

A Division of the American Federation of Teachers

RANDI WEINGARTEN, President
ANTONIA CORTESE, Secretary-Treasurer
LORRETTA JOHNSON, Executive Vice President

Higher Education Program and Policy Council
Chair: SANDRA SCHROEDER, AFT Vice President, AFT Washington
Vice Chair: DERRYN MOTEN, Alabama State University Faculty-Staff Alliance
BARBARA BOWEN, AFT Vice President, Professional Staff Congress, City University of New York
PHILLIP SMITH, AFT Vice President, United University Professions, State University of New York

TOM AUXTER, United Faculty of Florida
JASON BLANK, Rhode Island College Chapter/AFT
ELAINE BOBROVE, United Adjunct Faculty of New Jersey
ORA JAMES BOUEY, United University Professions
JOHN BRAXTON, Faculty and Staff Federation of the Community College of Philadelphia
PERRY BUCKLEY, Cook County College Teachers Union
CHARLES CLARKE, Monroe Community College Faculty Association
ADRIENNE EATON, Rutgers Council of AAUP Chapters
FRANK ESPINOZA, San Jose/Evergreen Faculty Association
CARL FRIEDLANDER, California Federation of Teachers Community College Council
JAMES GRIFFITH, University of Massachusetts Faculty Federation
BONNIE HALLORAN, Lecturers' Employee Organization, University of Michigan
MARTIN HITTELMAN, California Federation of Teachers
ARTHUR HOCHNER, Temple Association of University Professionals
KRISTEN INTEMANN, Associated Faculty of Montana State, Bozeman
BRYAN KENNEDY, AFT-Wisconsin
HEIDI LAWSON, Graduate Employees' Organization, University of Illinois at Chicago
JOHN MCDONALD, Henry Ford Community College Federation of Teachers
GREG MULCAHY, Minnesota State College Faculty
MARK RICHARD, United Faculty of Miami-Dade College
DAVID RIVES, AFT Oregon
JULIETTE ROMANO, United College Employees of the Fashion Institute of Technology
ELLEN SCHULER MAUK, Faculty Association at Suffolk Community College
ELINOR SULLIVAN, University Professionals of Illinois
DONNA SWANSON, Central New Mexico Employees Union
NICHOLAS YOVNELLO, Council of New Jersey State College Locals

Higher Education Diversity Working Group
DERRYN MOTEN, Chair, Alabama State University Faculty-Staff Alliance
ORA JAMES BOUEY, United University Professions
PERRY BUCKLEY, Cook County College Teachers Union
FRANK ESPINOZA, San Jose/Evergreen Faculty Association
KRISTEN INTEMANN, Associated Faculty of Montana State, Bozeman
JOHN PITTMAN, Professional Staff Congress
SANDRA SCHROEDER, AFT Vice President, AFT Washington

[^0]
"These recommendations for action are based on the fantastic work many of our affiliates already
have undertaken
to create a more just and equitable workplace."

## Foreword

THE AMERICAN FEDERATION OF TEACHERS has a long and rich history of supporting affirmative action and equity for a diverse faculty corps. In 2008, the AFT took another important step in this direction by enacting a resolution that not only reaffirmed the organization's commitment to diversity in higher education, but also called for an examination of impediments to faculty and staff diversity; an analysis of best practices to achieve diversity; and the provision of assistance to locals in implementing programs and procedures to ensure that all highly qualified people are welcomed into the academy.

The year 2010 saw the AFT issue its first report in furtherance of the resolution, Promoting Racial and Ethnic Diversity in the Faculty: What Higher Education Unions Can Do. What you are now holding is the second report, which focuses on gender diversity. Like the first report, this document outlines the barriers that women face with regard to educational pathways, hiring and retention, and it makes suggestions about what local unions can do to increase gender diversity at their individual institutions. These recommendations for action are based on the fantastic work many of our affiliates already have undertaken to create a more just and equitable workplace.

Many people worked very hard to make this report possible. The AFT Higher Education staff put in numerous hours of research and writing to produce it, and they were aided by invaluable feedback from the members of an AFT Higher Education working group on diversity, and from members of the AFT Higher Education program and policy council. Finally, of course, we are indebted to the many activists at our locals who have worked tirelessly to make visible and confront the challenges women in the higher education workforce face today.

## SANDRA Schroeder

Chair, AFT Higher Education Program and Policy Council

## Statement of Purpose

IN SPRING 2011, AS THIS IS WRITTEN, public higher education is under attack as never before. Public institutions have been targeted for drastic cuts in the past, but now the attacks are aimed at the very core of the educational enterprise and at the basic rights of college faculty and staff. This, in turn, has the potential of placing at risk the practices and policies that have arisen on campuses around the country to diversify the racial, ethnic and gender composition of the faculty corps. Diversity-related efforts do cost money, of course, and periodic budget crises can create situations in which institutions may sacrifice faculty diversity efforts on the altar of financial exigency.

By undertaking a series of publications on diversity issues, the AFT is saying that it is always time to take action to create and maintain a diverse faculty and staff corps. Even in times of budgetary crisis (which seem to be all the time, these days) it is critical to ensure that the people who staff our institutions of higher education reflect the great diversity of our students and of the nation as a whole.

The following report focuses on educational pathways for women and on recruitment and retention of women faculty in higher education. The report pays particular attention to issues relevant to ensuring that the academy is a welcoming place for women and an environment in which they can succeed in their chosen fields. In that regard, the report offers specific recommendations for making positive change, including:

- Correcting inequities in compensation;
- Expanding family-friendly policies on campus;
- Clarifying and providing more flexibility in tenure and promotion policies;
- Fostering opportunities for women in math and science; and
- Ensuring that women have a voice in their workplace and in their union.


## Women's Growing Role in the Faculty

During the 19th century, women began to trickle into American colleges and universities that had long been the bastion of affluent white men. Following World War II, the trickle started to turn into what would eventually become a flood. This began because (1) women were empowered by their large-scale entry into the labor force during the war; (2) the development of a growing grass-roots feminist
movement and (3) the increasing prosperity of American households. During the 1960s, the movement for gender diversity gained further momentum as women asserted themselves in the great social movements of that decade.

Part of the response to this activism was the advent of gender (as well as the various ethnic) studies programs and women's centers. This was coupled with a surge in campus-based programs to open opportunities in admissions and hiring to women and members of underrepresented ethnic groups.

Feminist activists in 1967 prevailed upon President Lyndon B. Johnson to include gender discrimination in a number of executive orders, which clarified the Civil Rights Act of 1964. The most notable of these was Executive Order 11246, which required employers receiving federal contracts to end discrimination in hiring. Feminist activists in higher education used this executive order to begin documenting and redressing inequities in hiring, promotion, and pay at colleges and universities around the United States. This growing activism, in turn, led the U.S. House of Representatives to pass Title IX of the Education Act of 1972, the text of which reads:

No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance. ...

