

ADVANCE-Purdue Research Note #4

Current research on gender and STEM in academia

December 1, 2010

ADVANCE PURDUE

CENTER FOR FACULTY SUCCESS

Upcoming Event

Event: Conference on 'Women's Health: Science, Technology and Society.'

Location: Brooklyn, New York

Date: April 2, 2011

Theses: "This exciting one day interdisciplinary conference will feature panels on a myriad of perspectives on women's health. Health Care Professionals, Scientists, Educators and Public Policy Professionals are encouraged to present and attend!"

Deadline for abstract/proposal submission: January 31, 2011

Details:

<http://www.stfranciscollege.edu/newsDetail.aspx?Channel=%2fChannels%2fAdmissions%2fAdmissions+Content&WorkflowItemID=dba>

Publications

1) *Title:* Women in Engineering: Ecole Polytechnique Massacre, Women in Computing, Women in Science, Women in the Workforce

Edited by: Lambert M. Surhone, Miriam T. Timpledon, and Susan F. Marseken

Publication year: 2010

Publisher: Betascript Publishing, Beau Bassin, Mauritius

ISBN (paper back): 978-6131072758

About the publication: This is a 'non-traditional' dissemination on women in engineering. The essays are based on top rated WIKIPEDIA articles on the work-life experiences of women engineers. They focus on the facts lower percentages of women graduate students in engineering, from 1995 to 2004 the percentages of women receiving PhD in engineering has increased by 6% only, the U.S. workforce continues to display underrepresentation of women engineers as compared to men engineers, and the heart breaking Ecole Polytechnique Massacre in Montreal, Canada where women were mass murdered because they were engineering students.

2) *Title:* International Perspectives on Gender and Mathematics Education: Cognition, Equity and Society

Edited by: Helen J. Forgasz, Joanne Rossie Becker, Kyeong-Hwa Lee, and Olof Bjorg Steinhorsdottir

Publication year: 2010

Publisher: Information Age Publishinh Inc, Charlotte, NC

ISBN (paper back): 978-1-61735-041-2

About the publication: This book is based on the gender issues in mathematics in the 21st century. The book is organized into four sections: (a) history, policy, and non-school factors – this sections traces the gender relations in both national and international schools since their early days, (2) national and international focus – this section discusses the gender issues as experienced by mathematics students in the U.S as well as other nations, (3) high achievers – this section presents the gendered experiences of high achieving students, and (4) tertiary students – this section portrays the gender issues as encountered by the students in tertiary mathematical institutions across nations.

Research Paper

- 1) Banerjee, Dina and Alice Pawley. 2010. "Institutional Ethnography: A Research Method to Study Work-Life Experiences of Women Faculty Members in STEM Disciplines." Presented in *The ASEE Annual Conference*, Louisville, KY
The objective of this paper is to present institutional ethnography as an effective research method to study the work-life experiences of women and minority faculty members of STEM disciplines. Data are collected in terms of promotion and tenure policy documents from different STEM colleges of a Midwestern university. Analyses of the data are based on discourse analyses. Findings suggest that institutional ethnography is indeed a powerful method to explore the work-life experiences of women and minority STEM faculty members. Additionally, inconsistencies in the structures and contents of the policies may make work-lives of women and minority faculty members more challenging as compared to men and white faculties in STEM disciplines.
- 2) Madera, Juan M, Michelle R. Hebl, and Randi C. Martin. 2009. "Gender and Letters of Recommendation for Academia: Agentic and Communal Differences." *Journal of Applied Psychology*. 94(6) 1591-1599
Using 2 theories based on the concept of social role of sex differences, the authors examine differences in the agentic and communal natures in letters of reference for women and men applying for academic positions and whether or not those differences impact their recruitment in academia. The study is based on content analysis of 624 letters of recommendation submitted for 194 applicants for 8 junior faculty positions at an American research institute. Results suggest that (1) that women are described as more communal and less agentic than men, and (2) that communal characteristics negatively impact hiring decisions in academia. These results are important because letters of recommendation still continue to be considered significantly as selection tools in academia.

Gender and STEM News

- 1) **Doing 'Dual Career' Right.** September 1, 2010. *Inside Higher Ed News*.
"Just about any discussion of academic hiring these days, after the natural focus on the tight market, tends to come around to the issue of "dual career" hires or "partner accommodations." Most colleges say that they take the issue seriously and work hard to find positions for the partners of those being recruited. But what's the right way to do so? The American Association of University Professors today is releasing guidance that suggests some ways for colleges to improve how they handle the hiring of faculty members who have partners who also want jobs. The guidance, prepared by the association's Committee on Women in the Academic Profession, generally called on colleges to be more explicit about their procedures, to be sure faculty members play a key role in the development and execution of policies, and to make sure that efforts to help academic couples don't come at the expense of adjuncts." For details:
<http://www.insidehighered.com/news/2010/09/01/dual>
- 2) **Parenthood Gaps and Premiums.** August 16, 2010. *Inside Higher Ed News*.
"Why are some disciplines more successful than others at attracting female faculty members and having them rise through the ranks? After decades of discussion of gender equity in the professoriate, increasing attention is going to the phenomenon that disciplinary patterns differ -- both in attracting a critical mass of women and in their satisfaction levels. Research presented this weekend at the annual meeting of the American Sociological Association explores some of those differences, including patterns in becoming (or not becoming) parents, and the impact that different combinations of parenthood and marital status have on academic careers. In many of the comparisons in two research papers presented here, men (or certain kinds of men) have clear advantages, but they are not uniform and many men say they are also facing significant issues related to work-family balance." For details:
<http://www.insidehighered.com/news/2010/08/16/gender>