

COMPARATIVE EFFECTIVENESS OF TRAINING AIDS

VRIS, THOMAS. *A Comparison of Principles Training and Specific Training Using Several Types of Training Devices.* Technical Report SDC 269-7-102. Research by the Instructional Film Research Program, Pennsylvania State University for the Special Devices Center, Office of Naval Research, Port Washington, L. I., N. Y. 28 p. July 20, 1955.

Purpose: This study was done to discover whether three-dimensional training aids might be used to advantage to teach motor skills. Previous research studies have shown that there is no significant difference in the instructional effectiveness of graphic materials, models, and cutaways for teaching factual information. The research was designed so as to discover whether teaching of general principles of performing a skill (principles training) was more effective than teaching the specific operation (specifics training).

Procedure: The perceptual-motor skill used in this study was the operation of sound motion picture projectors. The three instructional aids to be compared were (a) an Ampro projector, (b) a three-dimensional modification of the Ampro projector, and (c) a two-dimensional representation of the three-dimensional modification. The two training procedures compared were (a) specifics training in which the specific operation was demonstrated and the steps were explained, and (b) principles training which was similar to specifics training but was supplemented by stated reasons why various steps are performed in the operation. A performance test on the Ampro projector was used to measure learning. A performance test on a Bell and Howell projector was used to measure response generalization. In an audio-visual course, 144 college students were used in the experiment.

Results: For teaching a complex motor skill it was found that (a) a three dimensional model and the actual equipment were equally effective and each is better than a two-dimensional aid, (b) when the task must be performed on other related equipment it is better to teach principles rather than specifics, and (c) principles training and specifics training were equally effective methods of instruction when two-dimensional aids were used. It was recommended that three-dimensional aids be used in preference to two-dimensional aids for teaching motor skills such as the one studied. If it is likely that the training aid will be used to teach a skill to be applied to related equipment then the instruction should emphasize the principles involved.—L. Twyford

MURNIN, JOSEPH A. *Comparison of Training Media: Transfer of Principles Involved in a Manipulation Skill; Operation of the Aircraft Load Adjustor Slide Rule.* Technical Report SDC 269-7-103. Research by the Instructional Film Research Program, Pennsylvania State University for the Special Devices Center, Office of Naval Research, Port Washington, L. I., N. Y. 36 p. September 20, 1955.

Purpose: This study was done to give evidence on the value of a transparency, a trainer, and the actual equipment for providing transfer of training in teaching the manipulative skill of operating the aircraft load adjustor slide rule. Previous studies indicated that a mockup, cutaway, and chart were equally effective for teaching conceptual information but that a model was superior for teaching a skill.