DOCUMENT RESUME

ED 033 142 TE 499 909

By-Fancett, Verna S.; And Others
Social Science Concepts and the Classroom.
Syracuse Univ., N.Y. Social Studies Curriculum.
Pub Date 68
Note-64p.
EDRS Price MF-$0.50 HC-$3.30
Descriptors-Cognitive Development, Cognitive Processes, *Concept Formation, *Concept Teaching, Fundamental Concepts, Generalization, *Learning Processes, Secondary Education, Social Sciences, *Social Studies, Teaching Methods

Intended to introduce teachers to the concept approach in teaching social studies materials, the five chapters of this publication discuss (1) a definition of "concept" and the term's relationship to facts and generalizations, (2) the function of concepts in the social sciences, (3) how concepts develop, (4) how concepts are related to inquiry and the act of discovery, and (5) how teachers can use concepts in instructional activities. A bibliography on concepts and thinking in relation to the social studies is included. (MP)

SOCIAL SCIENCE CONCEPTS AND THE CLASSROOM

By

VERNA S. FANCETT

and
Eunice Johns
Warren L. Hickman
Roy A. Price

SOCIAL STUDIES CURRICULUM CENTER at Syracuse University

This publication made possible through
the Syracuse University Social Studies Curriculum Center

Library of Congress Catalog Card: 68-28367

For additional copies write to:

Social Studies Curriculum Center
409 Maxwell Hall
Syracuse University
Syracuse, New York 13210

Price per single copy is $1.50.

For orders of more than 10 copies to a
single address—$1.25 each.

Please enclose remittance with order.

Printed by Syracuse University Press, Printing Division

FOREWORD

It is not our intention to present this brief discussion of the *Social Science Concepts And The Classroom* as a definitive study of the conceptual approach to social studies. Rather, it is meant as an introduction to the growing body of material devoted to the concept approach. We have felt this to be a useful guide for the busy teacher; a summary of much of our thinking and that of numerous scholars, prepared for the hard-pressed teacher unable to collect and review the pertinent literature. We suggest the reading of *Major Concepts For The Social Studies* as a prelude to the *Social Science Concepts And The Classroom.*

The Social Studies Curriculum Center at Syracuse University is indebted to Mrs. Verna S. Fancett, and to the Jamesville-Dewitt Central School which gave her a semester's leave of absence to research and develop the materials herein. As senior author, Mrs. Fancett drafted, condensed, and re-drafted with an eye constantly cocked in the direction of the busy practicing teacher.

Dr. Eunice Johns offered suggestions incorporated in the final manuscript as well as drafting certain additional paragraphs for the early chapters. Dr. Warren L. Hickman worked closely with Dr. Johns and was editor of the final manuscript.

Social Science Concepts And The Classroom again emphasizes the advantages the Social Studies Curriculum Center has found in melding the backgrounds and efforts of experienced classroom teachers and university personnel.

Roy A. Price

Chapter I

THE MEANINGS OF CONCEPT

Conceptual teaching has become a byword at teachers' conferences and in curriculum centered publications. Nearly everyone seems to agree that the development of concepts in the classroom is essential in modern teaching. Yet, at every sizeable gathering of teachers someone is likely to request a definition of *concept.*

Psychologists, educators, and other scholars have offered numerous descriptions of a concept. These vary from what some call ideas to what still others label as generalizations. The few selected summaries and statements of definition below, drawn from scholars contributing to the field, indicate the context in which the term is most often used. These excerpts also reveal some common grounds of agreement among the various authors as to the meaning of the term "concept."

Some Definitions of "Concept"

David H. Russell, the psychologist, describes a concept as follows:

> ...a concept is a generalization about related data. It is a more-or-less stable percept. When the child has learned to distinguish cats from other animals, whether cats are large or small, black, white, grey, ginger, or tortoise-colored, he applies the word *cat* to the class of ideas and uses a concept. As a result of a number of related experiences he may conclude, "Men are stronger than women," and since this is a phenomenon which applies to many specific cases, it is called a generalization, and by some writers a concept. The concept, of course, is usually organized as a result of a group of related sensations, percepts, and images with a label attached to them. The label is practically always a verbal symbol or symbols. The child's concepts reflect his understanding of his world. They assist him to classify his experiences and give meaning to them. They are...an important element in thinking...[1]

Brownell and Hendrickson first define words as arbitrary associations–the names given to objects, persons, events. They then offer a description of a concept which includes an illustration of the way one's concepts change:

> A concept is far more than a "word," far more than an arbitrary association. . A concept is an abstraction. The concept "river" is appropriately applied to a given object, but it is not properly restricted to that one object...
>
> As a matter of fact, concepts as abstractions may relate to nothing which is immediately and directly available to sense. "Charity", for example, is not to be observed as such in the behavior of people. Rather, it is an intangible quality. It is a deduction, an inference, from many instances of behavior which are analyzed and compared with respect to a special kind of purpose or of consequence.

[1]David H. Russell, *Children's Thinking,* (Boston: Ginn and Co., 1956), pp. 68-69.

The basic processes in acquiring concepts of whatever sort are those of differentiation and integration (or synthesis.) Consider the differences between the child's and the adult's concept of "mother." A single individual has first to be differentiated from other people, and at this time "mother" is one particular person. Differentiation occurs through noting personal characteristics peculiar to this person and forms of behavior performed by this individual and none other. But as the child grows older, changes occur in this person's behavior; it is no longer completely beneficent; it may include punishment. And these new experiences must be integrated with the old. Only by stages, only by differentiating among and integrating new perceptual, motor, ideational, and emotional experiences involving the one "mother" and then others, does the child advance toward the adult concept. Nor did the adult's concept remain unchanged. Almost inevitably when he himself becomes a parent, and then a grandparent, his concept of "mother" undergoes modifications.[2]

I. James Quillen and Lavone A. Hanna describe a concept in the following terms:

A concept is a general idea, usually expressed by a word, which represents a class or group of things or actions having certain characteristics in common. Concepts give order and meaning to experience. For example, the concept "horse" connotes a group of animals with certain readily identifiable common characteristics. Unfortunately, social studies concepts are not always so easy to define as this example. Even after long periods of study, one is unable to comprehend fully the concept "democracy." This concept involves not only people and things but also ideas and values, and it is perhaps impossible to plumb completely the depth of its meaning. It is important for the teacher to realize that the word used to designate a concept–"democracy" or "horses"– *only symbolizes the real content,* the pattern of insights and meanings which the word evokes in the mind of an individual. Thus, while words remain the same, the concepts for which they stand constantly grow and change in meaning.

