Decision Maker

Dr. Seymour Papert
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"Technology in education usually means inventing new gadgets to do the same old stuff. The only people who get any sense of intellectual adventure out of it are the people who invent the gadgets. By the time the kids get to use it, it's just boring."

Thus, Seymour Papert, holder of two doctoral degrees and professor of applied mathematics at the Massachusetts Institute of Technology, expresses the thinking that has guided some of the most radically innovative uses of computers in educational projects to date.

Papert, who was born 42 years ago in Pretoria, South Africa, has spent more than a decade studying the logical development of children. Between the years 1958 and 1963, he worked with noted zoologist-turned-child-psychologist Jean Piaget at the International Center for Genetic Epistomology in Geneva. In 1963, Papert came to MIT. Since then, he has been applying his knowledge of mathematics and computer techniques to attempt to develop the kind of educational system that children need, as opposed to the kind of educational system that they now have.

"The basic problem with education is that it takes such a long time to do such a trivial thing," he observes. "I believe that, with quite simple techniques, you can reduce the amount of time necessary and increase the average performance dramatically."

To prove his point, a little over a year ago Papert directed a project which involved giving 12 Lexington, Mass. seventh graders an opportunity to experience computer programming and computer power. The programming experiment was substituted for the students' regular mathematics course. Yet, at the end of the year, the programming students scored higher on standard mathematics tests than did the students who had taken the regular mathematics course. In the meantime, the experimental group had learned sophisticated mathematical concepts and had grown familiar with computer techniques.

Papert is uncompromisingly opposed to standard educational techniques which rely on memorization, drill-and-practice, and dictatorial teachers. He derisively labels these techniques the "pop-ed culture."

"By refusing to replace the pop-ed culture with something else, we're doing a lot of harm to the students — we're turning off their minds while they're young. Drill and practice usually means drill in elementary, local facts and skills — it ignores the problem of giving the child the means to organize his thinking. The real world just isn't made up of a series of clear-cut simplistic steps. Real problems are fuzzy, murky. You have to struggle to get some order in it. This

"Contemporary educational methods turn off kids' minds."

"Usually, technology in education means new gadgets doing old stuff."

"Some of my best friends are drill-and-pactice people."

"There are many things in the world that are both fun and educational."