CIO.com

Wednesday, June 8, 2005

COLLEGE STUDENTS CONTINUE TO SHUN COMPUTER SCIENCE

By Linda Tucci

College students probably spend more time than ever in front of a computer, but fewer seem to want to make computers their life work.

New data from the Higher Education Research Institute at the University of California at Los Angeles shows the percentage of incoming students interested in majoring in computer science has plummeted over the last four years.

Between the fall of 2000 and the fall of 2004, the percentage dropped by 60% and now is 70% lower than its peak in the early 1980s.

For women, the drop is even more dramatic. The number of women interested in computer science as a major has plummeted 80% between 1998 and 2004 and 93% since its peak in 1982. The proportion of women to men interested in the field is the lowest since the 1970s. The trend is in sharp distinction to other fields, including biology, physical sciences and engineering, where the representation of women has continued to rise.

Freshmen interested in computer science have proved a fairly accurate predictor of the number of degrees awarded four or five years later, according to the study, suggesting there will be a sharp decline in the number of bachelor's degrees awarded in the next decade. Should CIOs and other IT hiring managers be concerned?

The Computing Research Association (CRA), a trade group for computer professors, isn't placing any bets.

"We don't talk about demand because it is too hard to predict at what point in the business cycle these kids will be looking for jobs," said Jay Vegso, manager of membership and information services for CRA. "The government numbers on IT projections 10 years show there will be a strong demand for IT workers, but what particular type of IT worker will be needed is not broken out."

Trouble with next-gen IT leaders

The numbers of students declaring computer science can be misleading, said Vegso, because "the other thing that is going on is the rise of IT in other majors and these programs are not tracked very well."

Azer Bestavros, professor and chairman of the computer science department at Boston University, has seen the current trend first hand, as the number of computer science graduates has dropped from over 100 in the "boom" years of 1999, 2000, 2001 and 2002 to about 55 students in 2005.

But Bestavros, who has witnessed boom and bust cycles in student interest over 25 years, does not think the decline is necessarily a bad thing.

"The quality of students this year and last year is decidedly better. In many ways we are bit relieved," he said.

The influx of students into computer science in the late 1990s was driven in part by the perception that computer science was a hot field, Bestavros said. The major attracted many "crossovers" -- students who switched from other fields into computer science, not so much from an intrinsic interest in the field, he said, but with the hope of getting rich quick. As demand for tech jobs cooled, so did the irrational exuberance among incoming freshmen. He sees the decline in interest in computer science over the past four years as more a market correction than cause for concern.

"This is good for the industry in general and good for the profession in general. The bubble made it too easy for a workforce that was not up to par," he said.

Talented students are having no trouble finding jobs, he added. Large companies such as IBM, Microsoft, as well as financial companies like Fidelity, "call all the time," looking for imaginative, well-educated computer science majors.

He agrees with trade association CRA that the growth in student enrollment is closely tied to the economy, because technology is the growth engine of the economy. Said Bestavros, "What comes down will come up again."

Not all IT vendors are willing to wait. IBM announced May 24 that it was giving customized training, worth $7 million, to students of the Sam M. Walton College of Business at the University of Arkansas, part of the Big Blue's Academic Initiative program aimed at students interested in open standards and IBM products. "The numbers don't lie," said Buell Duncan, general manager of the IBM Academic Initiative, in a company statement on the gift. With 1.5 million new IT jobs projected by 2007 by the U.S. Department of Labor and a steep decline in graduates with computing degrees, a labor shortage is inevitable, he said. "The business sector needs to step and be part of the solution."