CAMPUS SUCCESS STORIES

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Abstract — MentorNet (www.MentorNet.net), the E-Mentoring Network for Women in Engineering and Science, is a nonprofit organization focused on furthering women's progress in scientific and technical fields through the use of a dynamic, technology-supported mentoring program. MentorNet provides the centralized infrastructure for a partnership of colleges and universities, corporations, and government sites, each of which provides funding and reaches out to prospective participants in MentorNet's programs. To assist recruitment of participants for MentorNet's signature One-on-One program, which pairs undergraduate and graduate women studying engineering and related sciences with professionals working in industry and government for year-long, structured e-mentoring relationships, MentorNet provides sample text for email messages to campus, corporate, and government representatives. In addition, brochures and posters are available upon request, and flyers may be downloaded from the web site and printed. Through MentorNet's online Partners Community, campus representatives may access information about the students from their campus who are participating in MentorNet's programs. This paper provides insight into the experiences of campus representatives at Pennsylvania State University and the Massachusetts Institute of Technology.

Index Terms — higher education, mentoring, campus, MentorNet

MENTORNET AT PENN STATE

What does MentorNet offer a campus and its students? What do campus representatives do to recruit students and to position MentorNet strategically on a campus for maximum advantage?

The Pennsylvania State University has been part of MentorNet for four years, soon to be five. The advantages of a strong MentorNet program at Penn State become clear if one knows the geographics of the Penn State system. The main campus, University Park, is located in rural central Pennsylvania, with the closest major metropolitan area in Harrisburg, 90 miles away, the next closest is Pittsburgh at 150 miles. Although Penn State has over 20 satellite campuses throughout the state, the majority of undergraduate students reside at the University Park campus (nearly 40,000).

Given Penn State's rural isolation, the whole idea behind the MentorNet project was extremely appealing. The Penn State Women in the Sciences and Engineering (WISE) Institute was given the opportunity to test the MentorNet waters in 1999, and was very impressed with the program from the beginning. The program allowed our students to be mentored by individuals in some of the best technical, science and engineering corporations, private and government labs, and even foundations – and never had to leave campus!

Recruiting students was another challenge, given the numbers and the 20+ Penn State locations. The WISE Institute has a unique structure that gave us an immediate advantage for contacting students. WISE is funded by the five science and technical colleges, and each college had contacts who would work with us in recruiting students for the program. This collaborative effort included mass mailings, list-serv e-mailings, posting in student areas, and working with WISE student organizations. The MentorNet announcement template was utilized but adjusted to include contact and local information at Penn State. The MentorNet brochure was employed to assist in recruiting Penn State alumni as mentors. Each college was sent a supply for their use. We have utilized MentorNet's web site extensively to monitor the number of student applications and matching information.

In the years since our first recruitment effort, we have added to the recruitment effort by enlisting the assistance of central University offices in providing extended e-mail lists to include female students in the technical majors at our satellite campus locations, thereby reaching a more extended population of students.

What feedback, solicited or otherwise, comes from students participating? Since unsolicited feedback is rare, we have, in the past year, put a major focus on assessment and evaluation. Our first attempt to test the effectiveness of MentorNet at Penn State was to invite participating students to discuss their MentorNet experiences in an on-campus conference called VOICES. Students were encouraged to be open about their likes and dislikes of the program. The majority of the panel members had very positive experiences, but some negative experiences also surfaced.

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A video was made of the panel discussion, and it may be used in the future to facilitate small-group MentorNet discussions sponsored by WISE. It is also planned to have at least monthly e-mail contact with Penn State MentorNet participants. Our hope is to solve problems early in their MentorNet experience, rather than letting issues fester.

What advice would you have for others at campuses considering signing up? What budget supports the MentorNet fees? We believe that the most important advice to give other campuses of major universities considering MentorNet is to have higher administration support for the program, at the dean's level or above. Strong collaborations are needed among technical colleges, schools and/or departments in order to recruit student participants.

The Penn State WISE Institute has been fortunate in its monetary support for this program. The program fees were initially funded by individual contributions from WISE colleges. This was tedious and problematic at best. In the past two years, however, the program fees have been funded either by industry contributions or through the Office of the Vice Provost of Educational Equity.

How much time do you spend as the MentorNet liaison? It should be emphasized that executing the MentorNet Program in the WISE Institute is a team effort. In September, Dr. Nüket Acar, the Director of the WISE Institute, submits the IRB (Institutional Review Board) protocol for human subjects to the Regulatory Compliance Office. Next, she revises the advertisement bulletin for students and alumnae in preparation for mailing. She then contacts every science and technical college representative assigned to her by each undergraduate dean. She contacts these representatives about three times before the MentorNet on-line application deadline is over. She contacts alumni liaison from each college to send the Mentor invitation to their alumni, and sets up meetings with the Women Student Groups to spread the word on the MentorNet program. Dr. Acar answers many questions directly/indirectly sent to her regarding the MentorNet student/alumni applications. If she doesn't have the answer, she contacts MentorNet for the right answer. Sometimes mentors contact her directly if there are concerns about protégées. A considerable amount of time is devoted to the program in September and October. She also reports to each dean how many students signed up from his/her college.

