

## Futures: Where Will Computer-Assisted Instruction Be in 1990?

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Richard C. Atkinson, Director NSF

"Knowledge-based systems are being developed which so thoroughly "understand" the subject domain and the student's grasp of the subject matter that they are able to assist the student to recognize, articulate, and use diverse forms of information in problem-solving environments."

(speaking of the shift from an emphasis on effective methods to acquire facts and skills to the study and development of intelligent knowledge-based instructional systems)

"Computer-based, videodisc systems will be the basis for 'intelligent video books' which will be capable of presenting interactive programs, controlled for reading level and vocabulary, and which will be automatically adaptive to student performance. Book-sized, personal computers with the power of today's small machines, will be as ubiquitous as hand calculators and will be used for everything from computer art to solving differential equations."

C. Victor Bunderson, WICAT

"We have never had a "Model T" in CAI (a mass-produced system available to almost any family or individual). We have never had a "Bell System" for CAI (an affordable and almost universally available network connected to specialized computers). We will have both by 1990.

"The Model T will likely start as a color TV display with a powerful microprocessor accepting plug-in ROM and Bubble Memory chips. The list of optional peripherals will be headed by a videodisc player with capacity of at least  $10^{10}$  bits, divided between color-motion-sound and CAI code."