Review of AAFAWCE materials and resources; and (5) Summary and Recommendations.

Workshops

AAFAWCE offered two workshops this past year, “*Train-the-Trainer Faculty Recruitment*” at FSU in April and a *Train-the-Trainer Mentoring* workshop at FAMU in May. All institutions involved with AAFAWCE sent representatives to these workshops. The participants included faculty and administrators. Qualitative responses to the question of the “one thing you learned today that you plan to incorporate into your efforts to recruit and evaluate job candidates at the recruitment workshop” were sorted into four main categories: components of the search, involvement in search committee, preparation for university, and preparation for the search committee. Participants received a Mentoring Handbook which is available on the website. Participants ranked survey items on the workshop perceptions between 5.5 and 5.9 on a scale from 1-6.

Climate Study

The project developed a survey instrument to ascertain the working climate for scientists and engineers at the participating institutions. Project staff used factor analysis to establish the scales and Cronbach alpha to determine the reliability of the scales (shown in Figure 8). The instrument asked faculty for their perceptions’ on the following scales: *hiring process, tenure process, resources, department fit, management of work-life conflict, climate for women faculty, and climate for minority faculty.*

A total of 461 faculty answered the project’s climate survey and a detailed analysis is provided in the annual report. Women were more isolated in their departments, and had a more negative perspective on the work climate than men. However, overall most faculty were satisfied with their work environment and would recommend their department to another colleague. While a majority of the faculty had considered leaving their institution, there were no gender or ethnic differences reported on this response.

The project has established baseline data on the number of women and men in tenure and tenure-track positions at the universities. These data are divided by ethnicity and gender. In the future the project may wish to track how many tenured women and men are at the associate and professorial levels. Women often plateau at the associate level and an indication of effective mentoring may be that women move from associate to the full professor level in the same time span as their male colleagues.

Review of Materials & Resources

Web-site: AAFAWCE’s Blackboard web site has the following sections: *Announcements, Information, Staff Information, Documents, Discussion Board, Communication, External Links and Tools.* *Announcements* include the project’s mission statement, information about project activities and links to the resources provided at the workshops and other project activities. *Staff Information* contains contact information for AAFAWCE’s participants Gilmer (FSU), Hruda (FAMU) and

Davis, (USF). There is no information for the University of Florida, and Florida International University.

The *Documents* section has most of the project's materials and resources. A copy of the 2010 report is available. Within *Documents*, the *Dissemination* folder includes *AAFAWCE presentations*, *AAFAWCE posters*, *Women's Scientists Research*, *Guest Lecture* and *Workshops*. Within *Presentations*, there are two folders *Cited* and *Webcasted*, the *Cited* folder does not contain any materials. The *Webcasted* folder has a presentation by Dr. Gilmer on the project. Dr. Gilmer introduces the project's institutions, goals and the four strategies being used to attain those goals. The project has four approaches: recruitment; leadership workshops; mentoring and advising; and a faculty climate survey. The presentation is informative and provides a succinct overview of the project and its goals.

AAFAWCE posters have two folders, FSU and JAM NSF conference. FSU has a presentation from an undergraduate, Kaitlin Gorski & Dr. Penny Gilmer about the demographics of the engineering departments (FAMU/FSU) and the Chemistry and Biochemistry Department at FSU. In *Women's Scientists Research* there are two presentations, both from FSU. Dr. Penny Gilmer has a presentation on Sc:iii program and Dr. Susan E. Latturner *Growth of Magnetic Materials from Lanthanide-rich Fluxes*. The *Guest Lecture* is a presentation by Dr. Shelia Tobias "*Women in science, women and science: end-running the crowd or the problem of women in science: why is it so hard to convince people there is one?*"

The *Workshops* page has the presentations – as a complete video- for the STRIDE workshop, as noted the light for Part I are problematic but the video, along with the materials, provides a comprehensive resource for the project participants and for future participants. Faculty demographics are provided, and the project may want to consider adding the graphs from this report to that folder.

The *Discussion Board* has had limited use by project participants. There are few comments, however, as the project leaders have a weekly conference there may be limited need for a discussion board at this time. As the project develops this may be a forum where new participants can ask questions and offer suggestions.

