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A Study of the Learning Effectiveness of a Sound Motion Picture, Electrostatics, in College Physics

C. J. Lapp
State University of Iowa

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SOME FACTORS AFFECTING ACHIEVEMENT IN PHYSICS IN A SURVEY COURSE IN THE PHYSICAL SCIENCES

W. H. KADESCH

A study was made of the gains in physics achieved by different groups. Those who presented high school credit in physics for college entrance made a greater average gain than those who did not, but a smaller percentage of gain. Those whose intelligence rating was in the upper fifty percentile made a greater gain than those in the lower fifty percentile, but a smaller percentage of gain.

IOWA STATE TEACHERS COLLEGE,
CEDAR FALLS, IOWA.

A STUDY OF THE LEARNING EFFECTIVENESS OF A SOUND MOTION PICTURE, ELECTRODYNAMICS, IN COLLEGE PHYSICS

C. J. LAPP

Many findings have been made concerning motion-picture effectiveness as a teaching technic for school pupils, but little similar work has been done on a college level. The new sound film "Electrodynamics" produced by Erpi Picture Consultants was studied in detail to find: (1) The learning produced by two showings of the film; (2) The effect of an additional stimulus to learning in the form of a study sheet to be used during the class hour when the picture was shown; (3) The variation in the first two effects with class quartiles; (4) The ability to transfer new learning to specific situations not used in the picture; (5) The effect of knowing facts about a principle on the ability to transfer and use the principle in a new situation. Within the limits of the technique used, it was found that: (1) The teaching effectiveness of this sound film was considerably increased by the supplementary use of a study sheet; (2) The study sheet decreased the teaching effectiveness in some areas; (3) The study sheet had its greatest effectiveness in next to the highest quartile; (4) The study sheet

confused many students in the lowest quartile; (5) Certain strengths and weaknesses in the teaching power of the film "Electrodynamics" are pointed out; (6) There is evidence that the greater the "sureness" an individual has about a fact or group of facts, the more likely he is to use it in a transfer situation.

STATE UNIVERSITY OF IOWA,
IOWA CITY, IOWA.

A SUGGESTION FOR THE TEACHING OF ELECTRICAL
POTENTIAL

C. J. LAPP

Electrical potential is one of the basic concepts in elementary theory. Without a clear understanding of it, electrical theory is difficult. The writer has been experimenting for six years on the presentation of this topic with little success. It was finally decided that the inherent difficulty of the concept was much greater than had been previously thought. This year a new method was tried. It took into account the great inherent difficulty of the concept and produced the best results of any method tried to date. The potential was presented in terms of both the water and the heat analogues.

STATE UNIVERSITY OF IOWA,
IOWA CITY, IOWA.