Computing studies at Farmingdale

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Farmingdale Agricultural and Technical College is part of the State University System of New York. The College is one of three public two year colleges serving Nassau and Suffolk counties. The school is located 25 miles east of New York City on the boundary line dividing these two counties.

The computing program at the school is an academic program in data processing. The program was started in 1967, under the direction of Dr. Harold J. Highland. The program has about 150 day and 300 evening students enrolled. Computing support for the program is an IBM 360/30, DOS system.

The objective of the program is to equip the student with the skills and knowledge to enter the data processing field as a junior programmer. A junior programmer is defined as one who has a strong command of one language, familiarity with two others, has extensive experience programming structured problems, and has a general knowledge of computing and data processing systems.

The overall philosophy of instruction is application. Students are assigned programming problems as a primary vehicle of learning. The "hands on approach" rapidly develops command of programming and the confidence to program or solve problems.

The day student has a choice of choosing the scientific or the commercial option of the program. The first year is a core year for a second year of concentrated study in scientific programming, FORTRAN, or commercial programming, COBOL. Upon completing the program, the student is awarded an AAS degree in data processing.

The enrolling day student is generally a first generation college student. The academic background of the students vary widely, but can be grouped into those with three or more successful years of secondary mathematics, those without, and those with some knowledge of data processing. Students in all three groups have completed the program. They have entered the field as an operator or junior programmer or continued their studies in Computer Science, Programming and Systems, or Business.

The evening students have diverse backgrounds, but almost all have some knowledge of computing, varying from operations to systems programming. These students enter the program to advance their careers in the commercial aspects of data processing.

By and large, the data processing program has been a success; those who have completed the program can and have succeeded. Trends are developing, however, which threaten the success of this or like programs.

The era of “Send me a warm body, I’ll train him” is over. The recession, closing off entry jobs and causing a surplus of available and experienced personnel, has brought on a problem of locating meaningful junior programmer jobs for the graduates of the program. Although the predicted economic expansion will reduce this problem, the recession has brought to light the lack of professional recognition and unclear career patterns for the personnel in the information processing field.

The present and future student is aware and skeptical of entering a program which may equip him for a nonexistent job. The publicity and the increased attention to sociological/health careers has caused a significant reduction of potential students.

The era produced a proliferation of two and four year programs in computing science, data processing, and programs with minors in these subjects. This levelled the enrollment at a lower figure than had been anticipated, endangering future programs. Educational institutions, more than ever, must offer a variety of modern programs, supported with up-to-date hardware systems and faculty, and change these programs to meet the future, a challenge which is very costly and risk prone.

To meet this challenge, information is needed. Information which is authentic and available that can be used by students, educators, employees, and employers. Too many decisions are based on one's limited environment, not always objective or timely. A paradox, in that most computing programs are developing personnel who are to participate in supplying objective and timely information.

Information which will be considered authentic must come from a national organization which has as its purpose developing information processing personnel. This organization would publish statistics, local and national, about personnel needs and qualifications in greater depth and degree than is presently distributed. A natural outgrowth of such an organization's purpose would be to promote recognition of information processing personnel,
to conduct research in information processing instructional systems, and to develop programs of studies.

The statistics would be used by students and their counselors in deciding about their choice of careers. Educators would use the data in providing needed programs. Employees would be able to select and choose alternative educational programs for advancement. Employers would be able to provide professional development programs to meet their future needs.

Other functions the organization could serve is the promotion of professional recognition, seeking scholastic aid, and distributing programs, formal, inhouse, or intensive, with recommended instructional systems which would provide effective and efficient education.

This organization could also serve another needed educational and development function, regional training centers. These centers would equip personnel with locally needed qualifications. Personnel attending the centers would be recent graduates of college programs and in-service personnel temporarily relieved from their assignments. These centers would conduct intensive up to the minute training.

Hundreds of thousands future positions which are forecasted can only be filled by a national effort. If trends threatening this highly technical profession continue, the nation will face a shortage of qualified personnel and over supply of obsolete skilled personnel. Only a national organization can prevent another Apalachia.