

CareerWISE: The Power of You

By Peggy Coulombe

If you are in pursuit of a doctorate in science, technology, engineering, and math (STEM), chances are that somewhere along that rocky doctoral road, you are going to come face-to-face with a pothole. The solution to what academic life brings your way, however, is right in front of you: You – with a little help from CareerWISE.

We all have the power to bend and rebound, but sometimes we are tested by an advisor's excessive criticism, lack of access to mentors and networks, competing family interests, or even limited knowledge of how and when to manage our own attitudes.



So how to help ourselves better cope and overcome our hurdles? Enter Bianca Bernstein, a counseling psychologist and the leader of the team at Arizona State University that has developed CareerWISE (<http://careerwise.asu.edu>, Figure 1), an online resilience training program focused

Figure 1. ASU's new CareerWISE resource provides a fresh approach to retaining women in the science, technology, engineering, and math fields.

Photo is courtesy of Arizona State University.

on the personal and societal aspects of STEM careers.

Created to retain talented women and other minorities in the STEM career paths, CareerWISE offers skills building around four areas of common concern among women in doctoral programs: advisor issues, work-life balance, departmental climate, and unexpected delays and setbacks. The site provides more than 250 content pieces, including 180 HerStories video clips, two to seven minutes in length, taken from interviews with women in STEM who have successfully navigated the academic odyssey.

More than 10,500 individuals from 78 countries accessed the website between its launch on November 2, 2010 and April 2011. Forty-three percent of these visitors were found to return, drawn by the site's confidential, easy-to-access resilience building centered on interpersonal communication and solution-based problem solving, Bernstein reports. A full review of the impact of the CareerWISE approach is outlined in the March 2011 *Journal of Women and Minorities in Science and Engineering* (1).

One user, Jen Glass, soon in possession of a newly minted ASU doctoral degree, believes that the HerStories interviews are the most important and memorable aspect of the site: "Hearing the individual stories of all these successful women was so inspirational and a resource I had not found elsewhere."

"Now, when I have a problem, I am often reminded of these professionals' stories and how they dealt with their challenges," she says.

HerStories range from vignettes on time management, productivity, aging in the workplace, and raising children to satisfaction and creating an environment for the exchange of ideas. One HerStories contributor hoped that her narrative would make exactly this kind of impact: "I was a little hesitant about broadcasting some of my personal information, but in context, I think that if it encourages more women to pursue academic careers, it is worth it."

CareerWISE, Bernstein says, sees women as active agents in a complex environment. "Strengthening a woman's coping skills doesn't imply that the problems she faces are of her making. Rather we hope to expand and reinforce her personal assets to manage parts that are under her control."

One feature that brings personal skills building to the forefront is the Learn Skills area of the website. The Learn Skills category offers more than 40 links to help women in STEM analyze a problem and its context, assess their skills, and build on their strengths.

For example, if you're feeling negative, go to the first choice on the Learn Skills menu at the top of each page: "Understand Yourself." This link takes you to 11 tools to improve your understanding and outcomes based on your own context and personal assessment. The "How You Think" section offers interviews with professors Sandra Houston and Meenakshi Wadhwa (Figure 2), among many others, and tests and tips to help you refine solution-focused thinking and develop optimistic thinking habits.

Additional online resources and support provide quick links to professional networking organizations and resources specific to STEM women, including MentorNet, Association for Women in Science, AAAS's sciencecareers.org, and other resources for women and minorities.

"One of the strengths of CareerWISE is that it is specifically tailored for a STEM audience. The four-step problem-solving method is a critical and familiar strategy for scientists



Figure 2. Dr. Meenakshi Wadhwa, Director of the Center for Meteorite Studies, ASU School of Earth and Space Exploration.

Credit: Kenny Yang.



Figure 3. From left to right, Jennifer Bekki, Robert K. Atkinson, Bianca L. Bernstein, and Caroline Harrison are leading the research of the NSF-funded CareerWise II, a web tool designed to help women persist in STEM doctoral programs. Photo by Suzanne Starr.

and engineers, but we add evidence-based psychology to the mix for addressing personal and interpersonal, rather than technical problems,” Bernstein says.

In the randomized controlled trials just completed, women in STEM doctoral programs who reviewed the CareerWISE site for at least five hours did significantly better on all measures than wait-list controls (1). For Bernstein, that’s the best part: “It’s been a challenging project, no doubt. But to find that the training program we’ve developed actually makes a positive difference in how women think about and cope with the everyday hassles they encounter along the way makes it all the more exciting.”

So if you are looking to reclaim the energy and passion with which you entered your career, then CareerWISE is a good way to put the “you” back in success.

CareerWISE was developed at Arizona State University with funding from the National Science Foundation by a research team of students and faculty in engineering, counseling psychology, educational technology, social and computer science, arts and media, communications, curriculum, and instruction. The site asks for a quick, free registration step before use. CareerWISE Resilience Training can be found at <http://careerwise.asu.edu>. For more information about CareerWISE projects and research findings, visit: <http://www.asu.edu/careerwise/>. ■

Reference

1. Bernstein, B. L. (2011). Managing barriers and building supports in science and engineering doctoral programs: Conceptual underpinnings for a new online training program for women. *Journal of Women and Minorities in Science and Engineering*, 17(1), 29-50.