Cynthia D. Anderson, Dept. of Sociology & Anthropology
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NSF funded research grant to study *Academic Career Success in Science and Engineering-Related Fields for Female Faculty at Public Two-Year Institutions*

Collaborative effort involving three colleges within Ohio University

Two year, empirical mixed–methods research study using existing survey data from the National Study of Postsecondary Faculty (NSOPF) and data from interviews with women at nine CCs in Ohio and four other states.
Mixed Methods Design

Quantitative Data Analysis + Qualitative Data Analysis

Data Analysis Integrated at Interpretation Phase
Figure 5. Estimated number of students enrolled in each state’s community colleges, by state: Fall 2005

NOTE: The total public community college enrollment for Florida excludes students enrolled at Dade County College because the college was recently reclassified in IPEDS as a public 4-year institution by virtue of its offering bachelor’s degrees beginning in 2006. Dade County College historically has been among the nation’s largest community colleges; in 2006, it enrolled over 51,000 students. The District of Columbia has no community colleges.

Concern about the participation, status, and advancement of women in academic science and engineering is rooted in two issues: provision of human resources and social equity (Fox, 2008).

In today’s climate of economic downturn it is vitally important to explore how CC contribute to developing STEM talent.

Providing women STEM faculty members in CC chances for career advancement is a matter of national importance.
Important to consider the lens we are looking at these issues through: Academic culture and climate and institutional structures are vastly different at Community Colleges than at 4-year institutions.

Women face challenges and gender related obstacles in breaking through the “glass ceiling” in order to achieve promotion and rank in CC.

Perform stereotypically feminine gender roles: “glue work” keeping things running, advise disproportionate numbers of students, etc.
The numbers are different! The percentage of female faculty, administrators, and presidents is higher in CC than in 4-year institutions. Townsend and Twombly (2007) suggest that the representation of women in CC may be more accidental than intentional.

The issues these women face are both similar and different than in four-year institutions.

What about disciplinary differences? STEM specifically!
### Representation of faculty in STEM-related and Non-STEM fields

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Two-year institutions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STEM-related</td>
<td>52.3</td>
<td>47.7</td>
</tr>
<tr>
<td>Non-STEM/Other</td>
<td>49.7</td>
<td>50.3</td>
</tr>
<tr>
<td><strong>Four-year institutions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STEM-related</td>
<td>65.7</td>
<td>34.3</td>
</tr>
<tr>
<td>Non-STEM/Other</td>
<td>55.6</td>
<td>44.4</td>
</tr>
</tbody>
</table>

Gender by Institution highest degree awarded, Principal field of teaching, NSOPF:88
SOURCE: 2004 National Study of Postsecondary Faculty (NSOPF:04)
Research Questions

- What role do community colleges play in advancing women in STEM?
- How does the relative gender equity in occupational composition, salary, and promotion impact the experiences of women STEM faculty in community colleges?
  - CCs as “gendered organizations”
- What forces push and pull women scientists to work at community colleges?
N = 29 women STEM faculty
Mean Age: 56
Race: 90% white
Education:
   20% Doctorate
   60% Masters (MS / MEd)
   7% Bachelors

Employment Status:
   80% Full-time
   13% Adjuncts
Mean Years Employed: 11
   Range 2-28

Discipline
   33% Science
   20% Technology
   17% Engineering
   30% Math
Qualitative Analysis: Emerging Themes

- Satisfaction and Support
- Conscious Choice
  - Push / Pull Factors
- Balancing Personal and Professional Life
Our analysis suggests community colleges offer a positive workplace climate for women.

- Majority of women enjoy working at community colleges.
- While research demands are less than in 4 year institutions, demand for skilled teaching to diverse students appears to be higher.
Conscious Choice

- “Pushes” away from original career paths
  - Burnout

- “Pulls” by external forces
  - Mentors
  - Family
  - Vision of Community Colleges
Balance: Personal and Professional

- Stereotype: Community Colleges make it easier to raise a family
  - Devalues mission of CCs
  - Misrepresents work load of faculty

- Most respondents felt work demands at community colleges are just as rigorous as those found at four-year institutions
  - Significant amounts of service work
Many women in our sample return to teach in communities in which they grew up.
- Built-in support network
  - Extended family

Several had attended the CC in which they end up working
- Sense of giving back to community
- Commitment to community college vision
Implications and Conclusions

- Understudied Population
- Very Satisfied, Role Models, and Mentors
- Increasing College Graduation Rates—A National Priority
- Current Economic Conditions are leading to Increased Attention on the Role of Public Two-Year Institutions.
- Opportunities for Enhancing Female Participation in STEM?
This presentation and other reports are available at:

www.cehs.ohio.edu/c4he

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