CELEBRATING WOMEN IN SCIENCE & ENGINEERING GRANT PROGRAM, 2002-2005: INTERIM EVALUATION REPORT

Jessica Winchell
WISELI Project Assistant
October 2004

Since 2002, WISELI has sponsored the Celebrating Women in Science & Engineering Grant Program. This program provides funding to departments, centers, or student groups wishing to enhance their own seminar schedules or especially to create new workshops, symposia, lecture series, or similar events in line with the goals of WISELI: to promote participation and advancement of women in science and engineering. Applicants may use funds to invite a prominent woman in science or engineering to present her work at a departmental seminar, invite an officer from a major funding agency to discuss the importance of diversity issues to the agency, create a special one-day symposium to educate a department/center on the issues of women in science and engineering, or similar events.

WISELI expects that invited speakers will promote the advancement of women in science and engineering by contributing to the scientific discourse in various departments, increasing the visibility of women in science and engineering, and serving as role models and potential mentors for women students. The program also encourages departments to routinely include women among its seminar/colloquium speakers.

WISELI solicits applications for the grant program through its website, listservs, e-mail announcements to deans and department chairs in the natural and physical sciences, and through word-of-mouth. Applications are evaluated on the basis of their congruence with WISELI's goals for speakers. Recipients are required to submit evaluations of the effectiveness of their speaker in advancing WISELI's goals.

Awards granted under the program

WISELI awarded a total of 19 grants between 2002 and 2005. Grants were awarded to a number of departments in the biological sciences, physical sciences, and engineering. Grants were also awarded to the Graduate Women in Science student organization and the Committee on Women in the University and the Women Faculty Mentoring Program (jointly). Thus, the awardees spanned various science and engineering fields and various women's organizations. Figure 1 presents this distribution.

Award recipients typically used the WISELI grant to bring prominent women scientists to the UW-Madison campus. Guest speakers participated in a large number and wide variety of events on campus. Most gave research presentations, participated in question and answer sessions, and attended small-group luncheons or dinners. Some also lectured to one or more classes, met with student organizations, held one-on-one meetings with graduate students, faculty members, or post-doctoral students, or attended small-group discussions. The schedule of activities for one Celebrating Women in Science and Engineering Grant speaker is reproduced in Figure 2 to illustrate a typical visit.

A few grant projects took a different shape. One, sponsored by the Graduate Women in Science group, was used to bring a variety of women scientists together on a career panel. The panel addressed various science career options, spoke to issues of family/career interface, and offered advice for navigating graduate school as well as career paths. The Engineering Learning Center

received a Celebrating Women grant to facilitate the visit of the president and CEO of MentorNet, a non-profit organization which pairs aspiring women scientists with established professional women in the field. Finally, the Committee on Women in the University and the Women Faculty Mentoring Program were jointly awarded a grant that enabled them to host a luncheon for UW-Madison faculty and staff with Virginia Valian. This special program included a research presentation and question-and-answer session, both of which focused on Valian's research on gender issues in university settings.[1]

Program 'reach'

The various activities that visitors participated in were intended to reach a variety of audiences on the UW-Madison campus. For example, research presentations were open to a wide range of interested persons, while dinner meetings often encouraged networking between women scientists by limiting attendance to women graduate students and faculty members, or focused on research by including only those with shared research interests. WISELI intended that each of these activities would serve the broad goals of the grant program.

Attendance numbers for sponsored speakers' activities were very good. Lectures drew the largest audience, with an average of 44 people in attendance at each. This indicates that the Celebrating Women grants reached a sizeable campus audience. The make-up of the audiences, which covered a wide-variety of campus populations including men and women undergraduates, graduate students, post-doctoral fellows, and assistant to full professors, indicates that that the grants reached a diverse audience. Together these facts indicate that the program has a wide 'reach.'

There is also evidence that the program had a 'deep' reach, particularly for graduate students and assistant professors. This is illustrated by the large number of one-on-one meetings and small-group research discussions in which speakers engaged (one visitor met individually with 11 faculty and graduate students!) The prevalence of these meetings suggests that the grants not only fostered a significant amount of scientific and professional interaction, but also expanded professional networks for graduate students and assistant professors.

Program evaluation

Each grant recipient was required to complete an evaluation of his or her program. Grant sponsors solicited feedback on their program through questionnaires or informal discussions, and then presented their findings in an evaluation report. The evaluation focused on the impact of the Celebrating Women program on participants and on its contribution to the goal of advancing women in science and engineering.

Evaluation questions focused on three main issues: participant reactions, promotion of women in science and engineering, and best practices.

[1] See also: Benting, Devney and Christine Maidl Pribbenow. November 14, 2003. "Survey of the Virginia Valian Luncheon: Final Report."