The *External Links* has connections to the project's website, and the recruitment and mentoring workshops. In this section, the project could also provide participants with connections to the ADVANCE (see <http://www.portal.advance.vt.edu/>) portal and other sites with information on women and STEM issues (e.g. Donna Nelson's data on the number of women and minorities in STEM fields, see <http://cheminfo.ou.edu/~djn/Science and Society/>), or COACH web-site (<http://coach.uoregon.edu/>).

Summary & Recommendations

In the first year of the project, AAFWCE has met its first goal (providing opportunities, best practices and strategies for hiring women faculty in STEM fields) through two workshops that were well attended by representatives from all institutions. Through the mentoring workshop and the materials it provided the project has met its second goal (providing opportunities, infrastructure, and resources for mentoring and advising assistant and associate professors). The project has established baseline data to track its success on achieving the third goal (increasing the number of women in chemistry and engineering capitalizing on their leadership skills for career advancement and the attainment of leadership positions).

Project Leaders have weekly conference calls and the minutes of these meetings are available on the project's web-site. These regular meetings of key personnel have contributed to the success of the project during its first year.

Recommendations

- Analyze the success of women and minorities in tenured positions by level of appointment
- Provide the number of participants on graphs showing the percentage of faculty at each institution
- Continue contributions to the *Women's Scientists' Research* section of the web-site from all of the project's participating institutions
- Utilize the announcement section of the web-site to share the innovative practices and ideas from the 5 institutions
- Continue efforts to recruit a balanced representation of the universities faculties for the climate survey
- Because of the psychometrics conducted on the questionnaire, the project's *Climate Survey* is a good resource for other ADVANCE projects, publishing the survey would be a major contribution to the STEM community.

Reference

Borman, K., Holbrook, K. & Thomas, S. (2009). *Partnerships for Adaptation, Implementation, and Dissemination (PAID): Collaborative research-alliance for the advancement of Florida's academic women in chemistry & engineering*. HRD 0930220. National Science Foundation. Washington DC.

