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MentorNet: E-Mentoring for Women Students in Engineering and Science

This paper presents the early evaluation conducted for MentorNet's programs [1]. MentorNet was started in the late 1990s by a former associate dean of Engineering at Dartmouth College, who was well aware of the dearth of women who were studying and staying in the engineering fields. In 1997, Carol Muller founded MentorNet with a vision that expanded beyond engineering to include science, technology, engineering, and mathematics (STEM) (Muller, 1997).

MentorNet was one of the first and largest e-mentoring programs; E-mentoring programs were established in the 1990s to support high school and college students by pairing them with professionals, made possible by the expansion of electronic communications (Single & Single, 2005). MentorNet initially paired STEM students, particularly women, with professionals in scientific and technical fields and supported the pairs through an e-mentoring relationship lasting through the academic year. From the beginning, MentorNet incorporated elements of structured mentoring programs that facilitated the establishment and continuance of mentoring relationships (Single & Muller, 2001): training, coaching, and community building/group e-mentoring.

This article presents the evaluation results and insights from three years of data collection and analysis. In each of the three years, the participants ranged from 539 e-mentoring pairs to 2,000 e-mentoring pairs. The response rates hover around 60% for all three years.

The intent of MentorNet's early evaluations was to examine some basic assumptions of e-mentoring. We found that the protégés would be comfortable soliciting advice over email and the mentors would be comfortable providing advice. The participants illustrated their support for the program by stating that over 90% of the participants would recommend MentorNet to a friend or colleague. The protégés reported that participation in MentorNet increased their self-confidence and intent to pursue careers in their fields. What we didn't know was the amount of time required to establish and maintain an e-mentoring relationship. This turned out to be on average 20 minutes per week – regular interactions were more important than lengthy exchanges. Also, personal or lighthearted exchanges were an important part of the successful e-mentoring relationships; these social exchanges kept the lines of communication open for when the protégés needed advice or support.

Muller, C. (1997, November 5-8). *The potential of industrial "E-Mentoring" as a retention strategy for women in science and engineering*. Paper presented at the Annual Frontiers in Education (FIE) Conference, Pittsburgh, PA. Retrieved February 3, 2002 from <http://fairway.ecn.purdue.edu/~fie/fie97/papers/1268.pdf>.

Single, P. B., & Muller, C. B. (2001). When email and mentoring unite: The implementation of a nationwide electronic mentoring program. In L. K. Stromei (Ed.), *Creating mentoring and coaching programs* (pp. 107-122). Alexandria, VA: American Society for Training and Development. Retrieved October 22, 2003 from <http://www.uvm.edu/~pbsingle/pdf/2001Single.pdf>.

Single, P. B., & Single, R. M. (2005). E-mentoring for social equity: Review of research to inform program development. *Mentoring and Tutoring*, 13(2), 301-320. Retrieved on July 17, 2005 from <http://www.uvm.edu/~pbsingle/pdf/2005Single.pdf>.

[1] MentorNet (www.MentorNet.net), headquartered 1997-2005 at San José State University in San José, California, is a nonprofit {501(c)(3)} organization working to further the progress of women and others underrepresented in scientific and technical fields through the use of a dynamic, technology-supported mentoring network, and to advance individuals and society, and enhance engineering and related sciences, by promoting a diversified, expanded and talented global workforce. In partnership with colleges and universities, corporations, government labs and agencies and professional societies, MentorNet is international in scope, serving students all over the world.

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