On the first issue, WISELI solicited general feedback on the audiences' experiences: what they thought of the speaker, what they learned, and how the program affected their outlook. Responses to this question were overwhelmingly positive, with every evaluation indicating that the audience learned a lot from the speakers and felt that the events were beneficial. Several major themes emerged within these positive responses. Overall audiences felt that the speaker(s) were:

- **Interesting** ("lively discussion," "wonderful insight," engaged audiences asked multiple questions, "among the best seminars [participant had] ever attended")
- **Encouraging** ("extremely open and encouraging," "provided direction for future plans," "helpful guidance," good suggestions on pursuing science & engineering careers)
- **Inspirational** ("supplied them with an example of success," "encouraging thoughts," sparked interest in a new research area or career choice)
- **Informative** ("learned new information," gained insight into a scientific problem, learned about a new technique, "provided a broader perspective")

On the second issue WISELI asked how audiences' experiences and the program overall helped to support women in science and engineering. Responses indicated that invited speakers helped support women in a variety of ways. Several of the most common themes included:

- **Providing a role model** ("clear demonstration that women can and do flourish [in science]", "opened eyes to the relevance/competence of women in [science]," "inspirational," "example of someone [women in engineering] could 'look up to'")
- **Addressing career/family concerns** ("made it seem more possible to manage a career in science and also have a life," "specific advice on becoming successful and tenured while beginning a family," "I think the talk will help me to find a balance")
- **Speaking to climate challenges women face in science and engineering** ("good to hear about how people have dealt with the politics of being female in a mostly male world," "good to get a variety of perspectives on what it's like to be a female academic")
- **Suggesting alternative career paths** (new ideas about non-academic scientific careers, "insight into career options and opportunities")
- **Providing research support** (presentations and small group discussions allowed for research feedback and suggestions, "in depth discussions about everyone's research," "[speaker provided] a good suggestion specific to my research project that I hadn't thought of before")
- **Leadership and networking opportunities** ("helped me understand networking," "great ways to network," encouraged publishing efforts, suggestions on how to maximize mentoring relationships)
- **Mentoring** ("learned a lot about techniques to get where I want to go," "more direction for future plans," "advice useful for any career path in science," "addressed many questions that are important at a transitional phase in a person's career")

Finally, WISELI asked evaluators to provide feedback on what they would do differently if they were to organize the same program again and what WISELI could have done differently to help make their program a success. For the most part, most respondents indicated that they would not change anything in the planning, organization, or implementation of their speaker program. Most noted that they appreciated WISELI's support of the Celebrating Women grants and that they felt WISELI had provided all needed assistance. A few sponsors, both student groups, stated that they would want to advertise their program more effectively if given the chance to plan it again. They also indicated that WISELI could provide "promotional assistance."

Overall, the cumulative evaluation indicates that the Celebrating Women in Science and Engineering Grant Program was positively received, helped to encourage and support the efforts of women scientists and engineers, and was generally well organized and coordinated. In the future, WISELI could improve the effectiveness of the program by providing additional promotional support or guidance. Student group sponsors, who presumably have less experience with organizing events, would particularly benefit from this extra help.

Conclusion

The Celebrating Women in Science and Engineering Grant Program offers funding that enables sponsors in the physical and biological sciences and engineering to bring prominent women speakers to the University of Wisconsin-Madison campus. The program aims to expose students and faculty to accomplished women scientists and engineers and to advance women in science and engineering on the UW campus. While on campus, invited speakers are able to contribute to these aims in a variety of venues, including research talks, small-group discussions, and one-on-one meetings. Evaluations from the first two years of the program illustrate an overwhelmingly positive response to the program and very good success in supporting women in science and engineering.

Figure 1. Distribution of "Celebrating Women" Grants

Biological Sciences	***Engineering***	***Physical Sciences***	***Other***
◦ Comparative Biosciences ◦ Dairy Science ◦ Forest Ecology & Management ◦ Medical Microbiology ◦ Neuroscience ◦ Nutritional Sciences ◦ Population Health Sciences	◦ Biomedical ◦ Chemical & Biological ◦ Civil & Environmental ◦ Engineering Learning Center	◦ Atmospheric & Oceanic Sciences ◦ Chemistry ◦ Computer Sciences ◦ Physics ◦ Statistics ◦ Women in Computer Science	◦ Graduate Women in Science ◦ Committee on Women in the University & the Women Faculty Mentoring Program

Figure 2. Typical Schedule for a "Celebrating Women" Guest Speaker

Guest Speaker: Dr. Kathy Spindler, University of Michigan Medical School
Sponsoring Department: Medical Microbiology & Immunology (MMI)

January 29

3:30 – Arrival
4:15 to 5:00 – Meet with Stacey Schultz-Cherry, Asst. Prof. of MMI
6:30 – Dinner with Stacy Schultz-Cherry & Paul Lambert, Prof. of Oncology

January 30

early – Breakfast with Dr. Bruce Klein, Prof. of Pediatrics, Internal Medicine, and MMI
9:00 to 9:30 – Meet with Robert Striker, Asst. Prof. of Medicine (Infectious Diseases Section) and MMI
9:45 to 10:15 – Meet with Laura Knoll, Asst. Prof. of MMI
10:30 – 11:00 – Meet with Christina Hull, Asst. Prof. of MMI and Biomolecular Chemistry
11:15 – 11:45 – Meet with Donna Paulnock, Prof. of MMI
11:45 – 1:00 – Research presentation to Journal Club in Microbial Pathogenesis and Host Responses (open seminar)
1:00 – 2:30 – Lunch with MMI graduate students and post-doctoral researchers
2:30 – 3:00 – Meet with Curtis Brandt, Prof. of MMI and Ophthalmology & Visual Sciences
3:15 – 3:45 – Meet with Rebecca Montgomery, Asst. Prof. of Biochemistry and Molecular Virology
4:00 – 4:30 – Meet with Paul Ahlquist, Prof. of Plant Pathology, Molecular Virology, and Oncology
4:45 – 5:15 – Meet with the Stacy Schultz-Cherry lab (1 post doc, 3 grad students)

6:30 – Dinner with Laura Knoll, Robert Striker, Rebecca Montgomery, and Stacey Schultz-Cherry

January 31

early – Breakfast with Rick Gourse, Prof. of Bacteriology
10:15 – Departure