AAFAWCE Survey Data Analysis

Figure 7. Tenure Status by Gender and Ethnicity

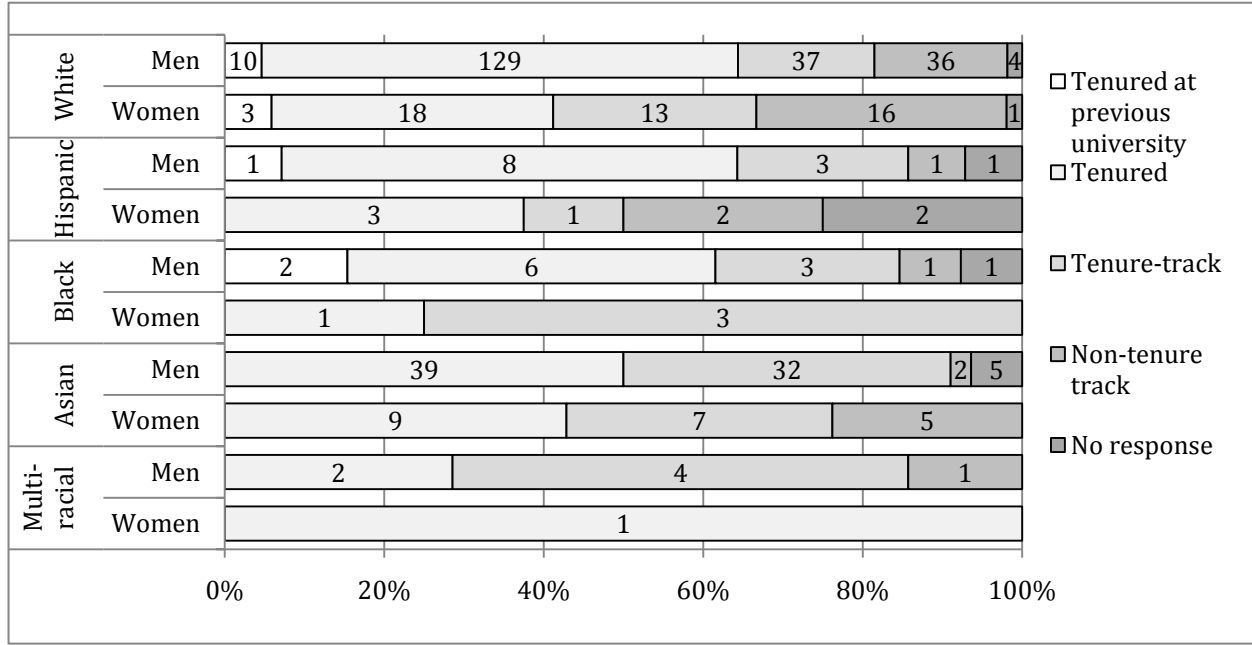


Figure 8. Mean Scale Scores by Gender

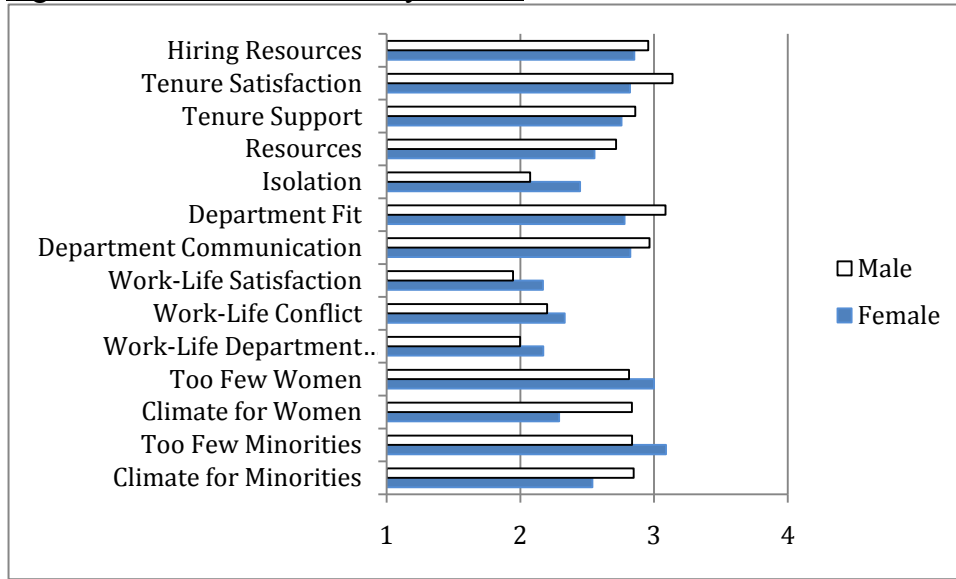


Figure 9. Rating Scales

Climate for minorities $\alpha = .927$	<p>My department has identified ways to recruit underrepresented minority faculty.</p> <p>My department has actively recruited underrepresented minority faculty. The climate for underrepresented minority faculty in my department is good.</p> <p>My department has identified ways to enhance the climate for underrepresented minority faculty.</p> <p>My department has taken steps to enhance the climate for underrepresented minority faculty.</p> <p>* Underrepresented minority faculty in my department must work harder than majority faculty to convince colleagues of their competence.</p> <p>My department has identified ways to move underrepresented minority faculty into leadership positions.</p> <p>My department has made an effort to promote underrepresented minority faculty into leadership positions.</p>
Climate for women $\alpha = .928$	<p>My department has identified ways to recruit women faculty.</p> <p>My department has actively recruited women faculty. The climate for women in my department is good.</p> <p>My department has identified ways to enhance the climate for women.</p> <p>My department has taken steps to enhance the climate for women.</p> <p>* Women in my department must work harder than men to convince colleagues of their competence.</p> <p>My department has identified ways to move women into leadership positions.</p> <p>My department has made an effort to promote women into leadership positions.</p>
Department Communication $\alpha = .882$	<p>I am treated with respect by my department chair.</p> <p>I feel like a full and equal participant in the problem-solving and decision-making.</p> <p>I have a voice in how resources are allocated.</p> <p>Meetings allow for all participants to share their views.</p> <p>Committee assignments are rotated fairly to allow for participation of all faculty.</p>

My department chair involves me in decision-making.