Percepts–mental products which result from sensory experiences through sight, sound, touch, taste, and smell–are the raw materials of thought concepts, are generalized abstractions developed from percepts based on present experience and on the memories and mental images of past experience. Thus clear thinking must begin with accurate perception.[3]

In a paper prepared for the Teacher Education and Media Project, Ashael D. Woodruff provides a general definition of a concept:

A concept is a relatively complete and meaningful idea in the mind of a person. It is an understanding of something. It is his own subjective product of his way of making meaning of things he has seen or otherwise perceived in his experiences. At its most concrete level it is likely to be a mental image of some

---

[2]William A. Brownell and Gordon Hendrickson, "How Children Learn Information, Concepts and Generalizations", *Learning and Instruction,* 49th Yearbook, Part I, National Society for the Study of Education, (Chicago: University of Chicago Press, 1950), pp. 98-112.

[3]I.J. Quillen and L.A. Hanna, *Education for Social Competence,* (Chicago: Scott, Foresman and Co., 1961), pp. 187-188.

is a synthesis of a number of conclusions he has drawn about his experience with particular things.[4]

Types of Concepts

Russell proposes eight types of concepts, with the observation that they overlap in content and that, in any one situation, a child may be employing concepts from several of these categories:

- Mathematical concepts (number, quantity, space)
- Concepts of time
- Scientific concepts
- Concepts of the self
- Social concepts
- Aesthetic concepts
- Concepts of humor
- Miscellaneous concepts (such as war, death, adult life)[5]

Another classification of concepts is provided by Bruce R. Joyce. He uses the term *organizing concepts* in a sense identical with that of Jerome Bruner's word *structure*. Joyce states that "organizing concepts" indicate relations between facts, organize the knowledge of a discipline, and guide research for more knowledge. He identifies three types of organizing concepts and explains each:

> OBSERVED CONCEPTS. An observed concept is formed by noting similarities, differences, or relations between objects that can be apprehended directly by the senses, such as verbal statements, physical actions, or objects...
>
> INFERRED CONCEPTS. An inferred concept, on the other hand, "points to unseen events which can only be inferred from some more immediately observed phenomena. This concept is most easily understood by comparison with observed concepts... While observed concepts are made about things that are seen, inferred concepts are made about things that are not seen directly but are inferred from things that are perceived... For example, the child cannot see values directly, but by observing actions he may be able to infer "what is important" to people.
>
> IDEAL-TYPE CONCEPTS. A third kind of concept refers to very general classes, called ideal types... These Concepts are created in the same way as observed and inferred concepts. That is, they are made by observing similarities or differences in relations. But they refer to such complex or large-scale phenomena that they are "ideals" that have no perfect representative in reality. Thus we speak of Cannes, Nice, Brighton and Atlantic City as resorts. And they are resorts. But that is not all they are. There is no place, in fact, that is purely and simply a "resort city." But the concept is still useful. They enable us to classify large masses of information...

---

[4]Herbert F. LaGrone, editor, *A Proposal for the Revision of the Pre-Service Professional Component of a Program of Teacher Education*, (Washington: The American Association of Colleges for Teacher Education, 1964), pp. 2-3.

[5]Russell, op. cit., p. 125.

We refer to *socialism, nationalism, free enterprise,* and the like, enabling us to describe the characteristics of large-scale events, social movements, and trends that have something in common but may be only loosely related.[6]

The Syracuse University Social Studies Curriculum Center

The major work of the Syracuse University Social Studies Curriculum Center has been directed toward the *identification* of social studies concepts and the *preparation of student material* for use in developing these concepts. No attempt has been made by the Center to develop a new or original definition of the term *concept* since this research would necessarily be exhaustive and could not be undertaken without jeopardizing the major purpose of the work of the Center. Consequently the staff of the Curriculum Center has used as a working definition the following composite statement drawn from the literature.

A concept is–

- an individual's own way of making meaning of things he has experienced.
- a mental image which assists a person in classifying his experiences, and which continually changes as his experiences accumulate.
- an abstraction or general idea in the mind of a person which represents a class or group of things or actions having certain qualities or characteristics in common.
- a synthesis of a number of things an individual has experienced and conclusions he has drawn about his experiences.
- Represented by a verbal symbol which indicates the real content of the insights and meanings the word evokes in the mind of an individual.

Although the reader may not completely agree with this definition of concept he is asked to accept the above statement for the purposes of the present discussion. It is expected that the way in which the Center has applied the term will become increasingly evident as the illustrative list of concepts is examined, and as the units prepared for use by students are read.

The Center has identified three types of concepts:

- Substantive concepts
- Value concepts
- Concepts of methods

---

[6]Bruce R. Joyce, *Strategies for Elementary Social Science Education,* (Chicago: Science Research Associates, Inc., 1965), p. 48ff. The author credits the origin of this classification, although using different terms, to anthropologist, John J. Honigmann.

Illustrative concepts were chosen under each of these three categories, and outlines to define them were developed. Substantive concepts selected include such items as *sovereignty, scarcity,* and *culture.* Value concepts include *loyalty, dignity of man, and freedom and equality.* Illustrative of the concepts of method are *cause and effect,* the *geographical approach,* and *the historical method.*[7]

The Relationship of Facts, Concepts, and Generalizations

Concepts are related to, but are different from facts and generalizations. They might best be described as "catalysts" between the two. The definition of each involves the role of each, and their roles aid in distinguishing among these terms.

The Role of Facts

Facts are items of information and data which can be checked for accuracy and which are generally accepted to be true. Facts are basic to the development of concepts, but their value is dependent upon their relevance and significance to the idea being developed. Facts promote precision in thinking, for they provide the evidence to support concepts and generalizations. But facts are not important simply for the sake of learning facts. When teaching is confined to imparting the facts it stops short of the goal of developing maximum understanding. Professor Morris R. Lewenstein of San Francisco State College describes the role of facts as follows:

> Facts are ascertainable bits of information. Scientists usually refer to a collection of facts as data. A single fact is unique. It is a single object or it is a characteristic of an object. Thus individual persons and events are facts. So are dates, locations, colors, and quantitative measurements of size, temperature, pressure, and other characteristics which can be measured. Statements of fact communicate information...
>
> Most social studies textbooks are filled with statements of fact... There can be no education without facts. However, the range of facts that might be included in any social studies curriculum is almost limitless.Facts are seldom important to be learned for their own sake. Therefore the instructor not only must make choices as to which facts he will teach, he must also aim to teach content which goes beyond the communication of facts and data. If he wishes to teach understanding, he must help students think about the facts that have been communicated. He must help them develop concepts and generalizations.[8]

---

[7]Roy A. Price, Warren L. Hickman, and Gerald Smith, *Major Concepts For the Social Studies.* (Syracuse University Social Studies Curriculum Center, 1965). This interim report briefly describes 34 major concepts, including the above illustrations.

[8]Morris R. Lewenstein, *Teaching Social Studies in Junior and Senior High Schools,* (Chicago: Rand McNally, 1963), pp. 82-83.

An unconnected set of facts "has a pitiably short half-life in memory," says Jerome Bruner. Furthermore, he notes, the only known way of reducing the quick rate of loss of human memory is the organization of facts in terms of principles and ideas from which they may be inferred. Bruner argues that skills learned in school transfer to activities encountered later, and that earlier learning increases the efficiency of later learning through the "transfer" of principles and attitudes.[9]

The following are examples of facts and information:

A modified market economy exists in the United States.

