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Recruiting More Computer Science Students--What To Do After The "Glamor" Has Gone Away?

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ABSTACT

The moderator will first focus on the question:"Are enrollments actually declining in computer science programs across this country?" He will report the results of his surveys which indicate there has been a definite downturn in enrollment over the past two years. The panelists will then discuss what is being done at their schools to recruit students and to meet this new challenge of declining enrollments.

STATEMENTS

James Calhoun

Western Illinois University, like many universities across the nation, has faced a recent substantial decline in its number of computer science majors. The department has responded with a multi-pronged approach through a major revision in its undergraduate curriculum. A major goal was to account for the differences between students who are targeting themselves for a traditional data processing environment and those who are aiming toward scientific programming or small business systems. Another goal was to provide a more attractive set of elective courses by introducing additional courses in newer, expanding areas of computer science.

As part of this reorganization, a pledge was made to the students to redesign upper division courses so they become as language independent as possible. In support of this effort a number of "quick-start", one-hour language courses were introduced which include such languages as C, Lisp, Prolog and Ada. The idea is to get students up and running in a new language as quickly as possible and allow the students to have some control over the language they choose for their projects in upper division courses. It is believed that this will better account for the differences between students' career goals.

A concentrated, ongoing effort is also underway to evaluate the computing needs of majors in other departments and in response to this evaluation a number of service courses have been instituted. Of all disciplines, computer science education should be the most adaptive to change. Just as programming languages and operating systems evolve from generation to generation so too must we.

James Richards

Although many school districts have invested heavily in computer equipment and teacher training to use that equipment, those students who develop an interest in computing by the time they are in high school often lack adequate understanding of what constitutes the science of computing. It is therefore likely that many high school students will try computer science as a major in college for the wrong reasons and be disappointed or, worse yet, a potentially good computer science student who has a false impression of computer science may not investigate the programs in computer science that a college or university offers. Reaching out to secondary schools through faculty visitation is a good way to provide information to high school students and their teachers at a time when the students who are thinking about attending college want guidance. These visitations could involve current computer science majors who meet with interested high school students to explain why they choose computer science as a major and how prepared they were for the curriculum in that program. Even if a college student is not initially a computer science major, the student's view of computer science formed in secondary school can greatly influence whether computer science will be considered should that student change majors or want a second major.

Harriet Taylor

Over the past three years, my department has experienced a dramatic drop in both the number of computer science majors and the quality of the majors. Our initial reaction was to be pleased with the trend, since our faculty had not grown at the same rapid rate as the student population in previous years. Now we have realized that we must adopt measures to maintain the undergraduate program at a minimum level. Particular care is taken to recruit quality high school students and assist our secondary school teachers in all ways possible. Faculty are now assigned to actively monitor and assist the students entering the program to retain those majors that arrive on campus. These efforts and other projected activities will be discussed in this presentation.

F. Garnett Walters

During the late seventies many high school students were "taken" with computers and computer games. They believed that their "calling" was to be a computer scientist. As this large number of students arrived at college to major in computer science we became painfully aware of the shortage of computer science faculty. Class size increased, more classes were taught by teaching assistants, less personal attention was given to students and the research effort took a nosedive. This was an unhealthy environment for both the students and the faculty. As students were counseled on career opportunities, the enrollment began to moderate and level off at a place where the current faculty could handle the teaching responsibilities.

During this "explosion" of student enrollment, many programs were introduced at colleges with little or no hope of supporting a new program at an acceptable level. In addition, the "magic" of computer science caused programs of questionable quality to be introduced. Thus, an oversupply of programmers was thrust upon industry at a time when the nature of industry was changing. The classic programmer was in a great oversupply and the field of computer science has had a bad "press" in recent years.

The field of computer science will become healthy when two things occur:

1. The quality of the programs in Computer Science, Information Systems, Data Processing, etc. is regulated by the Computer Science Accreditation Board and the sponsoring institutions and

2. The "word" is properly filtered to the news media and down to the high schools that Computer Science is a mathematical science and that positions are available for students who enroll in and complete an accredited program.