

Final July 30, 2018
Promoting Gender Equity in Higher Education
15 Essential Readings for
BIBLIOGRAPHY 2000-2018

The selected readings provide a glimpse of how researchers have approached the question of gender discrimination and gender equity in higher education. Much of the literature on gender equity has focused on the experiences of and challenges facing white women. However, more recently there has been a modest upsurge of intersectional analysis of gender, ethnicity, and race in higher education as scholars focus on the work and social lives of historically underrepresented women and women of color faculty.

1. ADVANCE Program, University of Michigan. (2004). *Gender in Science and Engineering Report*. Subcommittee on Faculty Recruitment, Retention, and Leadership.

<http://advance.umich.edu/researchreports.php>

From the Gender in Science and Engineering Committee, the Provost and the Vice President for Academic Affairs at the University of Michigan mandated the formation of the Subcommittee on Recruitment, Retention and Leadership. The subcommittee found substantial variation in the amount of documentation that supports policies and procedures at the institutional and unit (school/college) level. One of the key findings was the importance of proactive and vigorous programs for assistance in dual career situations as a critical component of any policy recommendation designed to improve diversity in the science and engineering faculty. Emphasizing interdisciplinarity as one of the distinctive hallmarks of the University's academic landscape could be an important tool to increase the diversity and excellence of the faculty, particularly in science and engineering. The principle recommendations span hiring, the Provosts Faculty Initiative Program (PFIP), dual career policies, structural mentoring mechanisms, pathways to leadership, and faculty retention processes at the University of Michigan.

2. Chesler, N. C. & Chesler, M. A. (2002). Gender-informed mentoring strategies for women engineering scholars: On establishing a caring community. *Journal of engineering education*, 91(1), 49-55.

<https://onlinelibrary.wiley.com/doi/epdf/10.1002/j.2168-9830.2002.tb00672.x>

Improved mentoring of women graduate students and young faculty is one strategy for increasing the presence, retention and advancement of women scholars in engineering. This research explores the sociological literature on interpersonally- and institutionally-generated gender roles and dynamics that make the construction and maintenance of mentoring relationships especially difficult for women in male-dominated fields. Non-traditional strategies including peer-, multiple- and collective mentorships that are likely to be more successful for most women (and many men) are reviewed. Finally, organizational change strategies designed

to provide a more egalitarian and cooperative atmosphere in engineering programs and departments are presented. These ideas represent a social contract for a caring community more supportive of all members' personal and professional growth and success.

3. American Association of University Women. (2015). *Solving the Equation: The Variables for Women's Success in Engineering and Computing*. Washington, DC.

<https://www.aauw.org/research/solving-the-equation/>

The dramatic increase in girls' educational achievements in scientific and mathematical subjects has not been matched by similar increases in the representation of women working as engineers and computing professionals. Just 12 percent of engineers are women, and the number of women in computing has fallen from 35 percent in 1990 to just 26 percent today. The numbers are especially low for Hispanic, African American, and American Indian women. Black women make up 1 percent of the engineering workforce and 3 percent of the computing workforce, while Hispanic women hold just 1 percent of jobs in each field. American Indian and Alaska Native women make up just a fraction of a percent of each workforce. In this report, barriers to increasing the STEM workforce for women including underrepresented women are noted and solutions for increasing representation and persistence are proposed.

4. Johnson, H. L. (2016). Pipelines, pathways, and institutional leadership: An update on the status of women in higher education. *Washington, DC: American Council on Education*.

<http://www.acenet.edu/news-room/Documents/HES-Pipelines-Pathways-and-Institutional-Leadership-2017.pdf>

In the effort to advance women's leadership in higher education, this study exposes the patterns of gender bias. The data is presented in the form of helpful infographics, effectively explicate income disparities and the lack of female representation among the ranks of university presidents. More specifically, the key findings of the report demonstrate that women make a little more than 25% of all faculty and approximately 15% of presidents of doctoral degree granting programs, despite making up half of all college students. In addition, in 2009 female faculty members earned 82% of what male faculty members.

The report includes updated data on women in higher education leadership to a previously published version. However, the data are not disaggregated by race and ethnicity of women leaders.

5. Mason, M. A., Wolfinger, N. H. & Goulden, M. (2013). *Do babies matter?: Gender and family in the ivory tower*. Rutgers University Press.

<https://www.bookdepository.com/Do-Babies-Matter-Mary-Ann-Mason/9780813560809>

This book is the first comprehensive examination of the relationship between family formation and the academic careers of men and women. The new generation of scholars differs in many ways from its predecessor of just a few decades ago. Academia once consisted largely of men in traditional single-earner families. Today, men and women fill the doctoral student ranks in

nearly equal numbers and most will experience both the benefits and challenges of living in dual-income households. However, changes to the structure and culture of academia have not kept pace with young scholars' desires for work-family balance. Individual chapters examine graduate school, how recent PhD recipients get into the academic game, the tenure process, and life after tenure. Concrete strategies are suggested for transforming the university into a family-friendly environment at every career stage.