Department Fit $\alpha = .806$	Colleagues in my department solicit my opinion about work-related matters (such as teaching, research, and service). In my department, I feel that my research is considered mainstream. I feel that my colleagues value my research. I feel like I “fit” in my department.
Department Response to Work-Life Conflict $\alpha = .785$	Most faculty in my department are supportive of colleagues who want to balance their family and career lives. * It is difficult for faculty in my department to adjust their work schedules to care for children or other family members. The department communicates the options available for faculty who have a new baby. The department is supportive of family leave. * Faculty who have children are considered to be less committed to their careers.
Hiring Resources $\alpha = .780$	I was satisfied with the hiring process overall. The department did its best to obtain resources for me. Faculty in the department made an effort to meet me. I negotiated successfully for what I needed including space. * I was naïve about the negotiation process. I was pleased with my start up package.
Isolation $\alpha = .798$	I feel excluded from an informal network in my department. I am reluctant to bring up issues that concern me about the behavior of my departmental colleagues for fear it might affect my reputation or advancement. I have to work harder than my departmental colleagues to be perceived as a legitimate scholar. I do a great deal of work that is not formally recognized by my department. I feel isolated in my department. I feel isolated on the university campus overall.
Resources $\alpha = .797$	I have the equipment and supplies I need to adequately conduct my research. I receive regular maintenance/upgrades of my equipment. I have sufficient office space. I have sufficient laboratory/studio space. I receive enough internal funding to conduct my research. I receive the amount of technical/computer support I need. I have enough office support.

	I have sufficient teaching support (including T.A.s).
Tenure Satisfaction $\alpha = .854$	<p>I am/was satisfied with the tenure process overall.</p> <p>I understand/understood the criteria for achieving tenure.</p> <p>The requirements/standards for tenure (e.g., level of scholarship, teaching requirements, and service requirements) are reasonable.</p> <p>* I am receiving/have received mixed messages about the requirements for tenure from senior colleagues.</p> <p>I feel there is/was a strong fit between the way I do/did research, teaching and service, and the way it is/was evaluated for tenure.</p> <p>Tenure decisions are based primarily on performance, rather than on politics, relationships or demographics.</p>
Tenure Support $\alpha = .787$	<p>I receive/d feedback on my progress toward tenure.</p> <p>I feel/felt supported in my advancement to tenure.</p> <p>I receive/d reduced responsibilities so that I could build my research program.</p> <p>I was told about assistance available to pre-tenure faculty (e.g., workshops, mentoring).</p> <p>My senior advisor/mentor committee is/was very helpful to me in working toward tenure.</p>
Too few minorities $\alpha = .780$	<p>There are too few underrepresented minority faculty in my department.</p> <p>My department has too few underrepresented minority faculty in leadership positions.</p>
Too few women $\alpha = .664$	<p>There are too few women faculty in my department.</p> <p>My department has too few women faculty in leadership positions.</p>
Work-life conflict $\alpha = .705$	<p>I often have to forgo professional activities (e.g., sabbaticals, conferences) because of personal responsibilities.</p> <p>Personal responsibilities and commitments have slowed down my career progression.</p>
Work-life satisfaction $\alpha = .603$	<p>I am usually satisfied with the way in which I balance my professional and personal life.</p> <p>* I have seriously considered leaving my university in order to achieve better balance between work and personal life.</p>

Note: Responses with an asterisk were reverse-coded.

