

RESEARCH ABSTRACTS

■ AV AIDS

Dean, Harold R.

A Study of the Effectiveness and Use of Audio Visual Aids Produced by the Boy Scouts of America. New Brunswick, N.J.: National Council, Boy Scouts of America, 1962. 114 pp.

Purpose: To determine the strengths and weaknesses of specific audiovisual materials and blocks to effective use of the materials. To develop a continuing program of testing new materials that will make possible more effective production techniques.

Procedure: The study was carried out in four directions. These included (a) a study of the effectiveness of audiovisual aids, (b) a study of their use, (c) a collection of technical information, and (d) a series of workshops to review administrative procedures. Effectiveness was defined in terms of content comprehension rather than behavioral change. The semantic differential scales and open-ended questions were used with reference to eight visuals. Comments were written on the scripts, and conferences were held with 19 experts on audiovisual materials.

Results: A process for pretesting films and filmstrips was developed. It involved (a) testing by the writer as he develops the visual, (b) testing on the audience to determine the knowledge comprehension and knowledge gain, (c) testing in use, and (d) testing for behavior change. Steps were outlined for initiating and producing audiovisual aids; research findings on the effects of audiovisual aids on learning of facts, skills, attitudes, and learning in general were outlined; and obstacles to the use of the materials were given. —L. TWYFORD

New York State Education Department

■ TELECOURSES

A Guide To Films, Kinescopes, and Videotapes Available for Televised Use, Winter 1962-63. Instructional Television Library Project. Great Plains Regional Instructional Television Library, Assenmacher Building, the University of Nebraska, Lincoln 8, Nebraska. Northeastern Regional Instructional Television Library, Eastern Educational Network, 238 Main Street, Cambridge 42, Massachusetts. National Instructional Television Library, 10 Columbus Circle, New York 19, New York. 55 pp.

Purpose: To describe telecourses available from distributors for broadcast or closed circuit use, and to list courses being planned or produced as well as selected publications on instructional television.

Procedure: The guide, originally published in the Spring of 1962, was revised. Courses were neither endorsed nor recommended. Descriptions included title, number of lessons, length of lesson, video tape, kinescope or film, short statement of content, year produced, teacher, producing agency, distributor, and other TV users of the course.

Results: The total number of courses described was 282. Of these 120 were for elementary grades, 58 for secondary, 82 for college, 14 for adult, and 8 for in-service teacher education. Courses are made available from the listed distributor. Sample lessons and teachers guides are often available. Courses were listed by subject area and level of education. Seventy-nine producing agencies were involved. Ten selected publications on instructional television were listed and described.

—L. TWYFORD

■ PROGRAMED INSTRUCTION

Wittrock, M. C.

“Response Mode in the Programing of Kinetic Molecular Theory Concepts.” *Journal of Educational Psychology* 54: 89-93; April 1963.

Purpose: To discover whether the overt response of verbalizing words in programed instruction is more effective than just watching a program and listening to it.

Procedure: Eighty first and second grade students were divided into two groups of 40 students each, according to mental age, chronological age, IQ, and sex. The verbalizing group watched a program designed to teach kinetic molecular theory which consisted of projected slides and tape recorded commentary. The students verbalized their responses to completion items during pauses in the taped commentary. The control group followed the same program, but was not required to verbalize their responses. The program consisted of eight parts, 15-20 minutes in length, administered over an eight-day period. After the instruction a 10-minute individual standardized interview was given followed by a written, multiple-choice group test. One year later the written test was repeated.

Results: Verbalization was found to enhance learning for children of average or below average ability. It was found to add nothing to children of high scholastic ability. After one year this difference could not be detected. This study confirmed that primary school children can learn, retain, and transfer rudiments of kinetic molecular theory.

—L. TWYFORD

Engstrom, John, and Whittaker, James O.

“Improving College Students’ Spelling Through Automated Teaching.” *Psychological Reports* 12: 125-26; February 1963.

Purpose: To compare two methods of college remedial spelling study—a linear program and conventional study.