Title IX, as well as other "affirmative action" programs were, and remain, a critical factor in promoting diversity on campus. A key moment in setting the parameters of affirmative action was the 1978 U.S. Supreme Court case Regents of the University of California v. Bakke, which barred quotas but also resulted in the acceptance of affirmative action as a reasonable approach to diversify the student body. While the Bakke decision dealt specifically with racial and ethnic discrimination as addressed in Title VI of the Civil Rights Act of 1964, subsequent court decisions applied similar interpretations of law to Title IX. ${ }^{1}$ Despite (or perhaps because of) the impact of these decisions, affirmative action continues to generate controversy in the political system. In addition to diversifying the academy, Title IX has been instrumental in helping to address income disparities and inequality in hiring and promotion, but only in instances where the discrimination can be proved to be intentional. Courts have held that Title IX cannot be used to address so-called disparate impact discrimination., ${ }^{2}$

As this report will demonstrate, one result of all these efforts has been a continuing increase in the gender diversity of the student population. The ranks of underrepresented groups-especially the ranks of women-in the college and university faculty have also diversified. However, it must be emphasized that progress in faculty diversity has not kept pace with student diversity; while women make up more than half of the student population, their representation among the faculty-especially full-time faculty-lags behind. Leaders of AFT Higher Education unions are deeply concerned, both as educators and as unionists, about the pace of efforts to increase gender diversity in higher education.

As educators, we know that if students are to succeed academically, they need role models and mentors with whom they can identify. Scholarship has consistently shown that campus diversity has both direct and indirect positive effects on the education outcomes and experiences of students. ${ }^{3}$ The campus is a more welcoming place when the diversity of the student population also is reflected by the faculty, where underrepresented students can learn from and be mentored by faculty and staff who share common experiences.

As scholars, we know that female faculty members have made incredible strides in extending the breadth of research in traditional disciplines, especially in the social sciences, and are forging ahead in the development of new fields of inquiry. While women's and gender studies (as well as the multiplicity of ethnic studies programs) and scholars are criticized as being "non-canonical" and contributing to the fragmentation of the academy, most of the scholars in these fields understand their work as re-evaluating traditional academic disciplines and creating a new, more inclusive canon of scholarship. The research interests of women faculty have helped provide a much deeper and more nuanced knowledge of our world-knowledge that has in turn created alternative political perspectives.

Finally, faculty diversity is a key issue to our members as unionists. We see the process of effectuating a diverse faculty and staff as an essential element in achieving a greater measure of economic and social justice in America. We recognize that diversity efforts, even on the part of faculty members and the union, have been insufficient. We need to correct this. Another serious concern from a union perspective is that a disproportionate number of female faculty members continue to be hired as contingent rather than as full-time, tenure-track faculty, which often marginalizes the contributions they can make to their institutions, and provides them with grossly inadequate pay and working conditions.

The American Federation of Teachers recognizes the importance of advancing educational diversity, and the union is proud of its efforts to support opportunities for women and other underrepresented groups throughout the education system. Delegates to AFT conventions have passed numerous policy resolutions in support of diversity, including the recent resolutions that set this series of reports in motion. The union has backed up our pro-diversity policies by putting into the field substantial sums of money, expertise and activism to defend diversity in the face of hostile legal and political challenges.

The union is a key player in support of state and federal legislation to expand college diversity, such as Title IX, the federal student aid programs, the TRIO programs and the McNair graduate education program. The union also has supported loan forgiveness for students who become higher education faculty members. To obtain the information needed to accurately follow the progress of diversity efforts, the AFT is working for the establishment of a stronger federal student data system. Most important, the AFT is campaigning around the country to create more full-time faculty positions to bring full financial and professional equity to contingent faculty members through the union's Faculty and College Excellence (FACE) program.

At the same time, we believe there is much more we can do-on our own campuses, in our own unions-to promote gender diversity. This report explores a broad array of obstacles that impede hiring and retaining female faculty. It also highlights a number of activities already under way to break down these obstacles and presents a long list of actions that unions may be able to undertake on their own campuses.

We recognize that most local unions may not be in a position to act on all or even most of these recommendations at once. But we believe it is high time to get more coordinated and ambitious plans started, and we hope that the ideas presented here will prompt a new wave of activity on the local level.

## Barriers to Diversity

## Overview

Despite gains in educational attainment, the representation of women among the ranks of college and university faculty remains a complicated picture notable for the underrepresentation of women in certain academic fields and the persistence of the gender gap in compensation. Although 51 percent of all doctorates awarded now go to women, ${ }^{4}$ they still comprise significantly less than half of the instructional workforce. In 2003, women made up 38.3 percent of the full-time instructional staff ${ }^{5}$ and 48 percent of the part-time academic workforce. ${ }^{6}$ Within the ranks of the fulltime academic workforce in 2007, only 15.5 percent of the women had achieved the rank of full professor, compared with 31.2 percent of the men. ${ }^{7}$ On average, a male faculty member in 2009-10 earned $\$ 87,206$ while his female colleague earned only $\$ 70,600 .{ }^{8}$ Women made up 47.3 percent of entry-level faculty (that is, assistant professors) in 2007. ${ }^{9}$

FIG 1. Female STEM Faculty in Four-Year Educational Institutions By Discipline and Tenure Status, 2006


[^1]To be sure, the faculty has become increasingly inclusive of women over the last 60 years as a result of more and more women entering-and demanding their space within-the academy, as well as college officials making efforts to recruit and retain female faculty. But this growing inclusiveness has not been uniform across all sectors of higher education. In the relatively flat hierarchy within public community colleges, for example, the faculty is split evenly between the genders, and the gap between the average compensation of male and female professors is relatively narrow. On the other hand, the gender gaps in representation and compensation at doctoral institutions are much wider than at other types of institutions. Looking at the evidence, it is clear that the number of educational pathways has opened to a notable extent but there remains much work to be done in hiring and retaining a representative number of qualified women in secure faculty positions.

Further variation can be seen at the disciplinary level: In 2003, women made up the majority ( 58.3 percent) of the full-time instructional corps in the education field, but only 9.5 percent of the full-time staff in engineering. ${ }^{10}$ It is in the science, technology, engineering and mathematics (STEM) disciplines where the absence of women is so glaringly noticeable. In 2006, women made up between 7.2 and 22.2 percent of the tenured faculty in the fields of engineering; the physical sciences; computer and information sciences; and biological, agricultural and environmental sciences (they made up between 17 and 42 percent of the nontenured faculty). ${ }^{11}$

Finally, women of color ${ }^{12}$ face a double challenge within the academy. As was detailed in AFT's previous report, Promoting Racial and Ethnic Diversity in the Faculty: What Higher Education Unions Can Do, people of color are underrepresented in the faculty ranks and face a number of barriers in reaching the tenure track. Women of color not only face the challenges imposed by virtue of their gender, but also those that arise by virtue of their racial and ethnic background-in 2007, this population held less than 8 percent of all faculty positions. ${ }^{13}$

The challenge of increasing gender diversity of faculty (much like the challenge of increasing racial and ethnic diversity, as addressed in our previous report) lies with the opening of the educational pathways that women follow into the academyparticularly in the fields where women are especially underrepresented, such as the STEM fields. As more women gain access to these education opportunities, it becomes necessary to evaluate and enhance institutional practices around the hiring and retention of female faculty in order to address the continuing gaps in representation and compensation, especially given the growing pool of qualified female candidates. Additionally, the workplace culture of higher education needs to be re-examined for practices, both individual and structural, that have a negative effect on the ability of women to pursue and progress in their chosen careers.

