Making Executive Mentoring Work in IT

Shari Lawrence Pfleeger
RAND Corporation, USA[1]

Norma T. Mertz
University of Tennessee, USA

INTRODUCTION

Although it is a relatively young discipline, information technology has a lack of gender diversity that is similar to many older sciences. For example, the 33rd annual Taulbee survey of computer science graduates indicates only 20% of those enrolling in computer science doctoral programs are women, and only 16.8% of those receive PhDs; these rates have been the same for the last few years (Zweben & Aspray, 2004). Moreover, once women move into computing careers, they can have a difficult time moving up the career ladder. For example, women's advancement in academia has been disappointing: 19% of the computer science faculty in the United States are female, but only 8.6% of full professors and 12.3% of associate professors are women (Zweben & Aspray). Similar figures are reported for women in industry as they hit the glass ceiling (Morrison, White, & van Velsor, 1987), but women in some countries may be catching up. For example, "pay and prospects for women in IT are the best they have ever been" in the United Kingdom: They achieved higher pay increases than men across all sectors for the 8th year running, but are still behind (Mortleman, 2004).

Thus, there is still room for women at the top. According to Corporate Women Directors International (2004), "The glass ceiling in corporate directorships is solidly in place." Indeed, only 7.5% of Fortune Global 200 boards have three or more women serving on them. Similarly, a recent survey sponsored by the UK Department of Trade and Industry and Shell revealed that a third of the boards of British companies still have no females (Cranfield School of Management, 2004).

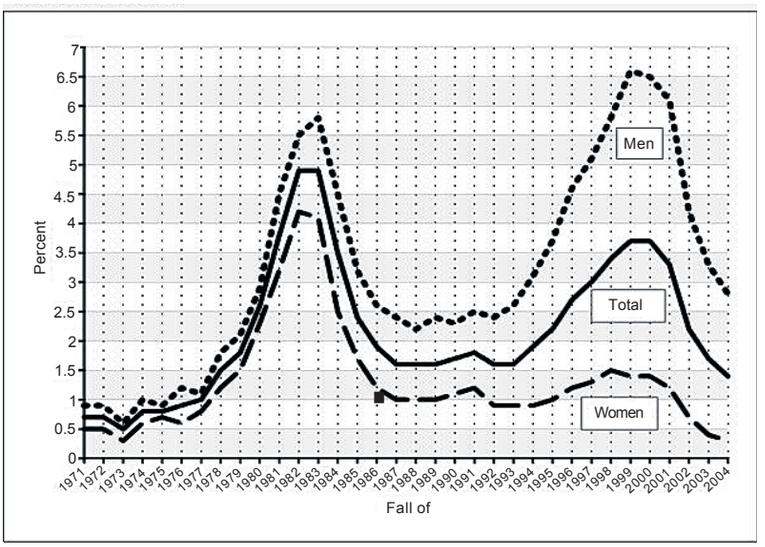
BACKGROUND

A 2000 study sponsored by the American Association of University Women (2000) notes that women comprise only 17% of the high-school students who take advanced-placement exams in computer science and only 28% of those with undergraduate degrees in computer science. Indeed, fewer women are expressing interest over time (see Figure 1). A major problem in attracting and keeping women and minorities in computer science (and other disciplines) is the lack of role models at all levels, and in particular at senior levels. In the early 1990s, we investigated what makes a good role model or mentor.[2]

MENTORING

Mentoring has long been associated with career advancement in business. Indeed, not only does "everyone who makes it 'have' a mentor" (Collins & Scott, 1978), but everyone needs a mentor. Recently, mentoring has become associated with efforts to increase the representation of underrepresented groups, such as women and minorities, in fields such as IT in which their presence at higher levels of such organizations has been notably absent. Professional and institutional calls for addressing the situation, whether responding to law or pressure, have led to creating projects and processes for changing the profile of top leaders and for enhancing the likelihood that women and minorities will advance. For example, the Computing Research Association's Committee on the Status of Women in Research has for 10 years conducted a distributed mentoring project:

Figure 1. Computer science listed as probable major among incoming freshmen



Source: HERI at UCLA

... to increase the number of women entering graduate studies in the fields of computer science and engineering. This highly selective program matches promising undergraduate women with a faculty mentor for a summer research experience at the faculty member's home institution. Students are directly involved in a research project and interact with graduate students and professors on a daily basis. This experience is invaluable for students...increasing their competitiveness as an applicant for graduate admissions and fellowships. (Committee on the Status of Women in Computing Research [CRA-W], 2006)

As organizations consider the underrepresentation problem, they almost invariably institute mentoring projects, pairing entry- and junior-level women and minorities with more senior-level members of the organization, most often the majority of whom are white and male. Despite the programs reported in the literature, and mentoring's ancient lineage, we know relatively little about the nature of such relationships and factors that contribute to its success. This situation is as true of traditional mentoring pairs (naturally occurring between junior and senior white males) as it is of relatively newly developed, arranged cross-gender or cross-race mentoring pairs (Mertz, Welch, & Henderson, 1988, 1990).

As part of a project sponsored by the National Science Foundation and the Association for Computing Machinery to institute and study mentoring for the career advancement of women and minorities in computer science in academia and industry, 15 pairs of mentors and protégés were studied over 18 months. All of the mentors and protégés agreed to participate, and their organizations were committed to the project and to the goal of advancing women and minorities in their organization.

Research Method

Approval was sought from highly placed members of the organizations' administrative or management chains. This buy-in was intended to maximize the likelihood of commitment to the project and to the mentoring process. Three industry organizations and two academic institutions agreed to participate in the project, to commit to mentoring women and minorities in their organizations, and to arrange for mentoring pairs of junior-level, promising women and minorities and senior-level persons. After an intensive workshop that examined the nature and intent of