

**RUN, COMPUTER, RUN:
The Mythology of Educational
Innovation**

by **Anthony G. Oettinger**, with the
collaboration of **Sema Marks**
Harvard University Press, 302 pp., \$5.95

IT WAS INEVITABLE that someone would come along and attempt to cut through the fog of hoopla that has surrounded educational technology these past few years. Someone had to douse the growing passion for educational innovation among some school people with the cold water of rational analysis. Someone had to stand up and boldly say, "Look! The Emperor has no clothes!"

This lively essay by Anthony G. Oettinger, professor of linguistics and applied mathematics at Harvard University, written with the collaboration of Sema Marks, a doctoral candidate at the Harvard Graduate School of Education, takes aim at the "mythology" of educational innovation and technology and makes several direct hits.

Oettinger effectively takes to task the hucksters of educational technology, particularly for their contribution to the confusion between present capabilities and ultimate potential. The author identifies the rhetoric of these publicists as being the product of the quest for funding from government agencies that are under pressure to demonstrate results. Moreover, Oettinger sees the educational innovators as being self-deluded victims of their own propaganda.

The book is especially incisive in its treatment of the notion that systems analysis can contribute significantly to the solution of education's major problems. This facile assumption, arrogantly made by systems analysts who have applied these techniques to the solution of problems in the defense and space programs, is laid bare as a piece of shoddy thinking. Oettinger points out that systems analysis can be applied effectively to only a relatively small class of simple systems; that even the claims made for it in the highly quantifiable fields of defense and space have been exaggerated. Most important, he writes, the conditions that make systems analysis a useful technique are notably absent in our educational system: It is not independent enough of other systems; it does not have well-developed research and design tools; and its objectives aren't explicit enough.

Oettinger also considers some other characteristics of our schools that tend to make them inhospitable to innovation in general and technology in particular. There is, he says, a lack of professionalism among teachers, a deadening bureaucratic atmosphere, a

fundamental antipathy to machines (and therefore to technology), and an apparent limitation on the resources available for education both now and in the future.

Oettinger argues that if the schools are not ready for technology, neither is technology ready for the schools. Defined as hardware, technology is both too expensive and too unreliable for effective use in schools. Oettinger provides some distressing comparisons of school budgets and equipment costs, as well as instances of unreliability of equipment ranging from simple slide projectors to complex computers.

Defined as process, technology again is found wanting. Our knowledge about how learning takes place is inadequate to provide a theoretical basis for solving the problems of instruction, and even if we did have the requisite knowledge, the environments in which education takes place lack the human and institutional resources that would be needed to apply such knowledge.

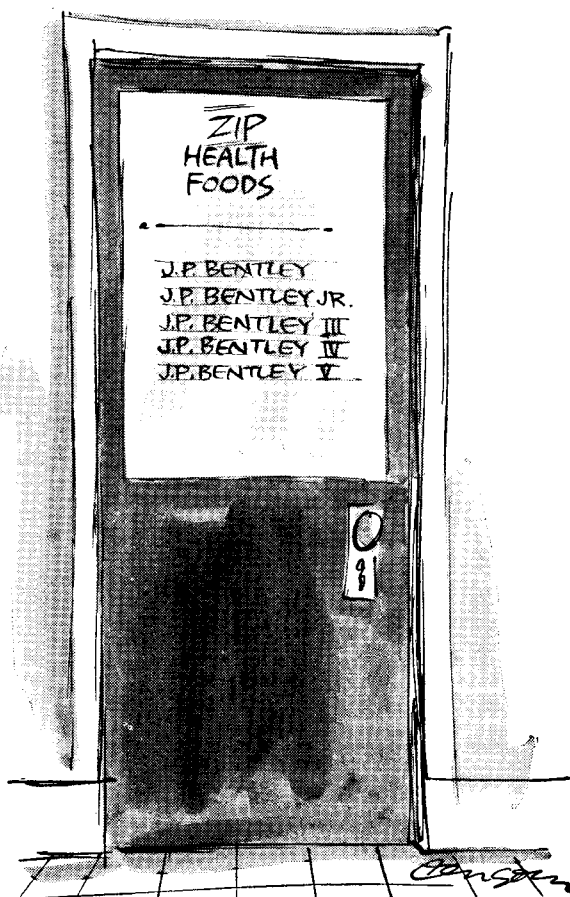
All of this is written with an aggressive and even hostile wit and with a style and verve that have not been typical of the jargon-laden discussions of educational technology that characterize the literature in this field. *Run, Computer, Run* is a polemic more reminiscent of the political and literary essays of the intellectual avant-garde than of the measured and generally rational work of the scholarly commu-

nity. This is, in no small degree, what makes the book so interesting. This is also what makes it inadequate.

Oettinger's polemical style is just right for deflating some of the overblown and pompous claims that have been made in the name of educational technology in recent years. Unfortunately, this same style tends to obscure the promising developments that have taken place and to muddy the waters on the substantive issues that merit the kind of discussion and debate that might lead to finding solutions rather than exchanging recriminations. The irony of it all is that Oettinger seems as much a captive of his own rhetoric as do the drumbeaters of educational technology whom he devastates in this book.

So anxious is he to make his case against the exaggerated claims that have been made that he tends to smear both worthless and the worthwhile with the same broad brush of acid disapproval. The people responsible for careful, long-range experimentation, such as the work in individualized instruction at the Oakleaf School near Pittsburgh, are hardly distinguished from the people responsible for the corporate image-building advertisements that lead the public to believe that computer-assisted instruction is about to become an operational reality in innovative schools.

