A “Small Wins” Approach to Institutional Transformation

ADVANCE Auburn: SEM Transformation Through “Small Wins”

National Science Foundation ADVANCE PAID Grant
Persistence of Gender Inequities in STEM

- Academia, particularly science and engineering disciplines, remain inhospitable to the representation and advancement and inclusion of women (Bilimoria, Joy & Liang., 2008; Stewart, Malley, & LaVocque-Manty, 2007; Valian, 1999; 2004).

- Systematic, historical and widespread inequities persist at every stage of the academic pipeline: hiring, tenure, promotion and leadership. (National Academies’ Report: Beyond Bias and Barriers, 2007)

- The NSF ADVANCE Program was designed to fund programs focused on institutional transformation that would enhance participation and advancement of women in science and engineering (LaVacque-Manty, 2007—interview with Alice Hogan)
Achieving Institutional Transformation

- Identify and break down the barriers that inhibit recruitment, advancement, and retention of women faculty
- Address issues of evaluation bias, accumulation of disadvantage, minority status, gender schemas
- Academic workplaces must become more inclusive
- Policies and practices must be evaluated and improved
- Chilly climate must become warmer and more welcoming for women
“Small Wins” Approach
(Myerson & Fletcher, 2000)

- Redefinition of a large problem into smaller, more manageable problems
- Creating solutions to each of these problems, producing visible results and progress towards change in the institutional climate
- Incremental changes can impact biases that are entrenched in the system
- Greater likelihood that these changes become a part of the institutional culture
“Small Wins” Approach Recognizes:

- Barriers to success are not always obvious but oftentimes subtle, unintentional, and invisible.
- These barriers adversely affect all of the faculty within STEM colleges, not only those most obviously identified.
- The power to define problems and make changes rests with the faculty themselves.
- A “small wins” approach is an economically feasible method for achieving change.
Focus of ADVANCE Auburn PAID Project

Identify initiatives that have the highest benefit to cost ratio for transforming STEM disciplines, based on information from NSF ADVANCE programs

Develop a “small wins” cost/benefits model for how organizations can facilitate gender equity through the use of small wins
Goals of ADVANCE Auburn PAID Project

- Collect information from ADVANCE institutions about their focus, initiatives that were implemented, effectiveness of initiatives, time and personnel investment, and short-term and long-term costs of these initiatives.

- Identify initiatives that have proven to be cost effective and beneficial, and determine the costs/benefits ratio of “small wins” practices.

- Capture and disseminate information on “small wins” best practices so that ADVANCE institutions and other educational institutions can benefit from our collective knowledge.
Overview of Procedures

A list of initiatives was compiled
  - “Small wins” initiatives implemented by other ADVANCE institutions were identified from websites and annual grant reports
  - Information from Stewart, Malley, and LaVacque-Manty book on ADVANCE programs was used to identify initiatives

A survey was created with a list of 29 initiatives, and ADVANCE institutions were asked to rank perceived cost/benefits of initiatives at their institutions
Method

- An e-mail message was sent to PI at each institution with NSF ADVANCE grant, describing the goal of the survey and inviting participation, and including the link to the electronic survey.

- Non-response follow up after two weeks, by telephone and e-mail; additional follow-up efforts after that.

- 48 of 70 institutions responded (70%)
**Survey Instrument**

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Perceived COST</th>
<th>Perceived BENEFIT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Very Low Cost</td>
<td>Very Little Benefit</td>
</tr>
<tr>
<td></td>
<td>Low Cost</td>
<td>Low Benefit</td>
</tr>
<tr>
<td></td>
<td>Moderate Cost</td>
<td>Moderate Benefit</td>
</tr>
<tr>
<td></td>
<td>High Cost</td>
<td>High Benefit</td>
</tr>
<tr>
<td>X +/- SD</td>
<td></td>
<td>X +/- SD</td>
</tr>
</tbody>
</table>

29 items
Rate perceived costs and benefits of various initiatives
Open-ended responses included as well
## Results: Initiatives Listed by Ratio of Higher Benefits/Lower Costs