Procedure: The program consisted of 30 common words frequently misspelled in college. Each word was treated in two frames. The first frame merely asked the subject to copy the word, and part of the word most frequently misspelled was underlined. In the second frame a positive clue was given and an association was made with another similar word to help remember it.

Sixty subjects were selected from an introductory psychology course and randomly assigned to two groups. The experimental group studied the linear program. The control group merely studied the words themselves. Both were limited to 15 minutes.

Results: An immediate posttest showed a significant difference at the .01 level of confidence in favor of the experimental group. A posttest four and one-half weeks later showed greater differences still significant at the .01 level of confidence.

The authors conclude that the experimental method is useful. They point out that they did not use the method for introducing new words, but only to improve spelling of words already known to the college student. —P. WENDT

Southern Illinois University, Carbondale

■ TRAINING PROCESS

Kinkade, Robert G., and Kidd, J. S.

“The Use of an Operational Game as a Method of Task Familiarization.” *Journal of Applied Psychology* 46: 1-5; February 1962.

Purpose: To determine if an operational game embodying the basic features of a radar air-traffic control simulator in a highly abstract manner could improve performance on the simulator.

Procedure: The simulator reproduced the radar system by an analogue computer device, telephone lines, and training individuals who gave appropriate verbal responses over the telephone lines. The operational game consisted of a game board and a set of metal tokens. The purpose was to move the tokens over the specific routes from an initial position on the periphery of the board to a central goal; the aim was to minimize the number of moves involved in getting a token from the periphery to the goal, a situation comparable to the air traffic control task. All 20 subjects were given six hours for preliminary indoctrination. Two groups of 10 then were chosen at random and divided into five teams of two each. One group was given six hours of practice in the operational game while the other five teams went directly to the simulator.

Results: At the beginning of the criterion task the teams having had familiarization from the operational game had initially an advantage of approximately 2 to 1 in terms of mean percent delay in approach. This advantage was reduced during ten 30-minute trials, but ended at 35 percent difference on the final trial. Compared in terms of number of aircraft processed, the operational game team again had a sustained advantage. The authors conclude that the operational game facilitated the training process, but they caution that the game was really a simulator of a simulator which makes generalizations hazardous. They also indicate that a larger sample would have been desirable. —P. WENDT

■ CCTV

Chabe, Alexander M.

“An Experiment with CCTV in Teacher Education.” *Peabody Journal of Education* 40: 24-30; July 1962.

Purpose: To determine the effectiveness of observation of instruction via CCTV and to determine the nature and extent of closed circuit televising problems.

Procedure: The subjects were 18 junior teacher education students who, in observing a fifth grade social studies class, were divided into two groups, classroom observers and televiewers. The televiewing group was further subdivided, with one group utilizing a teacher-prepared guide sheet and the other group televiewing directly.

Results: (1) As to the nature and extent of the generalizations formulated, guided televiewing was almost as effective as actual guided classroom observation. (2) TV viewers using the lesson plan-guide sheet were almost twice as effective in formulating generalizations as were those TV observers without the lesson plan-guide sheet. (3) In regard to pupil skills being developed as viewed by both control and experimental groups, the TV viewers using the lesson plan-guide sheet were almost as effective as the classroom observers with the lesson plan-guide sheet. (4) TV viewers using the lesson plan-guide sheet were most effective in viewing the development of pupil skills than were those TV viewers without the lesson plan-guide sheet. (5) For all general purposes, neither the control (classroom observers) nor the experimental group (TV viewers) was able to identify any development of attitudes and/or appreciations by the pupils. This may be due to the subtle nature of those two objectives. (6) The experimental group (TV viewers), on the average, encountered more viewing problems both in number and nature than did the control group (classroom observers). (7) Most of the CCTV production problems can be alleviated or eliminated through (a) the utilization of additional and better technically developed equipment; (b) the improvement of the classroom physical environment; and (c) the employment of needed technical personnel.

—A. CHABE

State University of New York at Fredonia