In addition to background information about the educational pathway, hiring and retention in the context of diversity, the end of this report includes a series of recommendations and activities that local higher education unions can consider to promote diversity on your campuses.

## Barriers to Gender Equity in Academe

This report addresses three major barriers to gender diversity: (1) barriers in the educational pathways that lead to becoming a member of the faculty, (2) barriers in the faculty hiring process, and (3) barriers to the retention of faculty members. Each will be examined in turn.

## Barriers in Educational Pathways

In this section, three specific barriers to educational pathways will be examined:

- The challenges faced by women in STEM fields;
- The underrepresentation of women in professional schools;
- The additional barriers faced by women of color; and
- Sexual harassment and campus climate.

As has been previously defined, the "educational pathway" is the progression from the start of a person's education, from prekindergarten or kindergarten, on through elementary, middle and high school, to undergraduate education and on through graduate education-in other words, the typical route a person follows to become a faculty member.

In some very important ways, the educational pathway for women into the academy has never been more open. As was mentioned earlier, women now receive more than half of the doctorates awarded. In the early 1990s, the number of bachelor's degrees earned by women surpassed those earned by men, ${ }^{14}$ a gap that has subsequently widened. Across the board, women have made dramatic increases in degree attainment.

FIG 2. Percentage of 25- to 29-year-olds with a bachelor's degree or higher, by gender: March 1980-2003


## Challenges to Women in STEM fields

However, these increases are not shared across disciplines-the percentage of women graduating with degrees in the STEM fields remained remarkably static from 1980 to 2000 . Only 1 percent of women earned a degree in mathematics in 1980-81, and that percentage dropped to 0.8 percent in 2000-01. In engineering, the percentage of women earning a degree increased from 1.7 percent in 1980-81 to 1.8 percent in 2000-01. ${ }^{15}$ Although the exact reason for this stasis is not clear, the numbers certainly suggest that these and other STEM fields have barely managed to keep pace in attracting the growing number of women pursuing higher education degrees.

While the percentage of women earning degrees in STEM fields has remained static, the percentage of STEM degrees earned by women has actually grown. In 2006, women accounted for 59.8 percent of the bachelor's degrees awarded in the biological and agricultural sciences and 51.8 percent of those in chemistry, up from 31.2 percent and 22.5 percent respectively in 1976. Despite the growth in the percentage of women earning bachelor's degrees, in most STEM fields, women are still in the minority: In 2006, they earned 44.9 percent of the bachelor's degrees in mathematics; 41.2 percent in earth, atmospheric and ocean sciences; 20.7 percent in physics; 19.5 percent in engineering; and 20.5 percent in computer and information sciences. ${ }^{16}$

Once the leap is made to the graduate level, the number of degrees awarded to women in STEM fields drops even more, notwithstanding the growth of women in the field over the last 40 years. In 2006, women earned 47.9 percent of the doctorates in the biological and agricultural sciences, 34.3 percent of those in chemistry, and 16.6 percent in physics. ${ }^{17}$

FIG 3. Bachelor's degrees earned by women in selected fields, 1966-2006


[^2]FIG 4. Doctorates earned by women in selected STEM fields, 1966-2006


SOURCE: National Science Foundation, Division of Science Resources Statistics, 2008, Science and engineering degrees: 1966-2006 (Detailed Statistical Tables) (NSF: 08-321) (Arlington, VA), Table 25, Author's analysis of Tables 34, 35, 38, \& 39

Part of the explanation for the gender disparities found in the STEM fields can be directly linked to persistent cultural tropes that circumscribe how women-and especially young girls—perceive themselves with regard to academics. ${ }^{18}$ Young girls are still affected by negative stereotypes concerning their ability to do mathematics, which also affect their aspirations to pursue science and engineering as fields of study. Oftentimes, these stereotypes become internalized self-limitations. Research has also demonstrated that young women often self-assess their math and science skills much lower than their male counterparts' self-assessments, in spite of similar levels of achievement. ${ }^{19}$

The key to overcoming these cultural stereotypes seems to lie within the classroom environment. In environments where it is made clear that academic achievement in mathematics and the sciences is equally obtainable for both girls and boys, differences in performance and in self-assessment disappear. A 1999 article based on an experiment conducted at the University of Michigan found that women's performance on the math section on the Graduate Record Exam improved vis-àvis their male peers if the test-takers were told there were no gender differences in test performance (as opposed to those who were told that men perform better than women on these tests). ${ }^{20}$ However, the lack of gender diversity among the faculty in STEM fields seems to be a self-perpetuating limitation on efforts to increase female participation in these disciplines. ${ }^{21}$

## Underrepresentation of Women in Professional Schools

Women continue to make inroads into many professional schools, but when they arrive there for their education, the faculty charged with teaching them is not necessarily reflective of this student population. In 2005-06, women made up slightly less than half of all law students. ${ }^{22}$ During that same time period, women made up
only 36 percent of the law school faculty. Only 26 percent of full professors were women, and only 19 percent of law school deans were women. Meanwhile, women were overrepresented among the ranks of contract law school faculty and among lecturers and instructors. ${ }^{23}$

A similar dynamic is evident in looking at medical schools. In 2008-09, women comprised slightly less than half of all medical school students, ${ }^{24}$ being taught by a tenure-line faculty that was only 41 percent female-and only 18 percent of full professors were women. ${ }^{25}$ Likewise, only 18 percent of the dentistry faculty were women, and none were full professors. Women were slightly more represented among the veterinary science faculty, with 46 percent of the faculty being female, including 25 percent of the full professors. ${ }^{26}$ In medical school positions, women comprised almost half of the assistant deans, but were underrepresented elsewhere in the administrative structure-despite an increase of 140 percent from 1998 to 2008, only 12 percent of deans and department chairs were women. ${ }^{27}$

Finally, the same pattern asserts itself in business schools. Half of the new doctorates in business are awarded to women, but only 36.7 percent of assistant professors and only 17 percent of full professors are women. ${ }^{28}$ Only 16 percent of business school deans are women. ${ }^{29}$

These professional schools present a sharp contrast to fields that have historically been considered more "feminine." For example, almost 70 percent of higher education credential librarians are women, ${ }^{30}$ as are almost 80 percent of those enrolled in master's of library and information science programs. ${ }^{31}$

## Additional Barriers for Minority and Low-Income Women

Particular attention must be paid to women from disadvantaged backgrounds, because their life circumstances often complicate the educational challenges they already confront by virtue of their gender. Women of color face a dual discrimination in which their racial and ethnic backgrounds compound the difficulties arising from their gender. African-American and Hispanic women have higher than average high school dropout numbers ${ }^{32}$ and lower than average high school completion numbers, ${ }^{33}$ even if these numbers have been trending downward. ${ }^{34}$ Despite these challenges, women of color are still more likely than their male counterparts to receive an associate's ${ }^{35}$ or bachelor's ${ }^{36}$ degree.

