

Books

HIGHER EDUCATION IN ENGINEERING AND SCIENCE

edited by Herman A. Estrin

McGraw-Hill \$7.95

Reviewed by Richard M. Sutton, Professor of Physics, and Director of Relations with Secondary Schools.

New engineers must have good teachers, but where are they going to get them? The problem of professional supply and training is a real one, particularly in a field where the competition for able persons is as great as it is in engineering. No technical institution can afford to rely on the old adage, "Those who can, do; those who can't, teach." But how can an institution cultivate good teaching in its staff while demanding of the same individuals a long technical training and a very high technical competence? There are no places where a teacher can learn his trade at the collegiate level, and much has been left to chance in the past.

Fortunately, our colleges have usu-

ally attracted those with high scholarly aims and interests, who found the academic life a satisfying one, and in many cases developed a real love of the classroom and the contact it affords with alert and growing minds. So the situation has not been completely hopeless. However, it seems likely to get worse rather than better, when industry is calling so loudly and forcefully in an economic way for the best output of our technical institutions.

Professor Estrin of the Newark College of Engineering, and his colleagues, have been devoting themselves to the problem of training technically able instructors to make them into proficient teachers as well. As an adjunct to this course, Prof. Estrin has produced one of the first books ever compiled in this field of higher education in engineering and science.

The book consists of 93 essays divided appropriately by subject content to cover the whole gamut of the teacher's job, his relations with his students, his professional development, the place of examinations and grades in the process, the development of good teaching, and many

other facets. Most of these essays from 88 authors appeared originally in professional and technical journals.

In an anthology as varied as this, it is not possible in a short review to characterize individual contributions. Your reviewer of course started by rereading his own article, then with admirable broadmindedness worked farther afield to a generous sampling of what others had to say. The farther he read, the more delighted he became with the many concrete suggestions and points of view that could conceivably change his own firmly established habits.

Let me close with two brief quotes from Mark Van Doren's article on "Teacher and Student in the Search for Truth." He says, "The teacher who does not love to learn will never cause anybody else to do so." Again, "The college teacher is devoted to the search for truth, and as such he is the envy of all those in our society who are paid to obscure or distort it. He is the only one who is paid to be as honest, as simple, and as serious as he can. Because the value of truth remains unknown he is paid chiefly with gratitude and love, whose value also remains unknown."

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