Charlemagne encouraged education in his empire.

The CCC was an agency formed to provide work and income for unemployed Americans during the depression of the 30's.

Napoleon was defeated at the Battle of Leipzig.

Concepts

Concepts are abstractions which refer to a class or group of objects, all of which have characteristics in common. Concepts apply to a number of related facts and observations, thus having a degree of generality that facts do not have. Concepts do not refer to single objects. Gertrude Whipple has explained a concept as follows:

> A child who uses the word, river, to refer only to a particular stream does not have a concept of a river. A child who uses "river" to designate any large natural flowing stream of water, distinguishing it from other bodies of water such as a pond, lake, canal, and the ocean, has acquired this concept, for he sees rivers as a class or group of streams.[10]

Concepts may refer to physical or material objects, or they may refer to more abstract ways of thinking about non-material phenomena or attitudes. Examples of the first type of concept are "mountain", "plateau", "desert." On an even simpler level a child may have a concept of "dog", but it has been said that the concept of "dog" can be reached only after the student has seen, felt and heard many dogs.[11] A concept on a still higher level would be "animal."

Words are not concepts. They may represent concepts when they refer to a class or category of ideas or things. Concept formation is, therefore, quite distinct from mere fact learning; it is also distinct from the committing of a definition to memory.

---

[9]Jerome S. Bruner, *The Process of Education,* (Cambridge: Harvard University Press, 1960), p. 7.

[10]Gertrude Whipple, "Geography in the Elementary Social Studies Program: Concepts, Generalizations, and Skills to be Developed", *New Viewpoints in Geography,* (National Council for the Social Studies, 1959) p. 113.

[11]Myles M. Platt, "Concepts and the Curriculum", *Social Education,* January, 1963, p. 21.

Concepts of the non-material type represent a greater degree of abstraction than the examples given above, and concepts of this type abound in the social studies. "Republic" is a concept, and "government" is another of a higher level of abstraction. In the same way the concept "city" and "urbanism" or "metropolitanism" reflect different levels of abstraction. The highest types of abstractions are found in concepts such as democracy, justice, liberty, rights and responsibility. Although these concepts cannot be seen as physical objects, they have meanings which have grown out of human experience.

Concepts are built as the learner is able to develop a general idea on the basis of his own experiences. No one can "give" a concept to the learner; he must develop it for himself. Concept development extends throughout life as one gains (or accumulates) a more mature understanding on the basis of his experiences, vicarious or direct. Consider, for example, the way the concept "power" expands as one's experiences accumulate.

Concepts provide short cuts which make it possible for us to think and to communicate with each other. They help us to organize information so that data take on new meaning as they are related to each other.

It would be neither practical nor possible to attempt to draw up a complete list of the concepts we attempt to build in the field of the social studies. What we can do is to agree upon some concepts that need to be built progressively throughout the student's experience in the social studies. Other concepts are over-arching in nature and apply to the total educational experience of each student. Value concepts, for example, can and should be built into all subject-matter areas.

Further examples of concepts selected by the Syracuse University Curriculum Center for emphasis include:

Substantive concepts:

Conflict–its origin, expression, and resolution
The Industrialization-Urbanization Syndrome
Secularization
Compromise and Adjustment
Comparative Advantage
Power
The Modified Market Economy

Value Concepts:

Empathy
Government by Consent of the Government

Concepts of Method–Techniques and Aspects of Method

Observation, Classification, and Measurement
Analysis and Synthesis

Objectivity
Skepticism
Interpretation

Generalizations

A generalization is a general statement or theory which states some relationship between or among concepts. It involves the statement of some principle that has wide applicability. A statement referring to only one event, region, or period is not a generalization. Generalizations are more complex than concepts, since the learner must understand the concepts involved before he can see the relationships between or among them.

Generalizations have been referred to as the "cognitive capstone" of a unit. They represent the peak of attainment in the recall or recognition of knowledge and the development of intellectual abilities and skills. Before students can develop or employ a generalization they must have developed concepts upon which the generalization is based.

In 1962, a research team at Stanford University made an extensive search of the literature of the social sciences for significant generalizations. This study has been widely quoted in social studies literature and the portion dealing with the nature of generalizations is most useful in making clear the distinction between concepts and generalizations:

> The team arrived at an operational definition of a generalization: for the purposes of this series of studies *a generalization is a universally applicable statement at the highest level of abstraction relevant to all time or stated times about man past and/or present, engaging in a basic human activity.*

In accord with this definition, the following statements must be made explicit:

1. The stated generalization, or the context in which it appears, shows that the author believes that there are no known exceptions.
2. The stated generalization is not limited by reference to specific geographic or cultural boundaries.
3. The facts upon which a generalization is based are not in themselves generalizations.
4. Neither a concept nor a definition is here considered to be a generalization and can appear only in the context of an otherwise acceptable generalization.
5. Opinions are not considered to be generalizations unless the specialist also reports that the opinion as a hypothesis has been tested and found to have no exceptions.
6. Generalization must have applicability to all places in all times, or be applicable to all places within a stated period of time.

7. Generalization can be either primary, statistical, or functional.
8. Generalization must deal with man in a societal orientation, not as an isolated individual.
9. Generalization must be applicable to man at the highest level of abstraction rather than to specific men or communities.[12]

The ability to generalize requires insight and comprehension on the part of the learner. It is for this reason that students need to develop their own generalizations, based on their own understanding, rather than have generalizations handed to them to memorize. Students must also learn to recognize data that contradict the generalizations they have developed. As students come to recognize generalizations they will discover many in the material they read and through the interchange of ideas in the classroom.

The following generalization illustrates the interrelationship of concepts and generalizations:

> Once nationalism, the sense of membership in a nation, has become aroused, people generally continue their efforts, despite obstacles, to achieve independence.

Three abstract concepts are involved in this generalization–nation, nationalism and independence. In addition to an understanding of these concepts, the student must have made some rather extensive observations concerning revolutions and other means of achieving independence before he could be expected to reach the conclusion stated in the generalization. Some writers object to qualifications of a generalization such as the word "generally" used in the example above. Others would hold that such qualifications are useful in preventing students from going beyond the evidence available to them. Some writers prefer to make the statement read "if (this condition exists) then..."

Another generalization avoids overstatement in a different way:

> One of the important needs of individuals, as well as of nations, is security. Time and again in recent years people have been willing to sacrifice their individual liberties to a political dictatorship in order to attain their national objectives, one of which is security.

An analysis of the generalizations below reveals the numerous concepts involved which must have meaning for the student before the generalization can be understood.

> Mankind in every part of the world, and in every time, has developed ethical standards and spiritual values, often expressing these ideas in religion.
>
> The central fact of life about government--any government-- is that it must have the power to coerce.

---

[12]Paul R. Hanna and John R. Lee, "Content in the Social Studies", *Social Studies in Elementary Schools*, Thirty-second Yearbook, National Council for the Social Studies, 1962, p. 73.

