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A STUDY OF THE RELATIONSHIP BETWEEN STUDENT
ATTITUDE TOWARD SCIENCE AND USE OF
THE CHEMISTRY HELP ROOM AND THE
PHYSICS ACTIVITIES CENTER

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by 349 5839

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Chapter 1

INTRODUCTION

In recent years there has been an increased trend in education toward individualization of instruction at the elementary and secondary school level. This is reflected in the new curricula designed for individually paced progress and the numbers of schools utilizing modular scheduling which is particularly adaptable to individualized programs. Many of the new curricula in science are designed to be used by the student in a self-paced program.

In contrast to procedures used in elementary and secondary schools, college science education, particularly in large universities, has been organized around a large lecture format. This format does not allow even the most conscientious instructor to interact on a one-to-one basis with a large portion of his students. As a consequence of this situation, the student is a passive observer rather than an active participant of lectures and demonstrations.

The Chemistry and Physics Departments at Kansas State University operate facilities designed to provide more personal involvement and individual attention for the student. The Chemistry Help Room is open about 40 hours a

week to any student in an introductory chemistry course. The Help Room has been in operation about five years, and was organized specifically to offer the student an opportunity to get the one-to-one assistance in his study of chemistry that is normally unavailable in the large lecture class. The room has study tables, and is staffed by a Teaching Assistant who is there to offer assistance to students. Materials available to students are problem sets, old examinations, laboratory exercises, work books, programmed study aids, supplemental texts and a few film loops and projectors. The purpose of the room is "to provide a place, a person and the materials so the serious student can readily obtain assistance in his study of chemistry."¹

The Physics Activities Center is open about 15 hours a week to any interested student. The Activities Center has been in operation one year. The Center was patterned after the Exploratorium in San Francisco.² It is a place where the student could become actively involved with physics. The room contains an electronic calculator, five carrells which contain film loop projectors and/or optics related experiments, and several other "activities" set up in other parts of the room. The room is staffed by a graduate or upper-level undergraduate student. Available to the student is a large library of 8-mm film loops, a selection of activities that may include experiments and apparatus related to topics under discussion in the classroom and laboratory, lecture demonstrations that have been used in recent lectures, and