6. National Academies of Sciences, Engineering, and Medicine. (2018). *Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine*. Washington, D.C.: National Academies Press.

<https://www.nap.edu/catalog/24994/sexual-harassment-of-women-climate-culture-and-consequences-in-academic>

System-wide changes to the culture and climate in higher education are needed to prevent and effectively respond to sexual harassment. There is no evidence that current policies, procedures, and approaches—which often focus on symbolic compliance with the law and on avoiding liability—have resulted in a significant reduction in sexual harassment.

Across all industry sectors, occupations, races, ethnicities, and social classes, sexual harassment undermines women's professional and educational attainment and their mental and physical health. For women faculty in science, engineering, and medicine, the professional outcomes from being sexually harassed include stepping down from leadership opportunities to avoid the perpetrator, leaving their institution, and leaving their field altogether. The cumulative effect of sexual harassment is significant damage to research integrity and a costly loss of talent in academic sciences, engineering, and medicine.

7. National Research Council. (2010). *Gender differences at critical transitions in the careers of science, engineering, and mathematics faculty*. National Academies Press.

<https://www.nap.edu/catalog/12062/gender-differences-at-critical-transitions-in-the-careers-of-science-engineering-and-mathematics-faculty>

This book presents new and surprising findings about career differences between female and male full-time, tenure-track, and tenured faculty in science, engineering, and mathematics at the nation's top research universities. Much of this congressionally mandated book is based on two unique surveys of faculty and departments at major U.S. research universities in six fields: biology, chemistry, civil engineering, electrical engineering, mathematics, and physics. A departmental survey collected information on departmental policies, recent tenure and promotion cases, and recent hires in almost 500 departments and included a stratified, random sample of about 1,800 faculty. Data were collected on demographic characteristics, employment experiences, and the allocation of institutional resources such as laboratory space, professional activities, and scholarly productivity. This book paints a timely picture of the status of female faculty at top universities, clarifies whether male and female faculty have similar opportunities to advance and succeed in academia, challenges some commonly held views, and poses several questions still in need of answers.

8. Ong, M., Wright, C., Espinosa, L., & Orfield, G. (2011). Inside the double bind: A synthesis of empirical research on undergraduate and graduate women of color in science, technology, engineering, and mathematics. *Harvard Educational Review*, 81(2), 172-209.

<http://hepg.org/her-home/issues/harvard-educational-review-volume-81-number-2/herarticle/a-synthesis-of-empirical-research-on-undergraduate>

The current underrepresentation of women of color in STEM fields represents an unconscionable underutilization of our nation's human capital and raises concerns of equity in the U.S. educational and employment systems. The authors refute the pervasive myth that underrepresented minority women are less interested in pursuing STEM fields and present a complex portrait of the myriad factors that influence the undergraduate and graduate experiences of women of color in STEM fields. Synthesis of 116 works of nearly forty years of scholarship on the postsecondary educational experiences of women of color in science, technology, engineering, and mathematics (STEM) provides insight into the factors that influence the retention, persistence, and achievement of women of color in STEM fields. The policy implications of their findings and identification of gaps in the literature provide a knowledge base for educators, policy makers, and researchers to continue the mission of advancing the status of women of color in STEM.

9. Spalter-Roth, R., & Van Vooren, N. (2012). Mothers in pursuit of ideal academic careers. *American Sociological Association*.

<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.303.9775&rep=rep1&type=pdf>

Authors use “data from their PhD-10 survey to investigate whether gender and parental status affected the likelihood of obtaining an ideal versus an alternative career during the first 10 years post-PhD. The new brief follows recent research that examines racial and ethnic differences in obtaining “ideal” versus “alternative” careers. Findings: Women sociologists with children are equally likely to have “ideal” careers as men with children and childless men. Mothers are seven times as likely to have ideal careers as fathers, childless men, childless women, when provided with departmental resources and have attended prestigious graduate schools. Mothers are more likely than fathers to use work/family policies.”

10. Turner, C. S. V., & González, J. C. (2011). Faculty women of color: The critical nexus of race and gender. *Journal of Diversity in Higher Education*, 4(4), 199.

<http://psycnet.apa.org/buy/2011-17452-001>

This article examines the experiences of faculty women of color at predominately White public research extensive universities. In the wake of legal challenges to affirmative action, the study questions were, “What are the lived experiences of faculty women of color in predominately

White institutions?” and “What are the implications of legal challenges to affirmative action, such as Gratz and Grutter, for faculty women of color and their institutions?” Focus groups were conducted with 51 faculty women of color from a wide range of disciplines, geographic regions and ranks to further understand their experiences, feelings, and reactions in light of the affirmative action cases. One major finding is that faculty women of color across three disciplinary areas STEM, Social, Behavioral, and Economic Sciences [SBE], and Humanities/Arts) experience a knowledge gap regarding the impact of public policies on their everyday lives. Faculty women of color, along with experiencing the typically documented conditions of tokenism, also report that communication about diversity initiatives and resources on their own campuses was extremely uneven and idiosyncratic.

