

A STUDY OF THE INTERRELATIONS OF ATTITUDE AND ACHIEVEMENT MEASURES IN AN AUDIO-TUTORIAL COLLEGE CHEMISTRY COURSE

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Introduction

The audio-tutorial (AT) method of instruction was instituted with the desire to promote the instruction of all students in science, regardless of previous educational success or failure. Early attempts at AT instruction were remedial in nature, and as the method gained more recognition, efforts were made to extend these early successes to produce a new method of instruction that would be more attractive to all types of students. Thus, AT seems to have been regarded as a method of instruction whereby there might be a more equal opportunity for achievement regardless of students' previous achievement record. In addition, many have suggested that the less confining learning atmosphere of AT would be judged as attractive by a wide range of students. At the University of Maine (Orono), we have begun a series of studies designed to unveil possible relationships among premeasured affective and cognitive variables and AT course outcomes. The first of these studies (Pare, 1973) examined predictor variables and outcomes in a predominately female population of students. The course studied was given to freshmen- and sophomore-level preservice elementary teachers and presented selected topics in the physical sciences to them. This study is the second to be reported in the series. It differs from the first especially in that the sample was derived from the all-male population then taking chemistry at the Maine Maritime Academy. The AT chemistry course was specially tailored to the needs of the Maritime Industry.

Pare (1973) found little relationship among premeasures of attitude and postmeasures of achievement. However, he did find strong, direct relationships between premeasured achievement and course grade. Most notable in his findings were relationships between pretest scores on physical science achievement and course grade, as well as between previous grade-point average and course grade. Generally, previous achievement was the best predictor of current achievement of all cognitive and affective measures included.

The object of this study is to determine if the same relationships among the same classes of variables existed in a very different setting. If it can be shown that prior achievement is the primary effective predictor of current achievement, then some of the assumptions regarding the AT method need to be called into question. Thus, if there continues to be a strong relationship between measures of past achievement and current achievement and little relationship can be