Women also are more likely than men to experience one or more factors that put them at risk for not completing their higher education. In 2000-01, more than 60 percent of low-income ${ }^{37}$ students were women, and almost 70 percent of single parents were women. ${ }^{38}$ Women were far more likely than men to cite a change in family status and conflicts at home or personal problems as reasons for leaving postsecondary education, which is indicative of the cultural family-related burdens placed on women that may affect their education. They were also more likely to cite other financial reasons as a reason for leaving.

## Sexual Harassment and Campus Climate

Despite a significant amount of attention paid to the problem of sexual harassment
on college campuses, it continues to occur and to have an impact on the ability of women to succeed in higher education. The American Association of University Women found that 62 percent of female college students reported being sexually harassed on campus. ${ }^{39}$ Seven percent of students (both male and female) reported being harassed by a faculty member. ${ }^{40}$ As a consequence of sexual harassment, 16 percent of female victims reported finding it hard to study or pay attention in class, 9 percent dropped or skipped classes, and 27 percent avoided particular buildings or places on campus. ${ }^{41}$

## Barriers in the Faculty Hiring Process

As women make the transition from graduate or professional schools into the faculty, they face a number of challenges in the hiring process. These barriers include:

- Inequities in compensation and the persistent "wage gap";
- Inadequate family-friendly policies;
- Lack of standard and transparent processes;
- Structural issues brought on by the academic staffing crisis; and
- Lack of respect for research on women and minorities.


## Inequitable Compensation and Wage Gaps

Studies have consistently shown a persistent gap in compensation for men and women in the academy. This gap has persisted even though women often work longer hours and participate in more professional activities than their male colleagues. A survey of life sciences faculty in 50 universities found that women were paid on average $\$ 13,226$ less than men, despite reporting greater workloads. ${ }^{42}$ The average salary for a female assistant professor in 2009-10 was $\$ 62,070$, compared with $\$ 66,718$ for her male colleague. The disparity is even more dramatic at the rank of full professor, where women earn on average $\$ 99,780$ to men's $\$ 113,556$. ${ }^{43}$ These gaps in compensation persist even when researchers control for different types of institutions and different academic disciplines. ${ }^{44}$

Since the 1960s, court battles have been waged to attempt to address and correct gendered wage discrimination, but they have often foundered on technicalities arising from the statutes of limitations and the difficulty of ascertaining when, exactly, the discriminatory compensation began. Legal remedies for wage discrimination have recently been enhanced by the Lilly Ledbetter Fair Pay Act of 2009, which allowed for an extended statute of limitations in which wage discrimination lawsuits can be filed (they now can be filed for 180 days after each discriminatory paycheck). That said, gender discrimination (regarding wages or in other areas) remains difficult to prove in court. In Kaplan v. SUNY Geneseo, ${ }^{45}$ even though gender discrimination was cited as the reason for the unfair dismissal of a faculty member, the court found that there was no pattern of discrimination, thus denying the plaintiff any awarded damages and letting the institution off the hook in terms of having to redress institutionalized inequalities.

Female academics often report being caught in a gendered double standard where aggressive negotiations over their hiring packages can cause them to be perceived negatively. The American Association of University Women has documented several
empirical studies that demonstrate the inverse relationship between "likability" and "competence" for women when they take on traditionally "male" working roles. ${ }^{46}$ In negotiations, this inverse relationship puts women at a disadvantage to their male peers when negotiating their initial compensation packages and helps create the initial gender gap in compensation that can persist throughout a woman's entire academic career.

## Lack of Family-Friendly Policies

Institutions that do not incorporate (or properly implement) family-friendly policies may find it hard to attract female job applicants. Due to both the rigors of achieving tenure and the disproportionate burden of child rearing that falls to women, young women entering the academic profession are often faced with a decision to avoid finding a tenure-track position and start a family or to delay starting a family until they have tenure. Hiring committees may also question the commitment of female academics with children (even though this is illegal). Additionally, women with children are almost twice as likely as men to take part-time, nontenured positions so they can attend to the needs of their families. In the STEM fields, women with children were 35 percent less likely to pursue tenure-track positions than men with children. ${ }^{47}$

## Lack of Standard Processes

Many colleges and universities have developed policies and procedures to make sure that the hiring process is equitable, but the simple fact is that these policies are implemented by hiring academic departments in piecemeal, haphazard and inconsistent ways, if at all. Whether the cause is the fact that hiring committees themselves lack diversity or an inadequate understanding of the institution's mission to recruit and hire women, the result is often an inequitable, disorganized hiring process that disproportionately puts women at a disadvantage.

## Academic Staffing Opportunities

Over the last 30 years, state funding for higher education has been drastically reduced. As a consequence, an inversion of the academic labor force has occurred: Almost 75 percent of today's instructional workforce works on a contingent basis. This move to a contingent model of employment for higher education professionals has coincided with the increased numbers of women entering the profession and has affected them disproportionately.

From 1997 to 2007, the number of women in the instructional workforce grew by 48 percent, and in 2007, women comprised 46 percent of all instructional positions. The positions being filled, however, have been primarily nontenure positions. In fact, the share of women in tenure-track positions actually declined 0.4 percent between 1997 and 2007, while the share of women in part-time faculty positions rose by 2.7 percent. Full-time tenure-track faculty who are women comprised 10.3 percent of the instructional labor force in 2007, whereas their male tenure-track colleagues made up 17 percent. Women faculty who were not on the tenure track (excluding graduate employees) made up 26 percent of the total instructional labor force, as opposed to 25.7 percent for their male peers. ${ }^{48}$ Women of color also are far less likely to be on the tenure track than are their male counterparts.

## The Undervaluing of Research on Women and Minorities

Female academics who focus their research on gender and/or ethnic studies may also find themselves at an additional disadvantage in the hiring process. Female applicants with these research foci frequently feel that this particular research is undervalued by traditional academic departments. It has been, as Sandra Harding put it: "ignored, trivialized, or appropriated without the credit which would have been given to a man's work." ${ }^{49}$ Many women find themselves directed toward finding employment in smaller area studies departments (often as a joint appointment with another, more traditional department, often doubling the service commitments of these hires). ${ }^{50}$ These departments increasingly are finding themselves under attack as budget cuts force universities to cut back on course and program offerings.