AAFAWCE Faculty Data Analysis

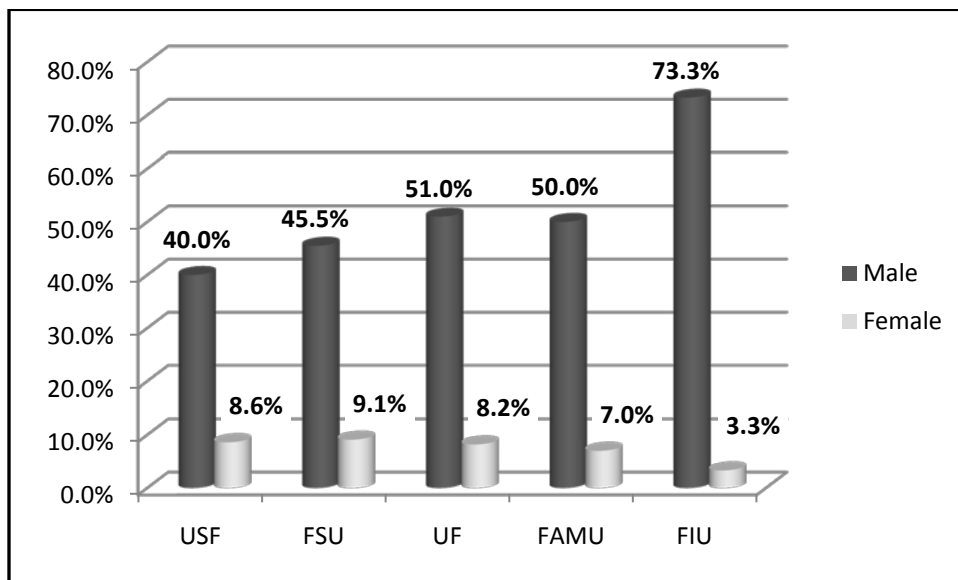


Figure 1. Tenured Chemistry Faculty by University and Gender

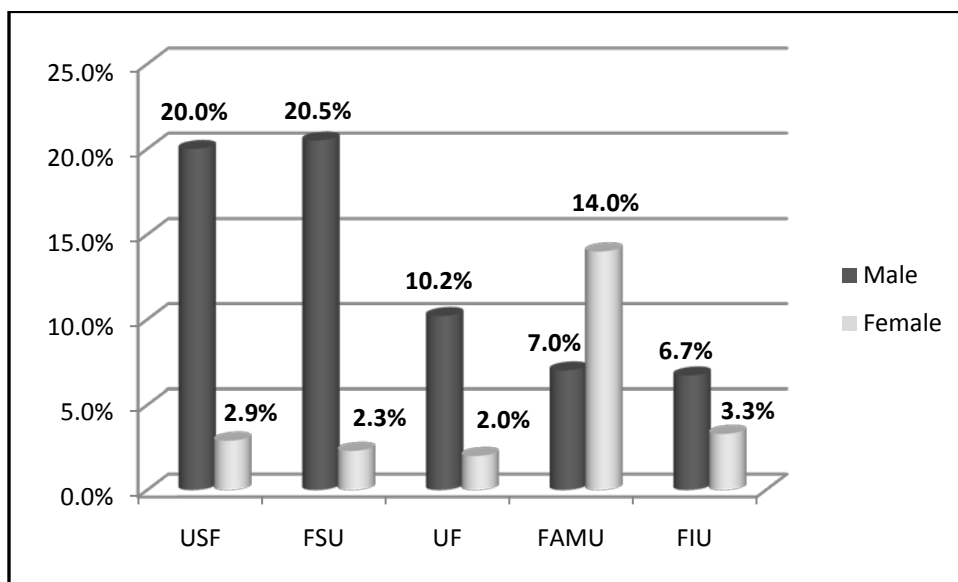


Figure 2. Tenure Track Chemistry Faculty by University and Gender

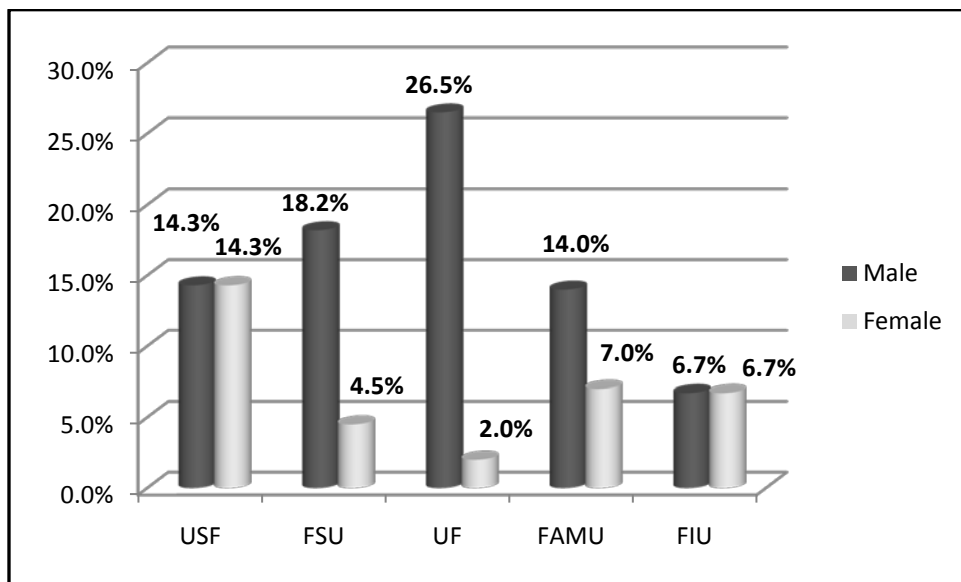


Figure 3. Non-Tenure Track Chemistry Faculty by University and Gender

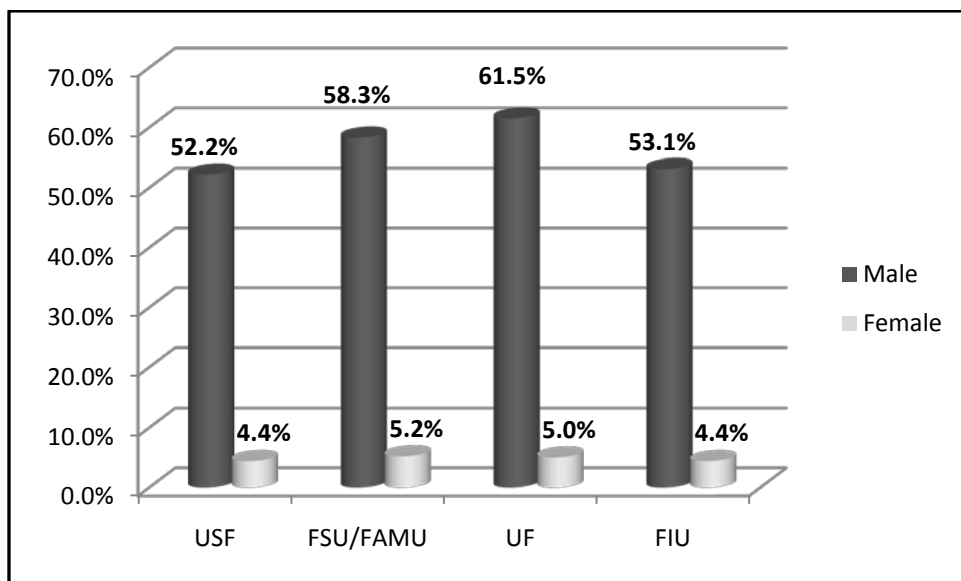


Figure 4. Tenured Engineering Faculty by University and Gender

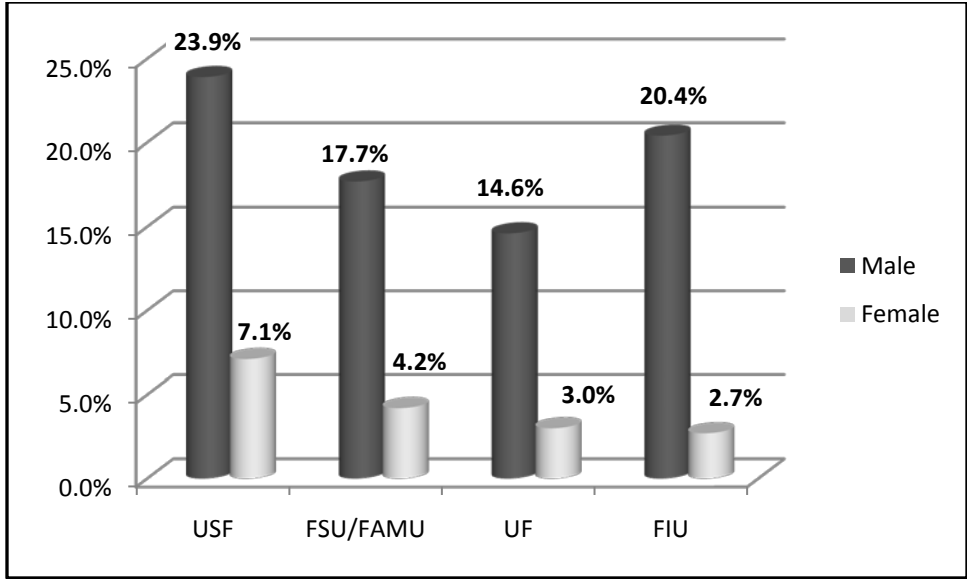


Figure 5. Tenure Track Engineering Faculty by University and Gender

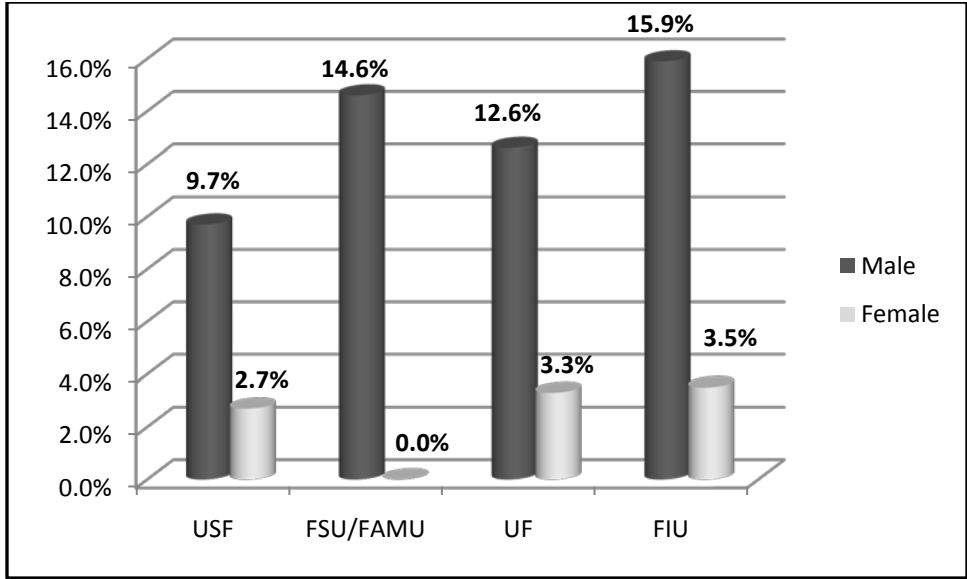


Figure 6. Non-Tenure Track Engineering Faculty by University and Gender

Table 1. University of South Florida Chemistry Faculty by Gender, Ethnicity, and Tenure Status

Ethnicity	Tenured Faculty				Tenure Track Faculty				Non-Tenure Track Faculty			
	Male		Female		Male		Female		Male		Female	
	%	n	%	n	%	n	%	n	%	n	%	n
White	28.6	10	8.6	3	14.3	5	0.0	0	8.6	3	5.7	2