<table>
<thead>
<tr>
<th>Initiative</th>
<th>B/C Ratio</th>
<th>Benefit</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilitating women’s participation in key academic committees</td>
<td>2.24</td>
<td>3.76</td>
<td>1.68</td>
</tr>
<tr>
<td>Publicizing family friendly policies</td>
<td>2.21</td>
<td>3.93</td>
<td>1.78</td>
</tr>
<tr>
<td>Mentoring programs to help women and minority faculty understand the <em>promotion and tenure process</em></td>
<td>1.88</td>
<td>3.98</td>
<td>2.12</td>
</tr>
<tr>
<td>Facilitating the use of family-friendly policies</td>
<td>1.86</td>
<td>4.34</td>
<td>2.33</td>
</tr>
<tr>
<td>Mentoring programs to help women and minority faculty understand the <em>culture of their department</em></td>
<td>1.86</td>
<td>3.94</td>
<td>2.12</td>
</tr>
<tr>
<td>Mentoring programs to help women and minority faculty balance work and personal life</td>
<td>1.76</td>
<td>3.83</td>
<td>2.18</td>
</tr>
<tr>
<td>Informational lecture series/distinguished lectureships by senior women <em>from the university</em></td>
<td>1.75</td>
<td>3.20</td>
<td>1.83</td>
</tr>
<tr>
<td>Mentoring programs to help women and minority faculty understand the <em>culture of their university</em></td>
<td>1.75</td>
<td>3.80</td>
<td>2.18</td>
</tr>
<tr>
<td>Grant writing/publication workshops which provide sample materials</td>
<td>1.72</td>
<td>3.89</td>
<td>2.26</td>
</tr>
<tr>
<td>Mentoring programs to help women and minority faculty understand <em>teaching</em> in this field</td>
<td>1.70</td>
<td>3.65</td>
<td>2.15</td>
</tr>
</tbody>
</table>
## Results: Initiatives Listed by Ratio of Higher Benefits/Lower Costs

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<th>Cost</th>
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</thead>
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<tr>
<td>Training to promotion/tenure committees on potential biases in evaluating women and minority faculty</td>
<td>1.65</td>
<td>3.89</td>
<td>2.35</td>
</tr>
<tr>
<td>Training for search committees on <em>best practices</em> in hiring women and minority faculty</td>
<td>1.64</td>
<td>3.95</td>
<td>2.40</td>
</tr>
<tr>
<td>Mentoring programs to help women and minority faculty understand <em>research</em> in this field</td>
<td>1.63</td>
<td>3.44</td>
<td>2.12</td>
</tr>
<tr>
<td>Training for search committees on <em>potential biases</em> in hiring women and minority faculty</td>
<td>1.61</td>
<td>3.95</td>
<td>2.45</td>
</tr>
<tr>
<td>Advisory councils on women and minorities</td>
<td>1.56</td>
<td>3.39</td>
<td>2.18</td>
</tr>
<tr>
<td>Formalization of exit interviews for departing faculty</td>
<td>1.47</td>
<td>3.65</td>
<td>2.49</td>
</tr>
<tr>
<td>Training to help male faculty relate to, lead and/or mentor female faculty</td>
<td>1.44</td>
<td>3.49</td>
<td>2.42</td>
</tr>
<tr>
<td>Parental leave policies beyond FMLA</td>
<td>1.37</td>
<td>4.30</td>
<td>3.15</td>
</tr>
<tr>
<td>Gender-awareness training for students</td>
<td>1.35</td>
<td>2.87</td>
<td>2.13</td>
</tr>
<tr>
<td>Dedicated electronic resource for Recruitment, Hiring, Evaluation and Promotion</td>
<td>1.28</td>
<td>3.44</td>
<td>2.69</td>
</tr>
</tbody>
</table>
# Results: Initiatives Listed by Ratio of Higher Benefits/Lower Costs

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<th>Benefit</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department-specific seminars or workshops to improve department climate</td>
<td>1.27</td>
<td>3.38</td>
<td>2.66</td>
</tr>
<tr>
<td>Searchable research interest database</td>
<td>1.25</td>
<td>3.20</td>
<td>2.56</td>
</tr>
<tr>
<td>Informational lecture series/distinguished lectureships by senior women <em>from the field</em></td>
<td>1.23</td>
<td>3.49</td>
<td>2.85</td>
</tr>
<tr>
<td>Funding for departmental transformation projects</td>
<td>1.12</td>
<td>3.42</td>
<td>3.06</td>
</tr>
<tr>
<td>Dual career hiring policies/practices at the university level</td>
<td>1.12</td>
<td>4.03</td>
<td>3.61</td>
</tr>
<tr>
<td>Funding for research and career advancement for pre-tenured women and minority faculty</td>
<td>1.11</td>
<td>3.82</td>
<td>3.44</td>
</tr>
<tr>
<td>Dual career hiring policies/practices at the departmental level</td>
<td>1.06</td>
<td>3.53</td>
<td>3.33</td>
</tr>
<tr>
<td>Funding available for targeted recruitment of women and minority faculty</td>
<td>1.06</td>
<td>4.00</td>
<td>3.78</td>
</tr>
<tr>
<td>Funding for restarting research after a hiatus</td>
<td>1.05</td>
<td>3.77</td>
<td>3.58</td>
</tr>
<tr>
<td>Theater techniques to foster communication</td>
<td>1.04</td>
<td>3.49</td>
<td>3.35</td>
</tr>
<tr>
<td>Funded professorships, funding for research and career advancement for tenured women and minority faculty</td>
<td>0.94</td>
<td>3.75</td>
<td>3.97</td>
</tr>
</tbody>
</table>
Highest Benefit to Cost Initiatives

