

2008

PACIFIC NW SOFTWARE
QUALITY
CONFERENCE



COLLABORATIVE
QUALITY

OCTOBER 13-15, 2008

CONFERENCE PAPER EXCERPT
FROM THE

CONFERENCE
PROCEEDINGS

Permission to copy, without fee, all or part of this material, except copyrighted material as noted, is granted provided that the copies are not made or distributed for commercial use.

Getting and Keeping Talent: Women in Software Development

Sharon Buckmaster and Diana Larsen, Futureworks Consulting
sbuckmaster@futureworksconsulting.com/dlarsen@futureworksconsulting.com

Abstract

Companies interested in gaining software quality through collaboration maximize the talents of their female software developers, testers, business analysts and quality assurance staff. Although women's participation is on the rise in many fields, including some of the traditionally male-dominated ones such as accounting and medicine, the percentage and number of women in the IT field is actually declining. The Computing Research Association reports fewer computing degrees awarded to women in 2004 than in 2000. Numerous academic and industry studies have documented that high exit rates for women from the IT arena contributes to an inability to fill roughly 500,000 information technology jobs nationally. With more than 50% of the current U.S. science, technology, and engineering workforce approaching retirement age, organizations must examine strategies to address the workplace conditions that attract capable women and men, and increase the likelihood of their continued employment.

Catalyst, a leading research and advisory organization, works globally with businesses to expand opportunities for women and business. In their 2007 landmark study on Women in IT, Catalyst examined drivers of satisfaction, retention, and advancement among women in technology. Learn to leverage these six drivers to recruit and retain talented women for your software development projects through an interactive discussion exploring which drivers make the most sense for your organization.

About the Authors

Sharon Buckmaster, Ph.D. and Diana Larsen are the principals of Futureworks Consulting, a firm specializing in bringing collaborative processes to organizations that want more productive, resilient workplaces. Both Sharon and Diana have many years of experience developing the generative capacities of individuals and teams that lead to higher quality products and services as well as a higher quality of organizational life.

Diana is known in the software industry for conducting project retrospectives and transitioning groups to Agile processes. She currently chairs the board of the Agile Alliance. Her publications include *Agile Retrospectives*, *Making Good Teams Great*, coauthored with Esther Derby. She consults and speaks internationally.

Sharon's research has focused primarily on women in leadership roles. She is the founder and past president of The Women's Center for Applied Leadership and is affiliated with the Center for Gender in Organizations at Simmons College. Sharon teaches in the Masters-level Applied Information Management Program at the University of Oregon and coaches executives and upper level managers.

The Current Situation for Women in Technology Positions

Many organizations face a serious constraint to growth in their inability to attract and retain sufficient numbers of qualified individuals to fill science, engineering, and technology positions (SET). This dilemma is particularly acute in the case of women. Contrary to popular belief, a large number of female scientists, engineers, and technologists have entered the workplace. However, these women don't stay in the technology field. They are abandoning their professions in droves. Numerous academic and industry studies document high exit rates for women from the IT arena, contributing to the daunting challenge of filling roughly 500,000 information technology jobs nationally (2007p. 121). With more than 50% of the current U.S. SET workforce approaching retirement age, organizations must examine strategies that attract and retain capable men and women.

According to The Athena Factor, a new Harvard Business Review Research Report, the female talent pipeline in science, engineering and technology (SET) for private sector firms is surprisingly deep and rich. Athena Factor survey data show that 41% of highly qualified scientists, engineers, and technologists on the lower rungs of corporate career ladders are female. Unfortunately, the female drop-out rate is huge. Fully 52% of highly qualified females working for SET companies quit their jobs, driven out by hostile work environments and extreme job pressures (Hewitt et al., 2008).