Black	0.0	0	0.0	0	0.0	0	0.0	0	2.9	1	0.0	0
Hispanic	0.0	0	0.0	0	2.9	1	0.0	0	2.9	1	2.9	1
Asian	11.4	4	0.0	0	2.9	1	2.9	1	0.0	0	0.0	0
Non Resident Alien	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	5.7	2
Other	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Total	40.0	14	8.6	3	20.0	7	2.9	1	14.3	5	14.3	5

Table 2. University of Florida Chemistry Faculty by Gender, Ethnicity, and Tenure Status

Ethnicity	Tenured Faculty				Tenure-Track Faculty				Non-Tenure Track Faculty			
	Male		Female		Male		Female		Male		Female	
	%	n	%	n	%	n	%	n	%	n	%	n
White	44.9	22	4.1	2	10.2	5	2.0	1	22.4	11	2.0	1
Black	0.0	0	2.0	1	0.0	0	0.0	0	0.0	0	0.0	0
Hispanic	2.0	1	2.0	1	0.0	0	0.0	0	0.0	0	0.0	0
Asian	4.1	2	0.0	0	0.0	0	0.0	0	4.1	2	0.0	0
Other	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Total	51.0	25	8.2	4	10.2	5	2.0	1	26.5	13	2.0	1

Table 3. Florida State University Chemistry Faculty by Gender, Ethnicity, and Tenure Status