- Facilitating women’s participation in key academic committees is highly beneficial and low cost.
- Mentoring programs are cost effective and highly beneficial, with the most benefit from programs that focus on the following (in rank order):
  - The promotion and tenure process
  - The culture of departments
  - Balancing work and personal life
  - Understanding the culture of the university
  - Understanding teaching in the discipline
  - Understanding research in the field
Addressing family-friendly policies (parental leave, dual-partner hiring, child care, modified duties)

- Publicizing family friendly policies is highly beneficial for faculty.
- Facilitating the use of family-friendly policies is critical and sends a strong message

- Lecture series by senior women at the university

- Implementing grant writing/publication workshops.
Effective Initiatives: Higher Benefit, Higher Cost

- **Work-Life Issues**
  - Parental policies beyond FMLA
  - Dual career hiring policies/practices at the university level

- **Evaluation Bias**
  - Training for promotion/tenure committees on potential biases in evaluating women and minority faculty
  - Training for search committees on best practices in hiring women and minority faculty
  - Training for search committees on potential biases in hiring women and minority faculty
Low Cost Transformations

- The lower-cost, higher impact initiatives overlap with those identified by Harle (2007): mentoring, networking, professional development, tenure and promotion guidance, grant-writing skills.

- Additionally, these results point to the key role of senior women at an institution in decision and policy-making positions and as role models.
The High Cost of Time

- While many effective programs are low-cost in terms of operational expenses, they require much time and dedication.
  - Course buy-outs for grant PI
  - Full-time administrative staff
  - Course buy-outs for other faculty members outside the grant
  - Ongoing commitment to maintaining programs
  - Time investment in mentoring
Adapting, Implementing, and Disseminating Findings

How can institutions utilize these results?

- Identify and understand the problems at an individual institution
- Identify administrative and faculty leaders who are committed to change
- Leadership at departmental and university level is critical for advancing initiatives
- Develop partnerships with other units (Human Resources, Women’s Studies, Women’s Centers)
- Recognition program for senior faculty who are effective and successful in mentoring
Adapting, Implementing, and Disseminating Findings (continued)

- Recognition of the time involved in developing and implementing programs, and the time it will take to see results
- Infrastructure to ensure the ongoing implementation of programs
- Build the case for a combination of the most effective initiatives, both low-cost and higher-cost, in working toward institutional transformation
- Documentation of the impact of programs for faculty development and advancement (e.g., mentoring, grant-writing workshops)
Disseminating Information

- Identify multiple outlets at home institution for disseminating information on institutional transformation gender equity initiatives, e.g., meetings of department heads, deans, faculty senate, and other decision-making groups
- Identify wider audiences, including higher education professional organizations, diversity organizations, professional conferences and associations that focus on faculty development, mentoring and work-life topics; disciplinary conferences that include sessions on leadership development, negotiation skills, effective networking
Challenges and Next Steps: Observations from Survey Participants

- “An organizational transformation project is an incubator for generating ideas and initiatives and testing them for their feasibility, acceptability and sustainability.”

- “Future empirical research should attempt to identify the specific circumstances and structures needed for effective gender equity solutions within a comprehensive change project.”
Challenges and Next Steps: Observations from Survey Participants

- Brown-bag workshops on topics such as T&P guidelines, time management, negotiation, etc, proved very useful and low cost. Large-scale departmental transformation initiative was very costly and did not reap commensurately large benefits. Informal mentoring through networks developed on collaborative seed grants proved extremely productive--moderate cost but large rewards in faculty productivity. Family-leave policy (a caregiving semester with modified duties) proved to be very good PR as well as good for retention, and not as expensive as anticipated.
Challenges and Next Steps: Observations from Survey Participants

- Transitional research funding, while expensive, can have huge benefits, including mentoring. Group mentoring is cheap and can build community.
- Systemic change takes time; critical mass makes a huge difference; women in senior roles changes everything.
References


References (continued)


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