## Barriers to Retention

Even after attaining a faculty position, women face numerous challenges to success in their chose fields. Reasons for this struggle include:

- Hostile or unwelcoming workplace climates;
- Inadequate family-friendly policies; and
- Difficulties in navigating the tenure track.


## Workplace Climate

Women frequently cite feelings of isolation and marginalization in their academic departments. A report issued by the University of California-Los Angeles equity committee found that female faculty (compared with their male counterparts) at UCLA:

- were less satisfied with their jobs;
- rated their work environment as less collegial;
- viewed the evaluation process as less fair;
- felt less informed about academic advancement and resource negotiation;
- rated the distribution of resources as less than equitable; and
- felt that power was concentrated in the hands of white male faculty. ${ }^{51}$

These findings, consistent with anecdotal reports from other women faculty members at other colleges, indicate a campus climate that leads to female academics feeling disconnected from their workplace. A lower sense of connection and satisfaction on the job is, of course, linked with an inability to retain disaffected workers.

Women in STEM fields also remain subject to implicit biases about their ability to perform well in these disciplines. This leads to a climate where women who choose to enter these fields must be significantly more productive than their male colleagues if they are to advance in their careers. ${ }^{52}$

It also seems that success for a woman in an academic field comes with a cost. Just as women feel constrained in their ability to negotiate aggressively for fear of being viewed negatively, research indicates that women who are deemed "successful" in their jobs are, on average, seen as significantly less likable than their male colleagues and compared with female colleagues whose performance is more ambiguous. ${ }^{53}$

## Lack of Family-Friendly Policies

The impact of the lack of family-friendly policies has already been seen in the hiring process, but it also affects the decisions of female faculty member to stay in their positions, and it affects their prospects for career advancement. Studies have found that, despite conducting research and teaching that is equal to or exceeds the work of men, women-especially married women with children-are more likely to be denied tenure than are their male counterparts. Women (and men, for that matter) are not able to stop the "tenure clock" to deal with the responsibilities that come with having a child:

Certainly the timing of tenure is terrible for women. Today, the average age at which women can expect to receive a Ph.D. is 34 . That puts the five to seven years of racing the tenure clock squarely at the end of the normal reproductive cycle. Those are the "make or break" years for female academics, in terms of both career and childbearing, not to mention the demands of raising young children. Difficult choices must be made. ${ }^{54}$

Inadequate family leave policies also can have an impact on female contingent faculty members. They may find that their prospects for reappointment are diminished if they take a leave to attend to raising children. Women in these positions are often hired with no recourse to sick or personal days that they could use to care for sick family members. Missing work for this reason, then, could diminish their chances for receiving future courses at a given workplace.

## Navigating the Tenure Track

Many of the retention problems facing female faculty members that have been discussed center around issues having to do with tenure. In many ways, the lack of transparency and consistency in what makes a tenure application competitive-the kinds of service, teaching and research records for which tenure committees are looking-and female faculty members' marginalization in social networks where informal conversations about how to navigate the tenure process put women at a disadvantage. As has been previously noted, women are often held to a higher standard in their work, and women whose work is equal to or exceeds that of their male counterparts sometimes find themselves being denied tenure for reasons having nothing to do with their portfolios-most often these tenure denials have happened to women with family responsibilities.

In the early 1990s, University of Michigan political science professor Jill Crystal was denied tenure after demanding her rights under the 1978 Pregnancy Discrimination Act. Crystal had found that the university did not have any maternity policies, instead informing female faculty that they should plan on giving birth during research leave or summer breaks-both are time periods that would affect their ability to do research, and hence have an impact on their tenure cases. Crystal pursued the matter and was allowed a term off for maternity leave, but was subsequently denied tenure, which, in 1996, a court found was in retaliation for asserting her rights. ${ }^{55}$ According to a study conducted by the National Science Foundation, female scientists with children are 27 percent less likely to achieve tenure than their male colleagues with children. ${ }^{56}$ Moreover, even when family-friendly policies exist, faculty members may not know about or take advantage of them. A study of faculty
members at the University of California-Berkeley found that only 25 percent of faculty knew of all four key policies designed to ease the burdens on faculty members with families, and 51 percent of female faculty members stated that they did not take advantage of the policies they did know about for fear that if they did so, it would adversely affect their tenure review. ${ }^{57}$

Women faculty members with children find themselves in a particular bind. As was discussed above, the tenure clock for women (and men) keeps on ticking when a faculty member is home with a young child, and this not only puts additional stress on young faculty members with children, but also puts the progression of their careers in jeopardy.

## Best Practices and Recommendations

## Promoting Gender Diversity among the Faculty

Faculty members and their unions are fortunate to have had many pioneering activists take on gender discrimination over the last several decades, which has left a legacy upon which we can draw. Building on this legacy, the AFT strongly recommends that each AFT Higher Education local make faculty diversity-which includes not only gender, but racial and ethnic diversity-an important part of the union agenda on campus. This can be done by:

- Taking an in-depth look at what is happening on the diversity front on your campus;
- Initiating a discussion with your leaders and membership about possible plans of action, including ways to incorporate diversity activities into the collective bargaining contract; and
- Designating a group of people to coordinate the union's efforts.

This can be accomplished with the following steps:
Inventory. As a first step, we urge local leaders to consider conducting an inventory of your institutions to assess the condition of diversity in the student body, the faculty and the campus administration-campuswide and in individual departments. Take a look at the obstacles to diversity enumerated in this report, and see how your institution stacks up in terms of eliminating the obstacles and creating a positive environment for female faculty.

Leader/Membership Involvement. We encourage you to take your inventory of campus diversity conditions, take the facts to your leaders and members, and initiate probing discussions about the issues raised in the report. Expand that dialogue as widely as you can.

Diversity Committee. To transform analysis and discussion into a concrete program of action, we recommend that each local affiliate establish a standing committee to oversee and coordinate diversity-related activities.

In addition to coordinating the union's work, these committees can serve as the main point of contact in attempts to build coalitions with other stakeholders-preK12 unions, university systems and local community groups, to name a few. Whenever possible, the work of the union diversity committee should be coordinated with any administration diversity committee or activities that may already exist on campus.

The union can, in fact, prompt the administration to create diversity structures at the institution. Joint labor-management diversity committees are another avenue that can be considered as a means toward creating effective and lasting ways to increase diversity for both the student population and faculty ranks.

## Activities To Promote Gender Diversity on Your Campus

What follows are several recommendations and activities about how to remove barriers in hiring, retention and the educational pathways that impede women on their way to academic careers.

## Establishing More Diverse Hiring Practices

Because the responsibility for faculty hiring is so dispersed at academic institutions, taking place primarily at the departmental level, here is a series of suggestions that your local can consider to promote a coordinated institutionwide focus on the outreach to and recruitment of female faculty.