As new nations have attained independence, each tends to stress the distinctiveness of its culture.

Social classes have always existed in every society, although the bases of class distinction and the degree of rigidity of the class structure have varied.[13]

An illustration of the way an historian generalizes by linking together numerous events in an attempt to find some general explanation demonstrates how students can proceed in learning to develop generalizations. Louis Gottschalk, a distinguished professor of history, has described the process by which he drew up a generalization about the causes of revolution:

For example, I once tried to analyze the causes of revolution. Beginning with the revolution that I knew best, no matter how inadequately, I derived for it a set of causes (in eclectic and general terms) from many suggestions that had come to me from many sources. I then tested them against the causes of other revolutions of which I knew, categorizing, qualifying, hedging, and shaping the terms in which I thought, as I went from revolution to revolution and back again, until I felt prepared to risk an interrelated set of causes in print.[14]

As early as 1957, Samuel H. Jones published an article entitled, "Generalizing in the Social Science Classroom." Much that he says about the importance of factual knowledge is applicable to concept development as well as to the building of generalizations. He notes that scholars and specialists use short cuts in communication among themselves steadily. But he points out that students repeatedly are "bombarded by statements rich in meaning to those who know the facts but which are quite empty and dull to those who are ignorant of the content."[15] His comments on generalizing in the classroom contain suggestions which are most appropriate:

But language bypasses are luxuries to be used safely only by those persons who have already undergone the hard labor of learning a topic thoroughly. Political arguments by persons who are not informed in politics fall apart when one is asked to substantiate his view. Anyone can parrot a generalization from his favorite newspaper or magazine. The real test comes when the reader is asked to give force and substance to his view by adducing the relevant particulars which support it.

William James, perhaps, has pointed up the central core of this matter most clearly and sharply: "No one can see any further into a generalization than his knowledge of detail extends." If James is correct, then it follows that scholars and specialists with abundant detail at hand can see deeply into the meaning of a generalization, whereas those who are uninformed do not grasp anywhere near its full significance. For the latter, *the generalization is meaningless.*

---

[13]Dorothy McClure Fraser and Samuel P. McCutchen, (eds.), *Social Studies in Transition: Guidelines for Change,* Curriculum Series No. 12, (Washington: The Council, 1965).

[14]Louis Gottschalk, editor, *Generalization in the Writing of History,* (Chicago: University of Chicago Press, 1963), p. 128.

[15]Samuel H. Jones, "Generalizing in the Social Science Classroom", *Social Education,* Vol. XXI, No. 8, December, 1957. pp. 358-362.

> In the main, the procedure for grounding a generalization in fact consists of separating out a generalization and then examining it in the light of the following four questions: (1) Is the generalization testable? (2) Are the data that are uncovered accurate? (3) Are the data relevant to the generalization? (4) If the data are accurate and relevant, then, do they challenge or support the generalization?[16]

Dr. Jones then examines and illustrates each of these four points at some length. He comments that at least four kinds of statements which are wholly or almost wholly untestable are commonly heard in classrooms: (a) a statement of preference, or of liking or disliking; (b) a declaration of hope; (c) a statement of personal opinion; and (d) a proposition that is "footless." He concludes, with emphasis, that *the worth of a generalization depends upon the way it was determined.*

Concepts have been defined briefly in this section as abstractions which refer to a class or group of objects, all of which have some characteristics in common. In addition, other qualities of concepts have been noted. Examples of various ways of classifying concepts were indicated, concluding with the three types selected for development by the Curriculum Center: substantive concepts, concepts of method, and concepts of value.

The importance of accurate and adequate facts and information has been emphasized because these provide the evidence to support concepts and generalizations. Facts are essential in communicating information, but they will not be remembered long if they are not organized in terms of general principles, or concepts and generalizations.

Special attention has been given to generalizations as a way of developing the relationships between and among concepts. Concepts and generalizations are closely related. Both enable the learner to assign meaning and significance to the experiences he undergoes, thus providing a means of transfer of intellectual activities. Both continue to develop throughout life as one develops greater maturity and understanding on the basis of vicarious and direct experiences. Both concepts and generalizations are abstractions, and both facilitate the recall and use of information. The ability to generalize, however, rests upon an understanding of concepts; students can neither develop defensible generalizations nor understand those made by others unless they understand the concepts upon which the generalizations are based.

---

[16] *Ibid.*, p. 362.

Chapter II

THE FUNCTIONS OF CONCEPTS IN THE SOCIAL SCIENCES

Teachers may well ask, "How do the functions of concepts in the social sciences differ from their functions in any other field of knowledge?" Actually, there is no essential difference. The ensuing paragraphs about the functions of concepts in the social sciences may also be applicable to other fields of knowledge, although the illustrations provided will be from the fields of the social sciences. Yet it seems appropriate to call attention to the special nature of concepts in the social sciences.

Concepts in the social sciences are difficult to understand because most are intangible. They are often ambiguous because they take on different meanings within the various social science disciplines. They also may have an interlocking quality, with the meaning of one concept so dependent upon an understanding of another that it is difficult to relate one to another. To take a particularly abstract example, the concept of *power* has been described as "central to political science, and it cannot be ignored as a factor in developing concepts of cultural behavior, social controls, interaction, sovereignty, the nation-state, and comparative advantage."[1]

As noted in the previous chapter, social science concepts are of different types. Peter Odegard, a professor of political science, has said:

> Concepts, like other things, come in many shapes and sizes and with varying degrees of significance. They also play different roles. Some merely seek to describe and define what *is*, some to outline what *ought* to be, and others to *predict* what will be or *could* be under certain circumstances.[2]

Finally, the increasingly complex nature of modern society provides comparatively few opportunities for the individual to develop social science concepts through direct experience. With these distinctive characteristics of social science concepts in mind, let us review the functions performed by concepts and the reasons why they are important in the learning process.

---

[1] Price, Hickman, Smith, *op. cit.*, p.11.

[2] Peter Odegard, "The Field of the Social Science", in Jonathan C. McLendon, ed., *Readings on Social Studies in Secondary Education*, (New York: The Macmillan Co., 1966), p.53.

Concept Development is Essential to Comprehension in the Social Studies

It is not easy for young people to think about ideas, events, peoples, and cultures which have very remote relation to their own "here and now" lives. The student who labors to understand why the Indian farmer might continue to push an ancient hand plow, when a new-model tractor sits idle nearby, must draw on his understanding of a culture, a history, a philosophy, and a religion vastly different from his own. The extent of his understanding will be related to the depth, breadth, and variety of his store of concepts.

