Gender & IT Education

Being the Same isn't Enough: Impact of Male and Female Mentors on Computer Self-efficacy of College Students in IT-Related Fields

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Summary of Study

Computer self-efficacy refers to people's perception of their ability to perform computing tasks. Those with higher computer self-efficacy are more likely to persevere and complete more difficult computer tasks. Mentoring and role-modeling have been found to positively influence self-efficacy of students and workers in other fields. We investigate whether female mentors in IT programs can influence the computer self-efficacy of students, particularly female students. We hypothesized that students with greater extent of mentoring are more likely to have higher computer self-efficacy, and that students whose mentors are of the same gender as themselves would have higher self-efficacy than the rest. This could possibly reduce computational reticence in women and encourage them to enroll and persevere in IT programs.

Results

- Students with greater computer self-efficacy were more likely to be male, had received more mentoring, and spent more time on computers as teenagers.
- Male students reported higher computer self-efficacy than female students.
- Female students with female mentors had lower computer self-efficacy than female students with male mentors or both male and female mentors.
- Female students with no mentoring had the lowest computer self-efficacy.

Take Home Findings

Mentoring contributes to higher computer self-efficacy in students. However, students with male mentors had higher computer self-efficacy than those with female mentors. Even though women were exposed to female mentors, they continued to have lower self-efficacy than men.

Why are female faculty less effective mentors?

- Weak presence of women
- Stereotypes of women faculty persist and prejudice students' against them
- Female faculty are less successful than male faculty in terms of seniority, tenure, reputation, connections and academic support.
- Overload of academic and non-academic responsibilities make mentoring challenging for women.

Simply adding women in IT will not solve gender-related problems. Programs need to address stereotypes and evaluate the environment in which women faculty are expected to work, and be willing to restructure these in ways that enable them to become productive and effective as researchers, instructors, mentors and role models.