Book Reviews

College Teaching by Television. Report of a conference sponsored jointly by the Committee on Television of the American Council on Education and the Pennsylvania State University at University Park, Pennsylvania, 20–23 Oct. 1957. John C. Adams, C. R. Carpenter, Dorothy R. Smith, Eds. American Council on Education, Washington, D.C., 1958. 234 pp. $4.

With the big wave of prospective college students already in the secondary-school pipeline, the search for solutions to the problem of the college teacher shortage has become acute. One of the principal hopes for alleviation rests in the use of closed-circuit television broadcasts. The hope is that with the intelligent and skillful use of this mass medium, large increases in the number of college teaching personnel will prove unnecessary. For this reason, the American Council on Education and Pennsylvania State University have sponsored two major conferences on teaching by television in colleges and universities. One of these was held in 1952; the other in 1957. This volume reports the proceedings of the later conference, held at Pennsylvania State University, 21–23 Oct. 1957.

Because a great deal of experience in the use of television in higher education has been gained in this decade, the conference was able to draw upon administrators, technicians, instructors, and researchers who have devoted a large portion of their time to the problems. The conference enabled these people to present the results of these experiences and to take a hard look at some of the persistent problems in the use of televised instruction.

As C. R. Carpenter, director of the Division of Academic Research and Services at Pennsylvania State, and one of the outstanding pioneers in behavioral research in audio-visual communications, put it, "The development of 'A Perspective of Televised Instruction' is one of the principal purposes of this conference." The attempt to attain this perspective was made by first appraising the gains, if any, that have been made in televised instruction.

The principal presentation on this topic was a paper by Carpenter on some of the advantages and disadvantages of televised instruction. The principal disadvantage, stressed both by Carpenter and by many other participants, is the problem of professor-student interaction. How can students ask questions and otherwise participate in discussion when television is used as the instructional medium? A number of subsequent contributors to the conference related their experience in dealing with the problem. Perhaps the most interesting of the devices used to establish student participation is the one reported by E. P. Adkins of State University College for Teachers, Albany, New York. Multiple classrooms presided over by graduate assistants receive a televised lecture. When a student wants to say something, he raises his hand; the assistant signals the instructor by pressing a lever which turns on a red light. At a signal from the instructor, the assistant presses a lever which opens the audio circuit from his particular classroom to the studio and the other receiving rooms and closes the instructor's circuit. Adkins reports that this results in "fast-flowing discussion with no more pause than in the traditional situation."

A number of participants reported that a good deal of research of the straight-evaluation variety has been conducted, in which the effectiveness of televised instruction is compared with that of ordinary classroom teaching. Almost always these comparisons reveal no superiority for either method. The eminent Yale theorist and experimenter in the field of learning, Neal E. Miller, made the most fundamental points about this problem in his paper, which is reported on pages 28 to 42 of the book. Miller points out that research which is directed toward comparing televised instruction with ordinary live instruction has been not very imaginative. By the use of learning theory, it is possible to isolate the important variables that could be utilized in televised instruction and measure their teaching effectiveness. He points out that "studies aimed simply at comparing the two techniques, without taking into account the specific requirements of the task, are likely to produce misleading and inconsistent results. . . . We are just beginning to get sophisticated enough to advance from the stage of grossly comparing televised instruction with ordinary instruction to the stage of finding out how this new medium can be used most effectively and what particular problems it can best be used for." He then refers briefly to examples of experiments that have tested significant variables, such as audience participation, which has been demonstrated to improve learning from films primarily because it guarantees practice of the correct or desired responses.

The volume has some important shortcomings that should be mentioned. It does not, perhaps, present a complete summary of the relevant research that has been done. For example, in my judgment, the systematic program of research on audio-visual communication carried on under the auspices of the U.S. Air Force, directed by A. A. Lumsdaine, and that carried on under the aegis of the Navy's Special Devices Center, which includes the research of C. R. Carpenter and his associates at Pennsylvania State University, are highly relevant to problems of television instruction. Some of these are referred to in the selected bibliography on pages 224–226. I would particularly like to call attention to "Graphic Communication and the Crisis in Education," by Miller *et al.* [*Audio-Visual Commun. Rev.* **5** (1957)] and to *Learning from Films* by Mark A. May and A. A. Lumsdaine (Yale Univ. Press, New Haven, 1958).

In spite of this shortcoming, all college and university officers as well as television producers concerned with educational programing will find that *College Teaching by Television* is a report very much worth reading. It provides a good account of experience to date in the use of television in collegiate instruction.

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The Motivation, Productivity, and Satisfaction of Workers. A prediction study. A. Zaleznik, C. R. Christensen, F. J. Roethlisberger, with the assistance and collaboration of George C. Homans. Graduate School of Business Administration, Harvard University, Boston, Mass., 1958. xxii + 442 pp. Illus. $6.

This is a worthy successor to the noted Hawthorne studies of industrial behavior, to which it is ideologically related. A major conclusion of the Hawthorne research, it will be recalled, was that social factors play a major role in determining worker productivity and satisfaction. The present study attempts to apply a precise research design which will verify (or reject) a variety of hypotheses set up to predict the levels of productivity and satisfaction of industrial workers.

Three theories of worker motivation