## Activity No. 1:

Encourage the institution to develop and implement a clear diversity mission and strategic plan.
An institutional commitment to gender diversity has been shown to create a more welcoming campus climate by sending the message to faculty, staff and students that employing a diverse faculty is necessary to the institution's success. Local unions can encourage the creation of such missions and plans, and can aid in their implementation. The union could, for example:

- Organize forums/workshops at which leading researchers on women in the workplace present findings to administrators about the benefits of a diverse faculty and staff.
- Facilitate discussion groups that build coalitions of students, faculty and staff around the issue of faculty gender diversity and its effect on student success.
- Promote and reward the success of departments that have made substantial efforts toward increasing the diversity of their faculty as well as their students.
- Encourage the administration to apply to the National Science Foundation for an ADVANCE Grant, which are grants designed to help higher education institutions achieve increased levels of gender diversity in the STEM fields.


## Activity No. 2:

Educate hiring committees about the institutional gender diversity mission and plan, and establish protocols, through collective bargaining whenever possible, for the search and hiring process.

- Develop institutionwide guidelines for candidate evaluation, with the goal of creating equitable faculty searches.
- Mandate gender bias training for all search committee participants that goes beyond the standard equal employment opportunity training. Groups like the American Association of University Women ${ }^{58}$ and the National Women's

Studies Association ${ }^{59}$ have guides for faculty and administrators to deal with the specific challenges to gender equity we have discussed here. In addition, campuses like the University of California ${ }^{60}$ have come up with their own "tool kits" to help make campuses more hospitable to female faculty.

- Create monitoring committees to ensure that faculty search committees continue to conform to standards that promote gender equality in the search process.
- Encourage the formation of more diverse hiring committees that include women, and take steps to mitigate workload issues around teaching and research for those who participate on faculty search committees.
- Work to educate search committee members about the academic value of research in the fields of gender and ethnic studies to reduce the marginalization of academics who are in those fields.
- Consider the policy of appointments for dual-career couples while also considering ways to maintain equitable hiring practices for all.
- Educate hiring committees about existing biases toward job candidates who have families; and ensure that during the hiring process, candidates are made aware of family-friendly policies and other available supports.
- Promote the use of "cluster hiring" to bring in women faculty from diverse populations at one time as a way to increase the number of women on campus while also working to eliminate a climate of isolation. For example, Rutgers University launched an innovative cluster hiring initiative to improve diversity on its faculty. Since 2008, deans and provosts have submitted five-year proposals for faculty diversity cluster hires-groups of three, four or five faculty who would come to Rutgers as a "cluster." These faculty could all be in one department or, more likely, be crossdepartmental hires or in different schools. The proposal must demonstrate how the new hires would strategically increase the diversification of the university's research and teaching.
- Promote recruitment through publications and listservs that target women, and consider other ways to coordinate recruitment among campus departments. For example, the University of California-San Francisco developed a tool that creates an "academic database," which tracks faculty searches and compares the university's performance with national data. In May 2009, UCSF leaders took new steps to increase diversity based on the data developed.


## Activity No. 3:

Establish collective bargaining mechanisms that will ensure equitable compensation for new faculty hires.

- Encourage the adoption of transparent and equitable salary scales.
- Many institutions give academic departments a considerable amount of latitude in offering job candidates or current faculty members compensation packages that go beyond what are in the wage scales. These packages often are justified as responses to competing offers or to reward especially productive faculty members. Whatever the reason, the process by which these offers are made should be made transparent and understandable to all faculty.
- Consider providing confidential negotiation counseling for those considering job offers. Candidates would receive advice on what points of their appointment contract to negotiate and how to undertake these negotiations.


## Activity No. 4:

Take advantage of the national AFT Faculty and College Excellence (FACE) campaign to promote better faculty jobs on campus through political advocacy and collective bargaining.

Specifically, the FACE campaign is designed to increase the number of full-time tenure-track positions and improve the working conditions for contingent faculty, both of which would benefit female faculty members. For more information, locals should visit the FACE website, www.aftface.org.

## Retaining Female Faculty and Navigating the University Culture

Local unions can contribute to the retention of female faculty through labormanagement activities, including collective bargaining, and the union's own governance.

## Activity No. 1:

Promote the inclusion of women in the union.
Such efforts may include:

- Involving female faculty in union events, featuring women speakers at union events, and fostering discussion of diversity and gender-related issues.
- Taking steps to ensure that union executive boards, councils, committees and bargaining teams actively recruit women to serve.
- Ensuring that faculty members with children are able to attend and participate in union activities and leadership. This may include scheduling union events at times when these parents can attend, or having the local provide child care at union functions.
- Creating a diversity committee within the local to address the difficulties that underrepresented groups, including women, face at the institution and within the union.
- Promoting a gender diversity agenda with the other labor organizations to which the local belongs, such as the Central Labor Council and the state AFL-CIO.


## Activity No. 2:

Engage the administration on issues and policies that will help female faculty members succeed. Again, some aspects of this may be supported through collective bargaining and the contract. For example, the union can:

- Create tool kits for department heads (often a temporary and untrained position) to help them advocate for and maintain a climate conducive to gender diversity in academic departments.
- Offer workshops for all new faculty members to introduce them to the union
and show them how the union can support their professional needs.
- Develop formal mentoring programs for new faculty members, such as one-on-one mentoring to counter the culture of isolation that so many new women faculty members face.
- Discuss with administrators and fellow faculty members the problem of excessive service workloads for female faculty.

The expectations imposed on tenure-track faculty should be balanced and limited to what is feasible, in order for them to pursue their research as well as service and committee work. Responsibilities should be varied enough for them to succeed when they are up for tenure review, while also ensuring good and fair working conditions.

- Work with administrators to implement family-friendly policies and services in the workplace. These policies should be made available to faculty members regardless of gender, and all faculty members should be encouraged to utilize them if necessary. These policies may include:
-Adding time to the tenure clock for junior faculty members with young children.
-Creating on-campus programs and facilities that support faculty members with young children. For example, does your campus have on-site day care? Are there comfortable facilities available for mothers who are breastfeeding and/or must pump breast milk?
-Encouraging faculty members to use the family leave policies available to them and working to see that they are not discriminated against for using them.

When these policies are available to and used by all faculty members, it becomes less likely that their utilization can serve as a basis for discrimination in other areas.

- Educate administrators and fellow faculty members on gender bias in the workplace.
- Clarify and make transparent the tenure review process, and support female faculty members in navigating this process.

When junior faculty members are asked to cite reasons for not staying at their institutions, they frequently focus on the idiosyncrasy and mystery surrounding the tenure and promotion process. The union can help. For example, the United Faculty of Miami Dade College provides its members with a series of faculty advancement workshops that include help with writing the self-assessment, applying for continuing contracts, navigating the promotion process and applying for endowed chair positions. Workshops are led by veteran faculty who offer comprehensive step-by-step guidance for new faculty.

