

A STUDY OF THE RELATIONSHIP BETWEEN THE RATE OF
SUBJECT MATTER PRESENTATION AND ATTITUDE AND
ACHIEVEMENT OF HIGH SCHOOL GEOMETRY STUDENTS

by

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CHAPTER I

INTRODUCTION

In 1957, Sputnik I was successfully lifted into orbit by the Soviet Union. Little did anyone realize at the time the impact that it would have on education in the United States in general, and mathematics education in particular. In the early 1950's efforts by such groups as the Commission on Mathematics and the University of Illinois were underway to develop a new secondary school mathematics curriculum. Preliminary reports and materials were becoming available just prior to the launching of Sputnik but little hope was given for their future due to lack of support both financially and publicly. However, the flight of Sputnik, more than any other technological event, caused the problems of mathematics education to be thrust into the public spotlight. Much like a catalyst in a chemical reaction, Sputnik acted to free federal funds for the purpose of developing, discarding, and renovating the content of mathematics courses. The School Mathematics Study Group, Ball State, and the University of Illinois were among several curriculum groups that became the recipients of the newly released funds and within a relatively short period of time the results of their efforts in the form of modern mathematics program materials became available.

The prevailing attitude among many people was and

probably still is that the new materials would more or less take care of any problems that the students had with comprehension, retention, and other assorted learning disabilities. There can be little doubt that the federal funds released by the catalytic action of Sputnik I allowed the development of the finest mathematical materials that this nation had ever known. However, in spite of the fact that improved mathematical content is necessary, it is not, in itself, a sufficient means to achieve the mathematical literacy that our society requires now and in the future. Consequently, the area of mathematics education which demands immediate attention is that of how to teach mathematics or in other words methodology.

The Problem

There are many aspects of methodology that are open to questioning. One such part is that of the rate or pace at which subject matter is presented. This particular aspect of methodology was the object of scrutiny in a study conducted over a 24 week period in the 1971-1972 school year at Shawnee Mission Northwest High School in Shawnee Mission, Kansas. This paper is a report of that study which utilized 191 geometry students at Northwest and which was designed to measure the relationship between subject matter pacing and the attitude and achievement levels of the students.

An attitude scale developed by Lewis R. Aiken was used