ADVANCE-Purdue Research Note #9

Current research on gender and STEM in academia April 1, 2012



NSF Stop-the-Clock Policies in the News

The Next Step for Female Scientists. Mason, Mary Ann. *The Chronicle of Higher Education*, 2/13/12. http://chronicle.com/article/The-Next-Step-for-Female/130717/

Research Articles

1. Distancing as a Gendered Barrier: Understanding Women Scientists' Gender Practices. (2011). Rhoton, Laura A. *Gender and Society* 25 (6): 696-716.

"This article focuses...on how individual women scientists' gender practices potentially sustain gender barriers. Findings based on interview data from thirty women in academic STEM fields reveal that women draw on gendered expectations and norms within their disciplines to discursively distance themselves from other women they perceive as having deviated from such norms and expectations. The types of distancing in which these respondents engage reflect and support gendered structures, cultures, and practices that ultimately disadvantage women and obscure gender inequality. I conclude by discussing the implications of women scientists' distancing practices for efforts to change the gendered cultures of STEM disciplines." (p. 696)

2. Diversifying the Faculty Across Gender Lines: Do Trustees and Administrators Matter? (2012). Ehrenberg, Ronald G., et al. *Economics of Education Review* 31 (1): 9-18. http://www.sciencedirect.com/science/article/pii/S0272775711001701

"Our paper focuses on the role that the gender composition of the leaders of American colleges and universities...play in influencing the rate at which academic institutions diversify their faculty across gender lines. Our analyses make use of institutional level panel data that we have collected for a large sample of American academic institutions. We find that other factors held constant, including our estimate of the "expected" share of new hires that should be female, that institutions with female presidents and provosts, as well as those with a greater share of female trustees, increase their share of female faculty at a more rapid rate. The magnitudes of the effects of these leaders are larger at smaller institutions...A critical share of female trustees must be reached before the gender composition of the board matters." (p. 9)

3. Faculty women of color: The critical nexus of race and gender. (2011). Turner, Caroline, et al. *Journal of Diversity in Higher Education* 4 (4): 199-211.

"This article examines the experiences of faculty women of color at predominately White public research extensive universities...This study's central 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?"...Critical Race Theory (CRT) and Critical Race Feminism (CRF) serve as frameworks to guide our analysis. One main finding is that faculty women of color...experience a knowledge gap on 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." (p. 199)

4. Effectively recruiting faculty of color at highly selective institutions: A school of education case **study.** (2011). Gasman, Marybeth, Jessica Kim, & Thai-Huy Nguyen. *Journal of Diversity in Higher Education* **4** (4): 212-222.

"In this study, we use the case study methodology to examine the faculty recruiting and hiring practices within a school of education at a highly selective private research university. The research question was, what are the practices and policies at the school of education that either promote or detract from recruiting and hiring of faculty of color?" (p. 212)

5. The Glass Obstacle Course: Informal and Formal Barriers For Women Ph.D. Students in STEM Fields. (2011). De Welde, Kris & Sandra L. Laursen. *International Journal of Gender, Science, and Technology* 3 (3): 571-595. http://genderandset.open.ac.uk/index.php/genderandset/article/view/205/363

"A new metaphor is proposed for understanding the experiences of women pursuing Ph.D.s in...(STEM) fields, based on a study of students in a U.S. Ph.D. program. The notion of the glass obstacle course captures the unequal gendered processes at work in women's graduate careers, including exclusion from the Old Boys' Club, outright sexism, a lack of women role models, and difficult work-life choices....In-depth interviews elucidate the gendered and influential aspects of these barriers and the agentic strategies our respondents utilized to navigate them. In this way, career pathways for women scientists and engineers are shaped by ideological and structural constraints, informal and formal biases, and active resistance or accommodation to them." (p. 571)

Research from other ADVANCE Programs

1. Evolution of a Faculty Mentoring Program for STEM Women. (2011). Nemiro, Jill, et al. *International Journal of Gender, Science, and Technology* 3 (3): 643-658. http://genderandset.open.ac.uk/index.php/genderandset/article/view/215/366

"ADVANCE at CPP [Cal Poly Pomona] developed a mentoring program for STEM female faculty...This case study describes the development of the CPP ADVANCE mentoring program...The challenges faced in the development of the mentoring program, and the lessons gained from these challenges are shared." (p. 643)

2. Survival Analysis of Faculty Retention in Science and Engineering by Gender. (2012). Kaminski, Deborah, et al. 2012. *Science* 335: 864-866.

"2966 faculty hired in science and engineering since 1990 at 14 United States universities were tracked from time of hire to time of departure by using publicly available catalogs and bulletins...Of all those who enter as assistant professors, 64.2% were promoted to associate professor at the same institution. Overall, men and women are retained and promoted at the same rate. In mathematics, however, faculty leave significantly earlier than other disciplines, and women leave significantly sooner than men." (p. 864)