## Activity No. 3:

Consider creating a travel fund for faculty with small children to bring a child along to a conference. This fund can be created within the local, or it is something that can be put on the table and bargained over with the institution's administration.

## Diversifying Educational Pathways

As reported in the previous section, achieving faculty diversity, in the end, will require educators to move more students from underrepresented groups, including women, onto educational pathways that lead to academic careers. Women have achieved remarkable gains in the last 30 years, but as we have seen, they are still underrepresented in the growing STEM fields and among the ranks of full-time tenure-track faculty. Moreover, women of color, who face challenges that are compounded, are still woefully underrepresented across the board.

Improving conditions will require significantly more time, attention and interchange among faculty and teachers at all levels. Here are some ideas organized in terms of (1) the preK-12/college connection, (2) the community college/four-year college connection, (3) the undergraduate/graduate school connection, and (4) succeeding in graduate school. We also pay special attention to the STEM fields and opening educational pathways to women of color.

## Strengthening the preK-12/College Connection

Lack of access to a rigorous high school curriculum, along with a lack of knowledge about the admissions process, financial aid and postsecondary education all contribute to low persistence rates.

To address these concerns, we urge local higher education unions to bring some of their members together with colleagues in the colleges' "feeder" preK-12 unions to determine what can be done cooperatively to help elementary, middle and high school students prepare for college and envision higher education careers for themselves-financially, academically and as a way of life.

Whenever possible, both preK-12 and higher education locals might try to incorporate ideas coming out of these discussions into their own collective bargaining agreements so constructive activities can get under way without imposing a completely extracurricular and unrewarded burden on the faculty. Activities suggested during these high school-college faculty discussions might include:

- Forming a corps of college faculty who can work in local high schools to encourage women to pursue college and to become ready for college. In particular, sending in female professors from STEM fields to encourage young women to pursue science and technology careers and mentor them about how to prepare for such a career could have a huge positive impact on getting more women onto the educational pathways for these disciplines.
- Pairing high school counselors with college counselors to brainstorm ways to help young women successfully make the transition to college. These counseling teams can also help students navigate the admissions and financial aid process, something that can be of great importance both to young women
of color and to women who will be first-generation college students.
- Providing opportunities for high school girls to visit college campuses.

Improving female students' K-12 academic achievement and preparation increases their chances of success. Faculty might consider inviting high school girls to participate in summer research projects and encouraging them to sit in on their classes and in their laboratories.

- Conducting periodic meetings between college and high school faculty in the same disciplines to discuss the high school curriculum and the expectations colleges have of entering freshmen.

Among the areas of discussion can be developmental education, as well as aligning high school and college expectations and curricula more closely. High schools located on college campuses, often known as laboratory high schools, could offer a good arena for developing ideas.

- Providing high school girls with union-sponsored financial assistance for college. Several local unions offer scholarships to members' dependents for higher education. Two programs are sponsored by the national AFT:


## Robert G. Porter Scholars Program

Four-year, $\$ 8,000$ postsecondary scholarships are available to AFT members' dependents. Applicants must be graduating high school seniors whose parent or guardian has been an AFT member for at least one year.

## Union Plus Scholarship Program

Sponsored by the Union Plus Education Foundation, the program is open to members of unions participating in any of the Union Plus programs, and their spouses and dependent children. The amount of the award ranges from $\$ 500$ to $\$ 4,000$.

- Connecting with community leaders to create programs to educate parents of young women about the value of and pathways to an affordable college degree. The partnerships can also be used to educate parents and community members about how to combat gender stereotypes and how to encourage young women to enter fields traditionally dominated by men, such as the STEM fields.


## Strengthening the Two-Year/Four-Year College Connection

Higher education unions should consider bringing together faculty at local twoand four-year institutions to help resolve problems of student persistence and articulation between community college and baccalaureate institutions. Articulation standards may or may not be within the control of faculty, but faculty can seek ways to facilitate the transition by aligning program criteria between two- and four-year institutions and facilitating the transfer of credits.

## Strengthening the Undergraduate/Graduate School Connection

Faculty members can help create incentives for their undergraduate students to pursue graduate programs. Considerable amounts of time, money and preparation are necessary for a successful graduate career, as well as some level of understanding that jobs will be available upon completion of the degree. Local higher education
unions can push for contracts supporting mentoring efforts and leadership training to encourage undergraduates to consider a graduate academic career as well as graduate-level professional programs such as dental, medical or law schools. Related activities could include:

- Conducting education fairs that are similar to job fairs. The education fairs should be aimed at informing undergraduate students about pursuing a career in academe and showcasing what kind of positions are available. Faculty members may want to consider having specific education fairs targeted toward women who are interested in pursuing a career in the STEM disciplines.
- Connecting female students with government or private financial incentive programs, including institutional or union programs, that are available to pursue graduate degrees. Faculty should attempt to familiarize themselves with these opportunities and encourage their undergraduate students to pursue them.
- Strengthen mentorship efforts aimed at female undergraduates-especially those in the STEM fields. These mentoring efforts should be integrated into collective bargaining agreements whenever possible. Mentoring ideas will undoubtedly be generated by union diversity committees. Other efforts may involve taking advantage of existing federal and private programs.


## Enhancing the Graduate School Experience

Higher education unions can help improve the inclusiveness of graduate programs by providing female students with the support and resources they need to successfully complete their studies. Faculty and staff mentoring and crossdepartmental communication and collaboration will enhance graduate students' success and persistence.

A common obstacle for faculty involvement in mentoring and retention strategies is a lack of time and resources to support such initiatives. Locals may want to consider pushing for contract language that supports initiatives to:

- Develop and promote interactive faculty-student groups with the theme of cross-departmental collaboration and graduate student success. Graduate research and teaching assistants should be included in these groups.
- Support faculty mentoring activities at the departmental and crossdepartmental levels.
- Identify community partners to support graduate student persistence and success.
- Incorporate family-friendly policies for graduate students with children in order to help them balance family and scholastic obligations.
- Encourage student participation in public and private diversity-related programs.
- Promote other funding opportunities for diversity efforts through the creation of a union-sponsored listserv or e-mail network devoted to diversity.
- Sponsor, in the STEM fields, events that help integrate female graduate students into their departments.
- Encourage the formation of groups for women scholars, either on a disciplinary or cross-disciplinary basis.

Graduate employee unions and their faculty allies should work to incorporate many of the same protections available to faculty members into their own contracts. Today, a growing number of graduate student employees are represented by labor unions, giving them a unique opportunity to bargain equitable labor practices for women into collective bargaining agreements.