As the student's knowledge of concepts accumulates and expands new situations or experiences lose more and more of their strangeness. He is able to recognize familiar elements and to group them with others that have common characteristics; he can then proceed more easily with what needs to be clarified, and his thinking becomes more efficient and economical. Professor Jerome S. Bruner has commented:

> ...understanding fundamentals makes a subject more comprehensible. This is true not only in physics and mathematics, where we have principally illustrated the point, but equally in the social studies and literature. Once one has grasped the fundamental idea that a nation must trade in order to live, then such a presumably special phenomenon as the Triangular Trade of the American colonies becomes altogether simpler to understand as something more than commerce in molasses, sugar cane, rum, and slaves in an atmosphere of violation of British trade regulations.[3]

The student who learns that *conflict* is inherent in society may be more apt to examine war in history as a method of conflict resolution, than as a mere succession of bloody battles. He may also be led to examine other methods of settling disputes (arbitration, compromise, diplomacy) to discover their effectiveness. He may even begin to see a relationship to the conflicts he meets in his own life and put his understanding to immediate use.

Those basic concepts which form the core of knowledge about man and his relationships with his social and physical environments are of momentous importance to society as a whole. Such concepts as *scarcity, conflict and its resolution, morality and choice,* and *loyalty* are basic to almost any of man's activities, including the education of the students in our classrooms. As the student's understanding of social science concepts grows he is better able to relate one big idea to another, to see connections and make generalizations which serve to synthesize his knowledge and to render it more useful. His ability to explain something to himself becomes a safeguard against too ready acceptance in rote fashion of the ideas advanced by other.

The ultimate value of concepts in aiding comprehension comes when the student preceives the relationship among concepts which form the basis of ideas that are relevant and useful; he can see that these ideas are useful for

[3]Jerome S. Bruner, *The Process of Education,* (Cambridge: Harvard University Press, 1960), pp. 23-24.

conducting his own day-to-day life as well as for a social studies class. The successive and continual growth of a student's concept repertory from the most elemental to the more complex does more than provide a means for organizing his knowledge of a particular subject of study. As he progresses from year to year and matures intellectually this conceptual framework will help to provide a means of synthesizing his total life experiences.

Concepts are Short-Cuts to Communication in the Social Sciences

For purposes of communication concepts are usually designated by a symbol or term which is intended to convey the meanings ascribed to them. In this way they facilitate the exchange of ideas in the social studies classroom as well as in everyday life. When the term refers to a material concept such as "river" or to an object such as "Mt. McKinley", whose properties are commonly agreed upon, it succeeds quite admirably in its task. However, difficulties arise when the term represents a concept such as "crime", "war", or "patriotism". These terms are not only complex but emotion-laden. If we expect students to benefit from communication when they are reading social studies materials, listening to an explanation, or exchanging ideas in a discussion the concepts used must serve to clarify issues not confuse them.

Vocabulary and conceptual understanding are closely related, but they are not identical. In the social studies classroom concept development is often dependent upon vocabulary development, and in most cases cannot proceed without it. Yet it should be remembered that a concept is more than a definition. Its potential for extension, its richness in meaning exclude the possibility of capture in a few well chosen words. The student is faced with two problems; assigning accurate meaning to the words others use, and building a store of words to use when he attempts to communicate his own meaning. When this is accomplished he is prepared to grasp the meanings involved in a statement such as "The peoples of the world are mutually dependent on one another in their standards of living." Without the ability to use the terms "mutually dependent" and "standards of living" in a broad context and a knowledge of the facts which support the concepts, he would be unable either to grasp the meaning of the generalization or to communicate with others concerning the ideas involved. Moreover, the student must understand the meaning of "culture" on a world-wide basis before he can understand the ideas that are both explicit and implicit in the generalization.

An Understanding of Concepts Promotes Recall and Use of Knowledge

Facts, dates, places, names fade quickly from a student's memory if they stand alone. Often this is as it should be, for there is no doubt a limit to the

amount of detail anyone should retain. If, however, it is necessary for the student to possess information in order to comprehend other ideas, retrieval will be facilitated if the information is tied to a major concept in the student's mind. Once the concept has begun to form in the student's mind the relevant and significant data he meets will be likely to take on meaning in terms of the concept.

For example, the term "revolution" acquires many meanings as one studies events of the past and keeps abreast of current affairs. Disregarding the meanings of the term outside of the social sciences, consider the various kinds of revolutions encountered by the student of history and the many details studied in connection with each one. Eventually he should develop a general concept concerning political revolutions and be able to state appropriate generalizations. The details of the specific events that took place on May 5, 1789 or in the October Revolution may, in time, be forgotten. What will be retained is a condensation of the information relating to the conditions under which people revolt. A knowledge of the general principles involved in his concept of revolution will enable the student to recall and use the details when they are needed.

Concepts Aid in the Transfer of Learning

Transfer implies the ability to recognize common elements in a variety of situations, under different circumstances, and to relate them in a meaningful way. When the student builds individual concepts he is automatically practicing the means of transferring the results of his learning. He is learning a model, a general idea, for recognizing other instances of the concept originally encountered. Given sufficient opportunity to develop concepts, he may be expected to use his knowledge with increased ease and efficiency wherever and whenever it is applicable.

For many teachers the problems related to transfer of learning are the most perplexing of all. These problems go to the very heart of the whole question of how we think and what students do with the results of their thinking. By the time children reach school age they have already developed a store of concepts and learned to transfer much of their learning. Their problems of transfer seem to become more acute as they are faced with more and more of what we decide they ought to know, and less and less of what they themselves really want to know. The difficulties may also be increased by the fact that slowly but surely as one proceeds from kindergarten to high school, knowledge is channeled off into separate packages, each labeled as a special course. Some way is needed, not to scramble knowledge, but to present it as a body which has a unity drawn from all fields.

The problems related to transfer may be resolved if the development of concepts is in *breadth* as well as depth. While the various meanings of the concepts needed for an understanding of the social studies should be

examined in the context of the social science disciplines, attention should also be directed to the added meanings they assume in other contexts. In the social studies, *the study of man in society*, there are concepts from other fields of knowledge which can bring order to the subjects discussed in the classroom.

Value Concepts Help to Determine Attitudes, Opinions, and Behavior

Teachers may differ as to whether or not they should be concerned with teaching values, but the very fact that they decide how much time to devote to one unit in preference to another indicates they have made value judgments. The teacher who has allowed such words as "important", "significant", "good", "strong", or "weak" to be used in political, economic, or social contexts in the classroom has allowed values to be interjected. The teacher who recommends a novel, a motion picture, or a television program does so partly on the basis of a value judgment.

> No matter how we may react to this general question, it is apparent that social studies *teachers are already* teaching values often unconsciously, certainly without labeling their material as values. There are those who even insist it is absolutely impossible to teach the social studies without teaching values. This is not a question of choice, it is inherent in the content of the social studies. We speak of teaching citizenship, and *citizenship is itself a value.*[4]

Concepts of substance, method, and value seldom stand alone. Values become enmeshed in the meanings of concepts such as institution, scarcity, saving, comparative advantage, power, loyalty, and sovereignty. In a somewhat different context the role of the social studies with respect to moral and spiritual values is stated in the following excerpt from a publication of the National Council for the Social Studies:

> The need for more effective development of moral and spiritual values is dramatically demonstrated in many of our current problems. These include delinquent acts by juveniles and such things as adult crime, unethical behavior, immorality, and bigoted behavior by adults. The need is tragically demonstrated by the rising tide of mental illness, attributable at least in part to the tensions of our times. By helping young people develop moral and spiritual values, we can help them find security in an insecure, changing world. We cannot give them solutions to problems not yet formulated, but we can help them arrive at moral and spiritual standards against which to evaluate both the problems of the future and the solutions that will be proposed for them.[5]

Major Concepts in the Social Sciences Indicate the Framework or Structure of Knowledge, Values, and Methods

One of the comparatively recent developments in the field of education has been a revival of interest in the role of concepts in the educative process.

