

AN ABSTRACT
of
DEVELOPMENT OF CONCRETE
RELATED TO MAP
CRACKS AND UNDERSTANDING

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ABSTRACT

The individual learns to know his world through the data that come to him by way of his sense organs. This process is called perception.

Concepts result from the elaboration and combination of sensory data. Early concept formation is based on concrete experiences. Later many of the child's concepts are based on vicarious experiences. Thus, concepts are complex and go from concrete to abstract as they change with experience and new knowledge on the child's part.

Generalizations are on a higher level than are concepts. Brownell and Hendrickson state that a generalization is any verbalized formulation of a relationship which is of broad applicability.¹ As the child's collection of sense meanings and words grow, he slowly begins to generalize and eventually reaches a stage where he does a great deal of generalizing. His efforts at generalizing carry him into the field of abstract thinking and the development of abstract meanings for words.

Words are used to represent or symbolize specific meanings and to state relationships in experience. Words also

¹W. A. Brownell and G. Hendrickson, "How Children Learn Information, Concepts, and Generalizations," The Forty-Ninth Yearbook of the National Society for the Study of Education Part I (Chicago, Illinois: The University of Chicago Press, 1950), pp. 92-128.

serve as the means of classifying experiences in terms of their common characteristics. Sentences help to organize words and their meanings in relation to one another.

Despite the present day emphasis on learning through first hand experiences and the use of visual aids, surveys show that, as compared with other media of instruction, language plays the predominant role.

Three groups of factors which help determine the success with which a realistic concept is made are (1) the difficulty of the concept to be made; (2) the adequacy of the language in which it is presented; (3) the student's funds--his interest, mind set, experience, language abilities, and habits of work. In making a concept these three groups of factors are interrelated.

It is the quality and not the quantity of the concepts which is important. A student with well developed concepts and generalizations has rich funds which can be utilized in the formation of new concepts. The teacher should remember that all the ramifications of a concept cannot be learned at once. With experience a particular concept is clarified and expanded.

The children of Morris Street School entering the fourth grades usually have very little previous experience in working with maps and globes. Most of the concepts which the children have formed in the social studies area deal with community affairs. Therefore these children have a limited experience background from which they can draw the concepts,

generalizations, and language necessary to the understanding of globes and maps.

The fourth grade demands the development of map skills because of the content of Siega's textbook¹ which comprises a major part of the curriculum. Unit One discusses the discoveries and explorations of the Spanish, English, French, and Dutch in North America. Unit Two deals with the settlements which these people made in the lands claimed by the explorers. Unit Three is the story of the growth of New York, New Orleans, Seattle, Minneapolis, Pittsburgh, and Phoenix. Unit Four discusses the lives of ten distinguished Americans. Unit One was selected for analysis because it has been the most difficult unit for the children to understand.

In making the analysis of Unit One in Siega's textbook² every sentence which refers to maps or map symbols was extracted from the text. Each quotation was categorized to indicate (A) whether the text assumes the children know how to use maps, or (B) whether it teaches the children how to use them. These quotations were then arranged into four categories: (1) Direction, (2) Relative Location, (3) Map Symbols, and (4) Scale.

The adequacy of the language was studied to determine whether the textbook writer:

uses familiar terms

¹Josephine Mackenzie, Ernest W. Siega, and Fay Adams, Your People and Mine, (New York: Ginn and Company, 1955).

²Ibid.

uses terms previously defined or explained in the text
defines terms
defines some terms and not others
clarifies terms by using maps in the text
leads children to discover meanings of terms
uses unfamiliar terms in a context which can be clarified by the teacher

Attention was also given to the maps found in the unit. They were analyzed to note the type of maps, map symbols, and scales used.

It was found that if the children are to grasp the content of Unit One, they must have prior instruction in these basic map skills:

1. understanding of continent and ocean
2. understanding of globe, map, globe map, flat map
3. understanding of north pole, south pole, north, south, east, west, equator
4. understanding of some map symbols - north arrow, blue for water, brown for land, broken red line for the routes of explorers.
5. knowledge of the relative locations of the major continents and oceans
6. understanding of Eastern Hemisphere and Western Hemisphere

After the children have mastered these map skills they are ready to read Unit One in Your People and Mine.¹

¹Ibid.