Ethnicity	Tenured Faculty				Tenure Track Faculty				Non-Tenure Track Faculty			
	Male		Female		Male		Female		Male		Female	
	%	n	%	n	%	n	%	n	%	n	%	n
White	43.2	19	4.5	2	11.4	5	2.3	1	13.6	6	4.5	2
Black	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Hispanic	0.0	0	0.0	0	2.3	1	0.0	0	0.0	0	0.0	0
Asian	2.3	1	4.5	2	6.8	3	0.0	0	4.5	2	0.0	0
Other	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Total	45.5	20	9.1	4	20.5	9	2.3	1	18.2	8	4.5	2

Table 4. Florida International University Chemistry Faculty by Gender, Ethnicity, and Tenure Status

Ethnicity	Tenured Faculty				Tenure Track Faculty				Non-Tenure Track Faculty			
	Male		Female		Male		Female		Male		Female	
	%	n	%	n	%	n	%	n	%	n	%	n
White	60.0	18	3.3	1	3.3	1	3.3	1	6.7	2	0.0	0
Black	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Hispanic	3.3	1	0.0	0	0.0	0	0.0	0	0.0	0	3.3	1
Asian	10.0	3	0.0	0	3.3	1	0.0	0	0.0	0	3.3	1
Other	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Total	73.3	22	3.3	1	6.7	2	3.3	1	6.7	2	6.7	2

