

CONCERNING THIS ISSUE

It is not exactly news that the computer is effecting society, in general, and education, in particular. As the Orwellian vision of "1984" and a generation of science-fiction writers' fatalistic predictions fade, we are able to glimpse, in more detail, the nature of the impact of computer technology on education and learning. But, if this clearer insight has laid to rest some issues and concerns raised 30 years ago, it has brought some of them into sharper focus. The social fabric of the 80s is much more inclined to accept as normal a level of technology never before dreamed of and this, in turn, has raised questions for which we have neither answers nor methodology. Movies such as "TRON" and "WarGames" and the media's exposition of the phenomena of "computer hackers" have forced the public to take renewed interest in the moral issues raised by the pervasiveness of computer technology.

In the first article in this issue, Sally Sloan investigates the basic objectives of using computers in education. She also explores the issues of ethics and legality as related to computer use.

There appears to be, at first inspection, a dichotomy of thought on the uses of computers in education. On one hand are the uses which support our existing curriculum efforts. Programs which provide drill and practice, tutorials and educational games are comfortable and familiar to most educators. These uses allow the teacher to retain control of the educational environment while struggling to understand the new technology. This approach is viewed by many as an attempt to integrate yet one more "gadget" into an already crowded classroom. The fact that these uses of the computer do not take advantage of the truly unique capabilities of the computer are offset by the fact that they provide real cognitive and affective gains for some learners.

On the opposite side of this dichotomy are the uses of the computer which support experimentation with both content and methodology. Programs arising out of research on artificial intelligence and knowledge of programming language such as LOGO, BASIC and PASCAL

wrest control of the educational environment from the teacher and place it in the hands of the learner. For some, including LOGO's creator, Seymour Papert, this is where it should be. For others, this represents an end to shared experiences and the orderly development of skills and knowledge necessary for sound cognitive development.

It is with the latter side of the previous dichotomy that the second and third articles in this issue will deal. In her article on artificial intelligence, Diane McGrath provides a context within which to view this unique aspect of the computer. Duane Yee, Barbara Jamile and Elaine Blitman, in their article on the integration of the computer into the K-4 curriculum at Punahou School, give us an insight into the thinking which led to the adoption of Papert's vision and a progress report on the implementation of that vision.

The remaining three articles address the problems faced by the educational establishment in dealing with a technology that seems to have passed it by. Because the computer entered the educational milieu by way of the home hobbyist and classroom practitioner, colleges of education are struggling to update curricula and provide leadership in the face of limited faculty expertise and, in some cases, outright resistance. In her article on changes in the preservice teacher education curriculum, Ruth Hoffman touches on those topics which are of immediate importance to the development of a cadre of teachers who will be required to utilize computers on a day-to-day basis in the classroom. Allen Glenn reports, in his article on developing computer literacy among college of education faculty, on the ongoing efforts of one institution to assist its faculty in retraining itself. In the final article, J. Richard Dennis and Sally Standiford translate the traditional role of the teacher educator into a responsibility jointly shared by the human and the computer.

Anthony J. Picard
Professor of Education
