

Abstract: Panel Discussion on the Use of Computers in the Classroom. Speakers: James Hurt, Dept. of Math; James Cole, Dept. of Statistics; and Ted Sjoerdsma, Dept. of Computer Science, University of Iowa.

Dr. Hurt's experiences with the use of computers in the classroom were discussed. The courses included Freshman Calculus, Numerical Analysis, Linear Algebra, and Differential Equations. The cost for the computer was estimated at from \$10 to \$20 per student per semester depending on the types of problems assigned and the system used. Several problem areas were identified including keeping the students interested in the subject matter and the effects of an improperly chosen or improperly defined problem.

Dr. Cole discussed the objective of achieving a satisfactory balance between expenditures of time, money and effort on one hand and rewards to the students on the other in uses of the computer in statistics courses. He noted that in using the computer as a problem solving tool, the goal had been pursued with mixed success by using packaged subroutines and programs to ease the interaction between the students and the computer. Greater success had been achieved through the term project--classroom presentation approach in which all students may benefit from the efforts of each of their fellows. However, a still more favorable cost-reward

balance was promised in the use of the computer as an aid in motivating and illustrating material presented in the classroom. Several examples of this use were presented.

Mr. Sjoerdsma presented a recent survey of the colleges involved in the Regional Computer Center at the University of Iowa. It showed a marked increase and diversification of the use of the computer in the undergraduate mathematics curriculum. The ~~increase of~~ use in the second year of operation is almost triple that of the first year. The diversification spreads the computer use in a wide arc so as to include Foundations of Mathematics, Intro. Statistics, Calculus, Differential Equations and Linear Algebra. Respondees indicated that in most cases interest and enthusiasm ran high in the courses in which the computer was introduced, and that much was accomplished with very little extra class time used in preparation. As usual, increased usage produced a rather sharp decline in per job cost.