The assistant director, Katie Rung, contacts the central administrative office to retrieve mailing addresses of the sciences and engineering students living on/off campus. She supervises the mass mailing of our ad to approximately 5000+ students, deans, and department heads. She also posts the ad in the WISE List serve and forwards to other list serves posting. Katie also places an ad in the on-campus student newspaper to advertise the program widely. All together, 1-4 hr/day/person is spent during the peak enrollment time.

Have you had any experiences with making suggestions, asking for help, or otherwise turning to MentorNet for assistance, and if so, what kind of response did you get? In a few situations Dr. Acar had to contact MentorNet for more information. In one particular incidence, MentorNet helped her prepare a response for a very delicate situation. MentorNet staff has been extremely responsive. Within a day or few hours someone always gets back to her. This is a real partnership.

How does MentorNet fit with any other existing related programs on campus? In what ways does it complement those programs? The MentorNet program is an excellent complementary program to the already-existing mentoring programs at Penn State. Many of the technical colleges run mentoring programs with their alumni. Many students take advantage of both MentorNet and their college specific mentoring program. The WISE Institute does not have the finances, resources and womanpower to run a program like MentorNet. We consider the MentorNet program as one of our major retention programs. The MentorNet program plays an important role in our mission to retain the women in the sciences and engineering at Penn State.

Are your alumni/ae involved as mentors? If so, with what results? Penn State alumni/ae are involved as mentors. We are aware that 50, 100, and 92 alumni/ae signed up for mentoring students in 2001, 2002, and 2003, respectively. Since we do not have access to alumni statistics from other institutions, we are not in a position to make a comparison. However, we are still pleased that there are caring Penn State alumni out there to mentor students.

What is your vision for the evolution of the MentorNet partnership in the future? Other suggestions, advise, experiences? Some suggestions to consider:
1) Is it possible to provide detailed information on campus representatives for students at the beginning of the mentoring? This way if they have a significant problem with a mentor, representatives would know about it firsthand.
2) A common complaint from our students is that mentors are not responsive. We understand that mentors are extremely busy with their work and lives; however, when they sign up to mentor a student they are also accepting certain responsibilities. Is there any way to improve this situation?
3) Another common complaint is "My mentor and I are not a good match from a personal and/or career point of view." Is re-matching students with another mentor a possibility?
4) We are interested in doing a follow-up with our MentorNet past participants. Where are they now? What degree MentorNet influenced their decision-making in terms of getting a job in industry? How many students ended up in companies that have been actively involved in the MentorNet Program? What would be

the financial implications for the MentorNet conducting a past-participant survey?

5) Access to demographic data on the MentorNet Partners' student participants would be very helpful in terms of diversity.

Our belief is that the future of MentorNet will depend largely on several things: 1) how successful it is in matching students and mentors; 2) its ability to expand its corporate and university/college base; and 3) the ultimate success (graduating and finding employment in science or technical fields) of the students utilizing the program.

Finally, we are hoping that MentorNet will be around long enough to help achieve 50/50 equity for women in the sciences and technology-based workforce and in educational institutions.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

The time that I [Associate Dean of Graduate Students Blanche Staton] spend in my role as campus coordinator is really quite insignificant relative to the benefits. As someone who cares about the quality of the graduate experience in all dimensions (academic, research, professional, and personal) for women students, I have found it gratifying to hear from them that Mentornet has made a positive difference. I remember vividly the palpable excitement and the smile of a young woman whose mentor had graciously offered to review her resume and advise her on how to best present her credentials. In an extremely competitive, male-dominated engineering and science community where women students feel marginalized, to have one person that is consistently accessible, responsive, encouraging and supportive is, for many women students here nothing short of nirvana.

I rely on satisfied students, graduate administrators in academic departments(posters and email announcements), graduate student groups, and the Graduate Students News(in print and on the Graduate Student Council's website) to help communicate MentorNet's program and services to graduate women students.

As we survey the landscape of today's graduate students at MIT, we find that they not only significantly outnumber undergraduates, but they are also more diverse with respect to gender, race, ethnicity, nationality, interests, and expectations of the graduate experience.

More and more, our students lament the absence of opportunities to develop and refine communication skills, to network with individuals and groups outside of their lab, and to be exposed to non-academic careers. Today's MIT graduate student considers connections to the broader world, which we refer to as "opportunities for priceless encounters," to be essential to their preparation to step into roles as global leaders.

Faculty members don't necessarily see it as their role to concern themselves with the student's life outside of the lab. With respect to career advising, historically at MIT, there was little perceived need for such, given that, generally,

students were expected to emulate their advisors by pursuing academic careers.

So, how does Mentornet fit in here? Well, MentorNet's mentors do provide opportunities for priceless encounters. They also serve as models of and provide coaching on the behavior and skills that are needed to be successful as young professionals. Students are in a position to learn from these mentors about a wider range of professional pathways and can benefit from the personal lessons learned through the experiences their mentors share.