Looking more deeply to understand the reasons women exit the technology field, Catalyst recently completed a major study with 60,000 male and female respondents in global, high-technology organizations. Catalyst studied six areas:

- Companies as places to work
- Supervision and corporate leadership
- Career development and talent management
- Fairness and voice
- Job satisfaction, engagement, and commitment
- Work-life effectiveness

Study Results

For four of these areas, very few statistically significant differences between women and men, or between women in technical roles and women in all other roles emerged from the data. However, two areas showed important differences in perceptions. In comparison with men and with women in positions other than technology, women in technology roles were the **least satisfied with their supervisory relationships**. Tech women rated supervisors lower for three reasons: not giving adequate, timely feedback,

lack of sufficient and effective communication, and lacking responsiveness to suggestions.

In addition, the findings show that women in technology roles were **less satisfied with their companies' approaches to fairness and voice** than *any* of the other comparison groups (Foust-Cummings, Sabattini, & Carter, 2008). For the purposes of this study, Catalyst defined fairness as procedures that result in the perception that management makes fair decisions regardless of a favorable or unfavorable outcome to the individual. Voice means having a say in the decision-making process, often contributing to perceptions of fairness.

Catalyst's study data relates to the findings of other researchers noting that lack of respect poses a significant problem for many women in technology (Allen, Armstrong, Riemenschneider, & Reid, 2006). As Harris noted, "the isolated or single incident isn't the main problem. It's the culture of incidents; a lifetime of small, seemingly insignificant occurrences that create a hostile, even toxic environment" (1995,p. 121).

So What Should We Do?

Improving Supervisory Relationships

When asked, tech women suggested these steps as the most crucial to improving the supervisor-supervisee relationship:

- Communicating openly and directly with staff members
- Providing regular, performance-related feedback
- Providing access to more challenging "stretch" assignments with greater visibility
- Implementing stronger career and goal-planning processes

Enhancing Perceptions of Fairness

Tech women suggested that companies could enhance perceptions of fairness and voice by taking the following steps:

- Advancing and promoting more women
- Ensuring more diverse corporate leadership, particularly at higher levels
- Accepting diverse individual working styles

Successful Organization Initiatives Resulting in Higher Retention Rates for Women in Technology Roles...a few examples

Texas Instruments- reorganized hierarchical structures by creating multilevel, cross-functional teams. Women advanced more quickly because of increased visibility and greater access to developmental assignments.

Hewlett-Packard- organizes worldwide Technical Women's Conferences to showcase female engineers and scientists and to provide career development workshops.

IBM- The "Taking the Stage" program designed to show women how to achieve a strong leadership presence when speaking in any situation. Available to IBM women around the world, the four program components are accessed via intranet by individuals and small groups. Ideally, higher-level IBM females facilitate the groups, thus providing opportunities for role modeling and networking.

In Your Organization...

How can you benefit from this new information?

Determine whether this data rings true for your organization or what you notice in the industry

Talk about "fairness". What are the ingredients that contribute to fairness in technical workplaces? Learn what your female staff members think.

Do the recommendations of the women in this study appear to you to be the most critical issues to address...in the industry, in your organization, in your project team?

What other possibilities for organizational improvement that would result in higher retention rates for talented tech women come to mind?

How could you build a coalition of support to accomplish these goals?

Taking steps to improve the work environment for female staff members will improve your ability to recruit skilled male and female professionals.

References

Allen, M., Armstrong, D., Riemenschneider, C., & Reid, M. (2006). Making Sense of the Barriers Women Face in the Information Technology Workforce. *Sex Roles*, 54(11-12), 831-844.

Foust-Cummings, H., Sabattini, L., & Carter, N. (2008). Women in Technology: Maximizing Talent, Minimizing Barriers.

Harris, D. (1995). Grease the gears of equality. *Personnel Journal*, 74, 120-127.

Hewitt, S., Luce, C. B., Servon, L., Sherbin, L., Shiller, P., Sosnovich, E., et al. (2008). Athena Factor, Reversing the Brain Drain in Science, Engineering, and Technology. *Harvard Business Review Reports*.

Nobel, C. (2007). Why are Women Exiting IT? *Infoworld* (January 29 2007), 34.