---

[4]Price, et al., *op. cit.*, p. 21.

[5]Dorothy McClure Fraser and Samuel P. McCutchen, (eds.), *Social Studies in Transition: Guidelines for Change,* (Washington: The Council, 1965), p. 35.

Much attention has been given to the *structure* of knowledge–the major ideas which explain the findings in a particular field. Some writers interpret *"structure"* to mean the major concepts,others believe it to refer to generalizations or to method, while still others would include concepts, generalizations, and methods. Jerome Bruner has used the term *structure* to refer to the fundamental or key ideas while Joyce, as noted earlier, uses the term *organizing concepts.* Both refer to the basic ideas the disciplines can identify which help to discover relationships.

General agreement as to the structure of the social disciplines is difficult to achieve. Joyce suggests three reasons why it is not easy to find the major concepts in the social sciences: (1) the large number of disciplines in the social sciences, with consequent difficulty of arriving at common agreement among the scholars, (2) the lack of an organized system of concepts, either in the older social sciences or in the newer disciplines, and (3) the fact that the social world is elusive and fluid and "holds still for study less readily than the physical world."[6]

One example of an attempt to identify basic principles of a discipline may be of interest. Professor Vincent R. Rogers, in what he calls a "first step", has suggested the basic principles which comprise the structure of history. He prefaces his proposal by pointing out that "Man's behavior is a complex thing and exceedingly difficult to classify." In the introductory paragraph, preceding the detailed list of proposed ideas, the author states:

> As I read the literature dealing with the nature of history, I find considerable agreement on at least one aspect of its structure. The methodology of history--how the historian works--is generally agreed to be an essential element of the discipline. Some would go so far as to say that the historian's method *is* the structure of his discipline, that once one has mastered the methodology of history one has gained an understanding of history's underlying principles. It seems to me, however, that ideas related to the structure of history tend to cluster around *three* major hubs: first, ideas related to the methodology of history; second, ideas related to the nature and goals of history; and third, ideas related to the content, the people, and events themselves that comprise history. The "sample" ideas stated under each heading below seem to me to represent important principles that form the foundation for a mature understanding of history.[7]

Hundreds of basic concepts are now being identified by scholars in geography, economics, history, political science, anthropology, sociology, psychology, and social psychology. Each of the disciplines is attempting to identify structure within its own area. Typical of the results of such investigation is the identification of the above listed concepts by the Syracuse Curriculum Center. It should be noted that one criterion for selection at Syracuse was the usefulness of the concept in more than a single discipline.

---

[6]Joyce, *op. cit.*, p. 23.

[7]Vincent R. Rogers, "History for the Elementary School Child", *Phi Delta Kappan,* 64:134, December 1962.

Sound Concepts are Essential for Rational Decision-Making and Action by Citizens in a Democratic Society

What our students do, what they think, how they interact with others, today or in the future, depend to a large extent on the concepts they have built over the years. The student whose concept of *citizenship* is restricted to "belonging to a nation and saluting its flag", may be excused if he fails to see how a citizen can be effective in that context. The person whose definition of democracy includes "unrestricted freedom" can scarcely be expected to respect the rights of others.

Concepts of substance, of value, and of the decision-making process itself are brought to bear, however unconsciously, on the actions of a student - whether it is a question of how to use his leisure time, whether or not to cheat on an examination, or which candidate to support for student council. Even the decision to act or not to act is based, in part, on the student's concept of self and of his role in his society.

The school in general, and the social studies class in particular, can offer the student a variety of experience in which to examine his concepts related to the making of decisions. He can be given the opportunity to search for relevant data, to analyze and interpret evidence, to weigh and choose between alternatives, and to reach conclusions by synthesizing the results of his investigations. He can study the methods used by historians, delve into the complexities of cause and effect, and practice the art of asking meaningful questions.

The social studies class becomes the laboratory where the student examines the methods involved in decision-making as well as the substantive and value content of an issue, and learns to make choices on the basis of what appears to be true and of value. Instead of relying on others for decisions, or taking a "stab in the dark", he may learn to stop, reflect, and proceed from a base more reliable than a stereotyped pattern, prejudice, or chance.

Whatever response one gives to a situation, however he interacts with the members of his society, it is done on the basis of conceptual understandings. Hullfish and Smith have called attention to the importance of the process of conceptualization in the following paragraph:

> It has frequently been said, and with reason, that all the purposes of education appropriate for a democratic culture could be advanced were each classroom progressively to enhance the conceptual life of its students. Meaningful, flexible, and creative *habitudes* would then be promoted, rather than the blind, rigid and conforming *habits* which are established by teaching that ignores conceptualizations.[8]

[8]H. Gordon Hullfish and Philip G. Smith, *Reflective Thinking: The Method of Education*, (New York: Dodd, Mead and Co., 1961), pp. 149-150.

Chapter III

HOW CONCEPTS DEVELOP

Concept development begins in early infancy and normally continues throughout life. Thus the child enters school with a number of concepts in the process of development, and it is well to remember that many concepts will continue to develop as a result of experiences outside of school. In pointing out the preeminent role of concepts in an individual's life Russell comments: "The adult's concepts determine pretty well what he knows, what he believes, and thus in large part what he does."[1]

The infant forms percepts through the senses–touch, taste, sight, smell, and sound. As these percepts are interpreted by the child they become a major part of the raw material of thinking. Russell describes how concepts develop from percepts:

> In a process which involves discrimination, or differentiating out unrelated items, plus generalization or response to common elements in object or situation, the percepts, memories, and images are integrated into a concept.[2]

In another connection he concludes: "Here, then, are the materials of thinking–sensations, images, percepts, memories, concepts, and generalizations."[3]

Concepts develop in the classroom out of a stimulus provided by the teacher. The student looks at a picture, reads a passage from a book, listens to a speech, feels the surface of a raised relief map, or tastes strange food from a foreign land. The percepts growing out of these sensory experiences are the first step toward concept development. The student describes to himself what he senses and how he feels about it, moving back and forth between the sensory experience and his thoughts about it. The accuracy and emotional content of his perceptions influence the extent of his progress in developing a concept. If he is expected to be content with remembering what has happened, little progress toward concept development will be made. What he needs is time to think in order to solve the problem of meaning by organizing his perceptions to see how they fit into what he already knows–his memories and mental images, or imagination.