Part of Oettinger's indignation and



pessimism about educational technology stems from the fact that he is a self-confessed reformed visionary. Here is an innovative technologist who dreamed about solving the problems of education before he had taken the trouble to examine firsthand what those problems were. Oettinger dipped his intellectual ladle into the stew that is American education, took a few sips, and turned up his nose in disapproval upon discovering that it is not boeuf bourguignon.

Thus, the book is a mixture of some fresh and irreverent viewpoints and extraordinary naïveté about our schools, a fair amount of intellectual snobbery, laced throughout with the mark of the amateur, if not the dilettante. Oettinger's sweeping generalizations are based on a very small sampling of real schools and educational experiments. He seriously underestimates the significant changes that have taken place in our schools in the past decade, and, therefore, he underestimates the capacity of our schools to change. He dismisses what is known about the psychology of learning as being largely without usefulness in education, although he gives no evidence of having any broad knowledge of learning theory; instead, he cites a report written for the Navy, presumably by two psychologists, who take this debatable position.

In the end, Oettinger turns out to be a good old-fashioned naysayer. He expresses his "nays" with humor and great zest, but these welcome qualities do not mask the absence of any substantial constructive alternative in his critique. Even when he is finally prepared to risk a generalization about what should be done, he manages to hedge his advice.

"We must encourage as much diversity as possible—as many paths, as many different outlooks, as many different experiments, as many different initiatives as we can afford once the demands of education have been balanced against those of other needs of our society," he concludes after previously exhorting us to "... follow through in depth with a small number of distinct alternatives." In other words, we should do more with less, or less with more, or perhaps both.

Nowhere are the weaknesses of this book more apparent than in its final chapter in which Oettinger summarizes what is wrong and what should be done about it. He rejects the possibility of solutions coming from the people now involved: systems analysts, technologically illiterate educators, ill-prepared and underpaid teachers, academic curriculum reformers, passive industrial designers, and hypocritical professors of education.

What should be done? Oettinger urges us to support promising ideas longer than we do now, to support more risk-taking, to share risks and responsibilities among all partners in the educational enterprise, to chart our course by human judgment rather than by formula, and to follow through in depth with a small number of diverse alternatives. All of which is a mishmash of pious platitudes and red herrings. He has dismissed the promising ideas (except his own), knocked the risk-takers, implied inaccurately that change is now being charted by some unidentified formula, and contradicted his own call for as much diversity as possible.

To conclude that the reform of American education will need better ideas, better people, and more money after one has rejected all of the ideas and people in education and convinced oneself that more money is simply not available represents either an extraordinary achievement in glibness or a massive failure in logic. *Run, Computer, Run* abounds in instances of both.

A more balanced book on educational innovation might have punctured many of the same balloons without running the risk, as this book unfortunately does, of discouraging new experimentation. That our schools need to change seems to be an incontestable proposition. That we do not have definitive answers to questions about how they should change and by what means is an unfortunate but stubborn fact of life. We cannot wait until the people, the process, the institutions, the devices, and the money all fit neatly into an elegant algorithm for innovation before we attempt any change, because that would freeze our schools exactly where they are. This is why *Run, Computer, Run*, in spite of the progressive sounds it makes, finally comes across as an implicit defense of the status quo, which is obviously not Oettinger's intent. One can only hope that Oettinger will sustain his interest in educational technology and will move on to more constructive work in this field.

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New Books

Utopias and Education, by Howard Ozmon (*Burgess Publishing Company*, 157 pp., \$3.75), is a disarmingly straightforward explanation of learning in brave new worlds conceived by Plato, More, Bellamy, Huxley, Skinner, and others. Together with his prefatory essays, Ozmon's helpful introduction distinguishes clearly between speculative and satirical utopias. They also illustrate many meanings of "utopia"—high ideal, for instance, or practical possibility, belief in progress, or intellectual exercise. Brief readings further whet the appetite for source writings. This uncomplicated thematic treatment of an important educational topic will furnish perspective for some of today's more fanciful yearnings for educational panaceas.

Teaching Black Children to Read, edited by Joan C. Baratz and Roger W. Shuy (*Center for Applied Linguistics*, 219 pp., \$5), arrives as number four in a series of research works dealing with the place of language in big cities. The focus here is literacy, and the principal contention that accepting a black child's own language structure is the soundest basis for building reading skills. Contributions range from dialectology to reading materials. William A. Stewart's final paper on the use of Negro dialect in reading instruction recommends "facing up to the data" that, Stewart asserts, indicate that Negro dialect can help span the gap separating black experience from "mainstream language skills." A very helpful book for metropolitan educators.

Homer Lane and The Little Commonwealth, by E. T. Bazeley (*Schocken Books Inc.*, 200 pp., \$1.95), and **Talks to Parents and Teachers**, by Homer Lane (*Schocken Books Inc.*, 197 pp., \$1.95), are reprints from the late Twenties after Lane's classroom permissiveness and Freudian theory had guided the Dorset institution for young delinquents through five gratifying years. A staff member, Miss Bazeley sketches the origins and inner workings of the Commonwealth itself, offering numerous close-ups of "citizen" inmates who responded favorably to opportunities for self-expression. Her book closes with the report of a committee charged with presenting reasons for the reform school's closure under intimations of irregularities. Lane's own work, with an up-to-date objective introduction by A. S. Neill of Summerhill fame, lays out the New Englander's views on developmental stages and the possibil-