Parents of girls, low-income students less likely to urge kids to study computers

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While perceptions of computing majors among high school students suggest that the geek stereotype is on the way out, a Penn State Lehigh Valley researcher said that universities may want to reach out to parents, particularly parents of female students and ones from lower-income households, to boost support of computer majors.

In a study of how incoming first-year college students perceive computing and computer majors and who influences those perceptions, most students had positive feelings about computing and computer-related majors and jobs. However, gender and socioeconomic status seemed to play a role in whether parents shaped those perceptions, according to the study's author, Jeffrey Stone, assistant professor of information sciences and technology at Penn State Lehigh Valley, and an affiliate of the Institute for CyberScience.

"There's still a gender difference, which is a bit of a disappointment," said Stone. "Males were significantly more likely to agree that their parents stressed that computing skills were important. Females were less likely to agree that parents were stressing the importance of computer skills."

Students from households with income less than $50,000 also were less likely to agree that their parents stressed the importance of computing compared to students from households with incomes between $50,000-$99,000, according to Stone, who presented his findings in a recent issue of the Journal of Computing Sciences and Colleges.

Stone suggests that universities should take a broader approach at whom they target for outreach and recruitment programs for computer majors. He added that universities already offer programs to recruit and encourage high school students to consider computer majors, but they may want to design outreach programs about computers specifically for parents.

"The problem we're encountering now is that, though students coming into the university may or may not have the skills that we expect them to have, they often have more skills and experience with computers than their parents," said Stone. "How do we get past that? I think over time, that will change a bit. But, right now, I think the best thing a university

can do is provide outreach programs to educate parents about different programs and different careers in the computing field."

High school counselors seem to be doing a good job at encouraging computer majors, Stone said. About 47 percent of the students agreed that high school teachers and guidance counselors stressed the importance of computing skills, he added.

Failing to promote computer majors among high school students, not only hurts the students' chances of landing high-paying jobs, but it could negatively affect the computer industry itself. According to Stone, computer industry experts expect that there will be more jobs than qualified computer and technology applicants in the future, which could stall the rapid growth of one of the United States' leading industries.

Stone said the survey may show that some stereotypes about students in computer majors are improving.

"The perceptions about computing majors, which in the past has been looked at as, for the lack of a better word, the male-dominated geek stereotype, or the nerd stereotype, seem to be waning, at least in this particular sample," said Stone.

Stone recruited 161 students who took part in a university summer orientation session. The questionnaire asked basic demographic questions and asked them to respond to a series of questions, including ones about their use of computer technology, perceptions on computing and computing majors and the influence of their parents and educators.

Stone cautioned that the sample size is small and that more work is needed to determine the robustness of the study.

"It would be beneficial to expand that to a much larger pool, which is

something I would hope to do in the future," said Stone.

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