---

[1]David H. Russell, *op. cit.*, p. 120.
At the risk of over-simplifying the author's meaning, the material in this chapter is a brief interpretation of Russell's book. Similar studies on the processes of concept development are listed in the bibliography below. However, Russell was among the first to write extensively on the subject.

[2]Ibid., p. 249.

[3]Ibid., p. 69.

It may be that the student is confronted with a situation so unique that he has no past experiences to use as tools for transforming his perceptions and feelings into a meaningful pattern. He faces ideas that are entirely new. In this case his concept will be initiated on the basis of the single experience, and will be described in his mind by the perceptions and feelings gained at that moment. Or, he may have had some experience in the past which is related to this concept, but may be only vaguely aware that something is familiar; he may be unable to decide why it is familiar, and, therefore, be unable to use the materials for further development of the concept. He is not able to establish the necessary relationships with something he already knows. If he does recognize similarities between the present and past experiences he can begin to fit the parts together, to extend the base of his understanding, in other words, to develop a concept.

Imagination plays a significant role at this time because no two events or ideas in human activity are likely to be identical. Imagining how one event might be related to other events requires more creative search than simple recall of a concrete item. One might consider the process of thinking at this stage as a sorting through memories until the right item is located. All the while, memories and imagination are being influenced by emotions as the searcher describes to himself how he feels about what is happening. If this does not take place concept attainment is abandoned.

Having identified related materials, the learner then abstracts the relevant elements and sets aside the irrelevant. Connections between the relevant elements are sought and tested, and adjustments are made as relationships are clarified. Gradually the pathways are made between items of knowledge which expand an original idea into a larger, more powerful whole. A more complex concept has been formed. In the future, under different circumstances, confronted with different materials that stimulate his thinking, he will repeat the processes of sensing, perceiving, recalling, imagining, abstracting, discriminating, relating, testing, generalizing. His concept will be adjusted and re-formed as understanding grows. The process may be repeated again and again or the concept may be retained, with little change, for long periods of time.

Concept Development Requires the Reorganization of Experiences; Concepts are, therefore, Constantly Open to Change

Because they are developed from experiences, each new opportunity to perceive may provoke the reorganization of concepts previously held by a student. For example, if his concept of "power" changes, so should his concepts of authority, social control, conflict, interaction, sovereignty, the nation-state, and cultural behavior as well as the value concepts of loyalty, freedom and equality, government by consent of the governed, and dignity of man. As children mature they are probably engaged more in reorganizing their concepts than in acquiring entirely new ones.

Periods of revolution are apt to produce drastic changes in all types of concepts as new ideas become generally accepted by a culture. If a revolt is accompanied by the overthrow of a government, some of the changes may be readily discernible to students as they learn about new personalities, new policies, and new laws. Other less overt changes of an ideological or psychological nature may not be so obvious. Students need help in understanding that what men do is based on their own conceptions of what is true at the time and place and in the culture in which they live.

Varied Experiences Do More to Promote Concept Development Than Repetition of the Same Experience

As has been emphasized, each individual builds his own concepts; no one can "give" a concept to another. A variety of experience, related to the same general idea or concept, enables the learner to recognize the central idea involved. Such experiences should make use of as many kinds of sensory experience as possible, in contrast to a single stimulus, such as the teacher's voice. The effectiveness of varied experiences form the basis of the multimedia approach to communicatitions.

If understanding of a concept rests upon the repetition of a single experience there is considerable likelihood that the understanding will be extremely narrow, and possibly even distorted. As truth is said to have many faces, so does a concept. Abundant experiences, all of which focus on the same general concept, should protect the learner from stereotyped patterns of thought.

Concepts Develop From Vicarious Experiences and From Noting Similarities and Differences As Well As From Direct Experiences.

As our social order becomes more complex the opportunities to form what Joyce has called "observed concepts" become fewer. Direct experiences may consist of verbal statements made either in person or by means of films, radio, or television. They also result from physical activities and from first-hand experience with objects in the environment.

However, since concepts are abstractions many of them grow out of inferences based upon comparisons and contrasts in what is perceived, what is remembered, and the mental images one retains. Both inductive and deductive reasoning may be employed in developing concepts. It is possible to provide a concrete demonstration in order to allow the learner to reason inductively and develop his own idea of the concept involved by moving from the known to the unknown. Other concepts may need to be developed deductively because they may not be demonstrable or because the method of induction is too time-consuming.

Concepts Are Acquired Chiefly Through The Medium Of Words

The importance of verbal learning has been pointed out by Brownell and Hendrickson: "We deal with facts and relationships which are recorded,

studied, learned, remembered, and used by means of words."[4] There are other ways of learning in addition to words--perceiving, motor activity, and feeling. But as the individual acquires facility in the use of language more and more of his learning depends upon words.

This dependence on words sometimes leads the learner astray because the term encountered means something quite different to the learner than was intended by the author. Ernest Horn noted some thirty years ago that social concepts appearing most frequently in books and periodicals are poorly understood. His conclusion is startling: "The more crucial and basic the concept, the more seriously inadequate, apparently, are the student's ideas about it."[5] Professor Horn reports numerous studies which indicate misconceptions arising from the meanings of words. He comments that words which express the author's thought reasonably well are significant to the reader only in so far as they are related to his purposes and experiences.

Concepts Develop Slowly In A Child's Mind

Concepts appear to become more securely fixed in a child's mind when they are developed over a period of time, rather than in a single concentrated study. This is what Jersild refers to as "seasoning"--the opportunity a child has to have related experiences, recall past experiences, see connections, and test relationships in a continuum of situations as he matures.

The process may involve much "learning and unlearning," even relearning, as he recognizes inconsistencies in his understanding and adjusts the pattern of thought to accommodate the new learning. Thus when a concept grows in a student's mind he both gains and loses, for in order to change his concept he must put aside some belief previously held to be true to accommodate something else he has come to accept. In the long process of maturing the student will experience many such changes related to his understanding of concepts.

An extension of the earlier quotation by Brownell and Hendrickson provides an example of the slow development of a concept:

> "Charity", for example, is not to be observed as such in the behavior of people. Rather, it is an intangible quality. It is a deduction, an inference, from many instances of behavior which are analyzed and compared with respect to a special kind of purpose or of consequence. The average child can learn to recognize the *word* "charity" in reading and conversation at age seven or eight; but he will not have much of a concept of charity for another four or five years. It takes time--more than that, it takes time filled with appropriate experiences--to acquire the *concept* "charity."[6]

---

[4]Brownell and Hendrickson, *op. cit.*, p. 93.

[5]Ernest Horn, *Methods of Instruction in the Social Studies*, (New York: Charles Scribner's Sons, 1937), p. 145.

[6]Brownell and Hendrickson, *op. cit., p. 106.*

Concepts Develop At Different Rates For Each Person

The rate at which concepts develop will differ from person to person, depending on age, maturity, intelligence, personal characteristics, motivation, past experiences, and--as a result of this--the extent of conceptual understanding brought to the learning task also will differ. At the upper grade levels where students are usually expected to work with many types of concepts, teachers find that some students require more time to understand relationships of an economic nature than those that are political or social. To others, it may be concepts such as causation, viewpoint, or objectivity that seem most difficult to comprehend. Value concepts are the most difficult of all to change.

