Mini Living Lab: Improving Retention and Success for Women in Tech and Diverse Teams Through Redesigning the Critique Process

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ABSTRACT

Gender disparity in high tech is a long-standing challenge. The number of women in tech is lower than 30 years ago; women leave the field 50% more often than men; attrition costs companies money and talent. This SIG addresses the issue of gender and retention by changing key work practices.

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KEYWORDS

Diversity; employment; gender; social and legal issues; organizational culture; critique; ux design

As a maker community critique, giving and receiving feedback on one's work, is a necessary and everyday experience. Yet especially women lose self esteem when criticized. Since HCI professionals are key participants in critique it is a good place to start improving interactions within diverse teams. In this SIG we engage the community in a critical examination and reinvention of the critique process. Using a Mini Living Lab format, participants share experiences of their critique practices, brainstorm improvements, and try them out with a practice problem. The organizers share insights from their Living Lab company-research partnerships addressing gender and retention.

1 WOMEN IN TECH RETENTION PROBLEM

The lack of women in high tech impacts innovation and profitability: Extensive research shows that a diverse and inclusive workforce, especially for complex problems like we have in IT, is associated with greater innovation, creativity, revenue, and profits [1, 2]

But men still vastly outnumber women in high tech [3]. In the US only 26% of the professional computing workforce are women [4]. In the European Union, women represent only 16% (1.2 million) of all technology specialists [5]. A reanalysis by gender, age, and ethnicity suggests that the disparity is even worse when filtered by a finer lens. [3].

On top of this, women are leaving tech at an alarming rate. In the US women leave the field at double the quit rate for men [6]. In the European Union, women who graduated with a degree in IT, only 20% still work in the field at age 30. By age 45, just 9% are left [7].

Research shows that factors such as biases and stereotypes are relevant to why women leave IT; the tech workplace is experienced as male-dominated and men are given preferential treatment [8]. Our own research [9-11] points to the role of feeling valued within a tight-knit team as a critical factor in retention of women.

Last, attrition costs companies money and skill. The resources invested in recruitment and training are in vain. From an economic perspective retention and diverse teams are a critical business investment - conservative estimates based on the percentage of tech employees leaving due to unfairness show costs as high as $16 billion per year for employee replacement [12].

2 POWER OF DIVERSITY

Diversity within a team increases the breadth of its cognitive and behavioral repertoire. This leads – under the right conditions – to an increase in quality and innovation [1]. The power of diverse skills and ideas associated with gender experience thereby enhances the chance that a superior solution will emerge. But when diversity is low, the fundamental design error, designing from personal experience, is more likely [13]. And the needs of unrepresented populations are more likely to be overlooked [14].

A critique process involving a diverse set of people is also critical to bringing multiple perspectives and skills to bear on a product design. Homogeneous reviewers are more likely to agree and reinforce initial intuitions [15]. Alternatively a diverse team helps mitigate against this built in myopia. But navigating interactions between people with different perspectives and skill can be challenging. If women's voices are lost because they remain quiet, are not heard, or leave the field altogether, the opportunity for significant innovation is also lost. A well functioning critique process is central to helping diverse teams succeed.

3 DESIGN CRITIQUE AS A STARTING POINT TO IMPROVE RETENTION

Critique is crucial to design education and design processes, serving as both a tool to provide regular feedback and as an assessment mechanism [16]. But we find that 80% of women lose self esteem when criticized [10]. Yet developing good practices around the critique and feedback process in design has received little attention [17].

Critique is based on evaluation. But evaluation is contingent on many factors and an ample amount of research has shown that women are subjected to gender-biased evaluations, with their work in male gender-typed tasks often devalued [18]. Especially when there is ambiguity about performance quality – as in the case of design or making – cognitive distortions can easily occur [19].

Gender bias in these situation in which women run a risk of being "presumed incompetent" can be mitigated by instituting procedures that reduce the ambiguity in evaluation [20]. By clarifying good practice for critique meetings we can ensure that judgment is based on agreed upon principles, user data, or other external criteria. And by defining rules of engagement for the meeting we can ensure that all voices are heard. This kind of intervention attached to existing practices can nudge institutions and people toward changes that reduce bias. For these reasons we have targeted the critique as a key practice to explore.

4 LIVING LABS AS A WAY TO ADDRESS HIGH TECH'S DIVERSITY PROBLEM

The co-organizers are using Living Lab approaches as a novel setting to change gendered inequalities in organizations, bringing research from gender studies into real-life industry settings [21]. The methods employed are from ethnography, (Participatory) Action Research, User-Centered Design, Participatory Design and Appropriation Studies.

In this SIG we engage the community in a critical examination and reinvention of the critique process. Using a Mini Living Lab format, participants share experiences of their critique practices, brainstorm improvements, and try them out with a practice problem. The organizers start with their insights from working with technology companies on improving the experience of diverse teams by changing practices like the critique. Participants leave with both new awareness and critique techniques to try in their own organizations.

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