**Table 5. Florida Agricultural and Mechanical University Chemistry Faculty
by Gender, Ethnicity, and Tenure Status**

Ethnicity	Tenured Faculty				Tenure Track Faculty				Non-Tenure Track Faculty			
	Male		Female		Male		Female		Male		Female	
	%	n	%	n	%	n	%	n	%	n	%	n
White	7.1	1	0.0	0	0.0	0	7.1	1	0.0	0	0.0	0
Black	35.7	5	7.1	1	7.1	1	7.1	1	14.3	2	7.1	1
Hispanic	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Asian	7.1	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Other	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Total	50.0	7	7.1	1	7.1	1	14.3	2	14.3	2	7.1	1

Table 6. University of South Florida Engineering Faculty by Gender, Tenure Status, and Ethnicity

Ethnicity	Tenured Faculty				Tenure Track Faculty				Non-Tenure Track Faculty			
	Male		Female		Male		Female		Male		Female	
	%	n	%	n	%	n	%	n	%	n	%	n
White	31.0	35	1.8	2	10.6	12	1.8	2	8.0	9	0.9	1
Black	0.9	1	0.0	0	2.7	3	1.8	2	0.9	1	0.0	0
Hispanic	3.5	4	1.8	2	0.9	1	0.9	1	0.0	0	0.9	1
Asian	15.9	18	0.9	1	8.8	10	2.7	3	0.9	1	0.9	1
Non Resident Alien	0.9	1	0.0	0	0.9	1	0.0	0	0.0	0	0.0	0
Other	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Totals	52.2	59	4.4	5	23.9	27	7.1	8	9.7	11	2.7	3

Table 7. University of Florida Engineering Faculty by Gender, Ethnicity, and Tenure Status

Ethnicity	Tenured Faculty				Tenure-Track Faculty				Non-Tenure Track Faculty			
	Male		Female		Male		Female		Male		Female	
	%	n	%	n	%	n	%	n	%	n	%	n
White	41.5	125	2.7	8	7.0	21	1.0	3	8.3	25	2.3	7
Black	1.0	3	0.3	1	0.7	2	0.3	1	0.3	1	0.0	0
Hispanic	2.7	8	0.0	0	0.7	2	0.0	0	0.3	1	0.3	1
Asian	16.3	49	2.0	6	6.3	19	1.7	5	3.7	11	0.7	2
Other	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Total	61.5	185	5.0	15	14.6	44	3.0	9	12.6	38	3.3	10

Table 8. Florida State University and Florida Agricultural and Mechanical University Engineering Faculty by Gender, Ethnicity, and Tenure Status

Ethnicity	Tenured Faculty				Tenure Track Faculty				Non-Tenure Track Faculty			
	Male		Female		Male		Female		Male		Female	
	%	n	%	n	%	n	%	n	%	n	%	n
White	21.9	21	2.1	2	8.3	8	2.1	2	8.3	8	0.0	0
Black	13.5	13	1.0	1	1.0	1	0.0	0	2.1	2	0.0	0
Hispanic	1.0	1	1.0	1	0.0	0	0.0	0	0.0	0	0.0	0
Asian	21.9	21	1.0	1	8.3	8	2.1	2	4.2	4	0.0	0
Other	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Total	58.3	56	5.2	5	17.7	17	4.2	4	14.6	14	0.0	0

Table 9. Florida International University Engineering Faculty by Gender, Ethnicity, and Tenure Status

Ethnicity	Tenured Faculty				Tenure Track Faculty				Non-Tenure Track Faculty			
	Male		Female		Male		Female		Male		Female	
	%	n	%	n	%	n	%	n	%	n	%	n
White	20.4	23	2.7	3	6.2	7	0.9	1	8.0	9	1.8	2
Black	3.5	4	0.0	0	0.9	1	0.0	0	2.7	3	0.0	0
Hispanic	7.1	8	0.0	0	0.0	0	0.0	0	3.5	4	0.9	1
Asian	22.1	25	1.8	2	13.3	15	1.8	2	1.8	2	0.9	1
Other	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Total	53.1	60	4.4	5	20.4	23	2.7	3	15.9	18	3.5	4