11. Sims-Boykin, S. D., Zambrana, R. E., Williams, K. P., Salas-Lopez, D., Sheppard, V., & Headley, A. J. (2003). Mentoring underrepresented minority female medical school faculty: momentum to increase retention and promotion. *J Assoc Acad Minor Phys*, 14(1), 15-18.

Underrepresented minority (URM) groups constitute only 3% of United States medical school faculty. Significant barriers remain to the advancement of URM faculty members at academic medical institutions. Mentoring is a viable way to improve the academic productivity and ultimate promotion of URM faculty. This report describes important lessons learned about mentoring from the unique perspective of five URM women, and systematically chronicles these women’s perspectives of mentoring. Several common elements emerged as being necessary for an effective mentoring relationship: trust, understanding of the minority experience, positive regard/validation, and availability of time. The respondents noted that when present these elements facilitated mentoring. These findings can be utilized at all academic institutions to improve the quality of mentoring, which should, in turn, increase the retention, persistence and promotion of URM faculty.

12. Williams, J., Phillips, K. W., & Hall, E. V. (2014). *Double jeopardy?: Gender bias against women of color in science*. Hastings College of the Law, Center for Work Life Law.

<http://www.uchastings.edu/news/articles/2015/01/double-jeopardy-report.pdf>

The current body of knowledge on gender bias has focused almost exclusively on the experiences of White women. This report examines the experiences of 60 women scientists: Black (26), Latino (32), Native American (2) Asian (45), mixed race, and other women. Four major patterns of gender bias are discussed: prove it again; tightrope of gender characteristics; the maternal wall defined as motherhood decisions; and tug of war (conflict among women). The report describes how each of the patterns are differently experienced by each racial/ethnic group. The report concludes that we know little about how racial bias is experienced in science. Moreover an important set of effective practices are included (in their own words) "to help the well-intentioned people working to retain women in STEM to forge new, more inclusive conversations in which women's varied experiences feel honored.....".

13. Wong, E. Y., Bigby, J., Kleinpeter, M., Mitchell, J., Camacho, D., Dan, A. & Sarto, G. (2001). Promoting the advancement of minority women faculty in academic medicine: the National Centers of Excellence in Women's Health. *Journal of women's health & gender-based medicine*, 10(6), 541-550.

<https://www.liebertpub.com/doi/pdfplus/10.1089/15246090152543120>

Minority physicians provide care in a manner that promotes patient satisfaction and meets the needs of an increasingly diverse U.S. population. Minority medical school faculty bring diverse perspectives to research and teach cross-cultural care. However, men and women of color remain underrepresented among medical school faculty, particularly in the higher ranks. National data show that although the numbers of women in medicine have increased, minority representation remains essentially static. Studying minority women faculty as a group may help to improve our understanding of barriers to diversification. Six National Centers of Excellence in Women's Health used a variety of approaches in addressing the needs of this group. Recommendations for other academic institutions include development of key diversity indicators with national benchmarks, creation of guidelines for mentoring and faculty development programs, and support for career development opportunities.

14. Work Life Law. (2013). *Effective policies and programs for retention and advancement of women in academia*. San Francisco: UC Hastings College of the Law - The Center for Work Life Law.

<https://worklifelaw.org/publication/effective-policies-and-programs-for-retention-and-advancement-of-women-in-academia/>

This comprehensive report draws on a significant body of knowledge on women and work with the basic premise that women are an undervalued and underutilized asset in higher education. It provides effective family-responsive policies and programs to further facilitate gender equity in recruiting, retaining, and advancing women faculty. The examples of existing institutional policies and practices address parental leave, dual career support, mentoring and networking programs, childcare, alternative career tracks, bias in the hiring and promotion processes, benefit programs, and other pertinent topics. Their website contains a rich set of resources for women in a variety of fields including higher education.

15. Xie, Y. & Shauman, K. (2003). *Women in science: Career processes and outcomes*. Cambridge, Mass.: Harvard University Press.

<http://www.hup.harvard.edu/catalog.php?isbn=9780674018594>

Women in Science provides a systematic account of how U.S. youth are selected into and out of science education in early life, and how social forces affect career outcomes later in the science labor market. While attesting to the progress of women in science, the book reveals continuing gender differences in mathematics and science education and in the progress and outcomes of scientists' careers. The authors explore the extent and causes of gender differences in undergraduate and graduate science education, in scientists' geographic mobility, in research

productivity, in promotion rates and earnings, and in the experience of immigrant scientists. They conclude that the gender gap in parenting responsibilities is a critical barrier to the further advancement of women in science. This earlier report did not include historically underrepresented women.