## Endnotes

1 Cohen, D.S. (2005). "Title IX: Beyond Equal Protection." Harvard Journal of Law and Gender, v. 28, pp. 222-226.
2 Ibid., p. 223.
3 Examples of these studies include Gottfredson, N.C. et al. (2008). "Does Diversity at Undergraduate Institutions Influence Student Outcomes?" Journal of Diversity in Higher Education, v 1(2), pp. 80-94, available at http://www.apa. org/pubs/journals/features/dhe-1-2-80.pdf and Milem, J.F. (2001). "Increasing Diversity Benefits: How Campus Climate and Teaching Methods Affect Student Outcomes." Pp. 233-249 in Diversity Challenged: Evidence on the Impact of Affirmative Action, Harvard Educational Publishing, available at http://www.eric. ed.gov/PDFS/ED456202.pdf. Further studies on the links between diversity and student outcomes can be found at http://www.diversityweb.org/research_and_ trends/research_evaluation_impact/student_learning_outcomes/index.cfm
4 "Women, minorities continue to grow." November 2010. Women in Higher Education 19(11), pp.3-4.
5 "2004 National Study of Postsecondary Faculty (NSOPF:04) Report on Faculty and Instructional Staff in 2003," p. 10. Available at http://nces.ed.gov/ pubs2005/2005172.pdf
6 lbid., p. 11.
7 http://nces.ed.gov/programs/digest/d09/tables/dt09_250.asp
8 Curtis, J. (2010). No Refuge: 2009-10 Report on the Economic Status of the Profession, p. 21. Available at http://www.aaup.org/NR/rdonlyres/AFB34202-2D42-48B6-9C3B-52EC3D86F605/0/zreport.pdf
9 http://nces.ed.gov/programs/digest/d09/tables/dt09_250.asp
10 "2004 National Study of Postsecondary Faculty (NSOPF:04) Report on Faculty and Instructional Staff in 2003," p. 10. Available at http://nces.ed.gov/ pubs2005/2005172.pdf
11 American Association of University Women. (2010). Why So Few? p. 18. Available at http://www.aauw.org/learn/research/upload/whysofew.pdf
12 We use the term "women of color" to mean women who are African-American, Asian, Native American or Hispanic. Our use of this particular phrase, however, should not imply that the experiences of women in these racial/ethnic categorizations are the same.
13 http://nces.ed.gov/programs/digest/d09/tables/dt09_246.asp
14 "Gender differences in participation and completion of undergraduate education and how they have changed over time," p. V. Available at http://nces.ed.gov/
pubs2005/2005169.pdf

DesRoches, C. \& Zinner, D. (April 2010). "Activities, productivity, and compensation of men and women in the life sciences." Academic Medicine, 85(4), pp. 631-639. Available at http://journals.lww.com/academicmedicine/ Fulltext/2010/04000/Activities,_Productivity,_and_Compensation_of _Men.23.apx
43 Curtis, J. (2010). No Refuge: 2009-10 Report on the Economic Status of the Profession, p. 21. Available at http://www.aaup.org/NR/rdonlyres/AFB34202-2D42-48B6-9C3B-52EC3D86F605/0/zreport.pdf

44 Fairweather, J.S. (1995). "Myths and Realities of Academic Labor Markets." Economics of Education Review, 14(2), pp. 179-192. Available at http://nersp. nerdc.ufl.edu/~lombardi/edudocs/fairweather.pdf.
45 http://reocities.com/Athens/crete/9234/
46 American Association of University Women. (2010). Why So Few?, p. 83-86. Available at http://www.aauw.org/learn/research/upload/whysofew.pdf
47 Ibid.,, p. 24.
48 AFT Higher Education. (2009). American Academic: The State of the Higher Education Workforce 1997-2007, p. 20.
49 Harding, S. (1987). "Introduction: Is There a Feminist Method?" In Feminism and Methodology: Social Science Issues, (Sandra Harding, editor), p. 4. Bloomington, IN: Indiana University Press.
50 National Women's Studies Association. (2006) "Women's Studies Program Administrators Handbook.", available at http://www.nwsa.org/research/ downloads/paddocs/admin/WSHandbook2006.pdf
51 UCLA Gender Equity Committees: Climate Committee Executive Report (April 2003). Academic Climate. Available at http://www.faculty.diversity.ucla.edu/ gendeq/comittees/docs/ExecutiveSummary-Climate.pdf.
52 American Association of University Women. (2010). Why So Few?, p. 24. Available at http://www.aauw.org/learn/research/upload/whysofew.pdf
53 Ibid., p. 84
54 Mason, M.A. (April 22, 2009). "Is Tenure a Trap for Women?" The Chronicle of Higher Educatin. Available at http://chronicle.com/article/ls-Tenure-a-Trap-for-Women-/44814/
55 AAUW (2004). Tenure Denied: Cases of Sex Discrimination in Academia, pp. 2627. Available at http://www.aauw.org/learn/research/upload/TenureDenied.pdf

56 Mason, M.A. (March 17, 2010). "Women, Tenure, and the Law." The Chornicle of Higher Education. Available at http://chronicle.com/article/women-tenurethelaw/64646/
57 Creating a Family Friendly Department: Chairs and Deans Toolkit. Available at http://ucfamilyedge.berkeley.edu/ChairsandDeansToolkitFinal7-07.pdf
58 AAUW Educational Foundation Sexual Harsassment Task Force. (2004). Harassment-Free Hallways: How to Stop Sexual Harassment in School. Available at http://www.aauw.org/learn/research/upload/completeguide.pdf
59 National Women's Studies Association. (2006). "Women's Studies Program Administrators Handbook." available at http://www.nwsa.org/research/ downloads/paddocs/admin/WSHandbook2006.pdf
60 Creating a Family Friendly Department: Chairs and Deans Toolkit. Available at http://ucfamilyedge.berkeley.edu/ChairsandDeansToolkitFinal7-07.pdf

AFT Higher Education Staff
LAWRENCE N. GOLD, AFT Higher Education, Director CRAIG P. SMITH, AFT Higher Education, Deputy Director LINDSAY A. HENCH, AFT Higher Education, Senior Associate CHRISTOPHER GOFF, AFT Higher Education, Associate LISA HANDON, AFT Higher Education, Administrative Assistant KEVIN WASHINGTON, AFT Higher Education, Administrative Assistant

A Union of Professionals
American Federation of Teachers, AFL-CIO
555 New Jersey Ave. N.W.
Washington, DC 20001
202/879-4400
www.aft.org
Item no. 36-11004


[^0]:    © 2011 American Federation of Teachers, AFL-CIO (AFT). Permission is hereby granted to reproduce and distribute copies of this work for nonprofit educational purposes, provided that copies are distributed at or below cost, and that the author, source and copyright notice are included on each copy.

[^1]:    SOURCE: National Science Foundation, Division of Science Resources Statistics, 2009, Characteristics of doctoral scientists and engineers in the United States: 2006 (Detailed Statistical Tables) (NSF 09-317) (Arlington, VA) Author's Analysis of Table 20

[^2]:    SOURCE: National Science Foundation, Division of Science Resources Statistics, 2008, Science and engineering degrees: 1966-2006 (Detailed Statistical Tables) (NSF 08-321) (Arlington, VA), Table 11, Author's analysis of Tables 34, 35, 38 \& 39

