

BEHAVIORAL OBJECTIVES  
for  
KINDERGARTEN MATHEMATICS

AN ABSTRACT OF  
A THESIS  
PRESENTED TO THE GRADUATE FACULTY  
OF WESTERN CONNECTICUT STATE COLLEGE

IN PARTIAL FULFILLMENT  
OF THE REQUIREMENTS FOR THE DEGREE  
MASTER OF SCIENCE

by  
Leona A. Ward  
March 1971

Mathematics for kindergarten is still regarded by many as an amusing topic, not to be taken seriously. Others including educators, mathematicians, psychologists and interested laymen are examining the state of kindergarten mathematics.

Classroom teachers of kindergarten use various methods in teaching mathematics to five-year-olds. The more traditional method is the incidental, experiential type, based on incidents and experiences of the day. The teaching will usually take place for a total group of twenty to thirty children, occasionally it will be a small group or a single child. Manipulative devices have come into use, bringing more structure to the math programs. Workbooks for kindergarten are available with most mathematics series. Manipulative devices and workbooks are being used in numerous kindergarten classrooms, usually for total group instruction.

With the workbooks and more structure has come the use of more abstract ideas and materials at an earlier age. Some children thrive under these conditions; others are lost and early in their school careers become convinced that mathematics means failure for them.

The problem for the kindergarten teacher is how to teach mathematics to five-year-olds in an effective way and have the children meet success.

A literature search was conducted: What is the five-year-old's developmental level physically, socially, emotionally, and intellectually? What do the mathematicians and educators recommend for mathematics for kindergartners? On the basis of their recommendations and the experience of teaching kindergarten for six years, the appropriate mathematical concepts were determined. To cope with the variation of mathematical interests and abilities exhibited by five-year-olds, the idea of a continuum of behavioral objectives for kindergarten mathematics came about.

The literature was also consulted about behavioral objectives. Some authors recommend the use of objectives; others find them unnecessary. Mathematics is one area where many agree behavioral objectives can be valuable.

The continuum of behavioral objectives was written for the seven concept areas which had been chosen. The continuum includes a wider range than is usually presented in curricula for five-year-olds because in real life school situations kindergartners are in varying stages of development. A description can be given of the typical five-year-old, but each child is different.

Each concept area was broken down into steps or segments and written in a specific pattern. Given stated materials or ideas, the child responds by performing specific steps. When he proves his competence with that objective, he moves to the next one. The continuum has been divided into four groups. Group I is for the least mature, less

mathematically oriented children: Groups II and III become increasingly difficult; Group IV includes objectives for the most mature, mathematically adept children. One can follow a concept area from group to group through a numbering system. A short test and a progress sheet has been included.

The continuum of behavioral objectives gives a visual progression of the early learning in mathematics which can be applied to children's needs. The individual or the small group in the kindergarten or the large group in an ungraded class can start on the continuum where they are and progress at the pace which best allows them to find understanding and success.