Concepts Vary In Degree Of Depth, Accuracy, Emotion, And Value Content In An Individual's Mind

No two students will possess precisely the same concept of an idea important in the social studes. The number of different concepts held depends upon the number of students in the class, plus that very important different concept possessed by the teacher. Even the most able student in the class will not have a store of concepts that could be described as completely accurate and fully developed. In classes supposedly grouped on a homogeneous basis great differences are to be found. If one could find an instance in which two students held concepts that were both accurate and equally developed--which is most unlikely--they would be divergent in emotional or value content.

Although students seem to have most difficulty with social studies concepts that are abstract and emotion-laden, teachers are familiar with the fact that even the most denotative concepts are often misunderstood. Inaccuracies in a student's concepts are not always a result of poor teaching. Each child arrives at kindergarten with many concepts already formed and throughout his school years he is influenced, for better or for worse, by many people and experiences outside of the classroom--his family, friends, heroes, television programs, reading, and so on.

A consideration of the processes involved in the development of concepts and a reflection on the personal characteristics of learners suggest possible causes for misconceptions by students of the social studies.

- They may have had a limited background of perceptual stimuli upon which to build. Concepts will tend to be narrow in scope.
- Their perceptions may have been inaccurate because of a habit of seeing only what they wish to see.
- Faulty memory may impair the possibility of making relationships or permit the individual to build on images that have taken on inaccurate qualities.

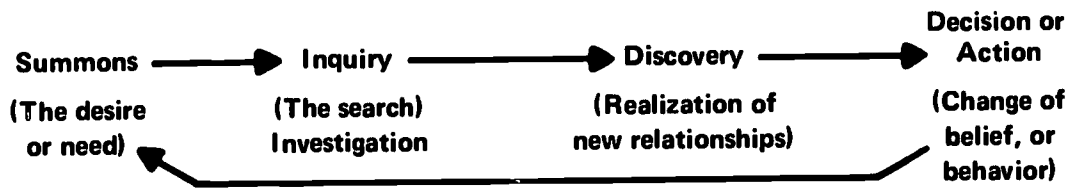
- A lack of objectivity and skepticism may cause students to accept too hastily their own or other's interpretations.
- They may lack the necessary intellectual skills and abilities–abstracting, discriminating, categorizing, synthesizing, testing, generalizing.
- They may not have matured sufficiently to acquire the understanding or simply not have lived long enough to acquire a wide background of experiences.
- They may resist thinking, especially about ideas and beliefs directly opposed to their own.
- Poor reading habits may encourage them to pass over a new term and its meaning, retaining partial or even incorrect ideas.
- They may lack important reading skills–comprehension, confusion over homonyms, multi-meaning words.
- Personal characteristics and attitudes toward social studies materials may result in a rejection of learning.

Chapter IV
CONCEPTS, INQUIRY, AND THE ACT OF DISCOVERY

Inquiry is a critical intellectual process; it is not involved in most of our actions. We accept explanations or sense impressions of taste, color, sound, or odor without seeking further information, without asking "why" or "what". When we do require further reasons or meaning, when some mechanical maneuver will not satisfy our need, we undertake an investigation before deciding what to do or what to believe. When the inquiry is related to a concept or a generalization it is a search for new meaning.

For the learner, then, inquiry is a process by which he uses his intellect critically in order to satisfy a need he perceives. If the process is carried out successfully a *discovery* is made which may satisfy the need or which can be acted upon to acheive satisfaction. Inquiry is the process which comes between need and satisfaction and culminates in a discovery which makes action or new understanding possible.

For inquiry to take place, the student must feel a summons and perceive the possibility of achieving a goal, or action, or satisfaction. The summons is his "call" to thought; it must be heard if he is to engage in the activities of inquiry. But it is not simply a matter of hearing the bugle, or for that matter perceiving that the teacher wants him to be moved. It must come from within. The sequence is illustrated in the following diagram:



The learner must have some idea, vague though it may be, of where he wants to go when the process of inquiry has been completed. Without some perception of the goal, interest will soon evaporate. The immediate goal will not be a particular action or solution, but a product that will serve to quiet the displeasure. It will then be used–

- to correct an error that seems to exist

- to find a different way to resolve a problem of meaning
- to decide what to believe about something
- to decide what attitude to have about something
- to decide how to resolve a social issue
- to decide what action to take
- to find out why something happened.

The dictionary definition of inquiry is quite applicable to education. It says *to inquire* means *to seek* information, to carry out an examination or investigation, or to ask questions.

Asking questions means little unless we assume the question has been prompted by a need for an answer. This in turn implies *seeking* an answer. Naturally, inquiry, so defined, can be found at various levels. The question and the answer to the question, "How can we improve the economic conditions in Centerville," are much more complex than, "What is the average per capita income of the residents of Centerville?" The latter involves only mathematical computation or even a simple checking of statistics, while the former requires a broader spectrum of intellectual skills and abilities, plus those "left-handed" activities – imagining, guessing, experimenting, and manipulating.

Inquiry, that is seeking an explanation or further information upon which to base an explanation, is by its very definition purposeful. It is directed toward a perceived goal. Aimless questioning, though non-directed, may produce end results, even discovery. An idea that pops into one's head, seemingly from nowhere, may be sensible and satisfying, but it is not the result of inquiry. As a process of *seeking,* inquiry may be appropriately referred to as a "search," especially as it implies that the inquirer realizes he will find something when he has finished; there will be a reward for his endeavor. In the development of inquiry as a means of teaching, questions and answers should be *goal-directed.* Aimless questioning is not a part of teaching through inquiry; there is no "search," without a goal to be sought.

Actually, it is difficult to conceive of completely aimless questioning. Forming a question indicates seeking an answer. Therefore, we again see that the problem is not one of questioning in which no inquiry is involved as opposed to situations involving inquiry; rather, we are faced with *levels* of inquiry. The scattered shotgun approach of a few dozen unrelated questions, each with a limited goal such as determining whether a student read page 169 or remembers the date upon which Washington crossed the Delaware limits the search to just those goals. In contrast, a series of questions, discussions, and speculations directed toward discovering the causes of the decline of slavery throughout the world, or toward identifying the effects of the Great Depression of 1929-1939, involves inquiry directed toward a broader more meaningful goal. All questions, all inquiry, are goal-directed even though the

goal is no more than finding a way to fill the last five minutes of a class period.

Whenever a student is pursuing a line of thought or a chain of evidence and reaches a point where the information before him provides inconsistencies, he faces a potential obstacle to reaching his goal. Similarly, a point at which there appear to be several directions in which to pursue evidence or where there appear to be a multiplicity of answers, all posing as correct, a student is temporarily blocked. The new problem he faces is a sub-problem within the overall problem he has defined as his search and his goal.

In the classroom, the realization that an inconsistency exists may at first be merely a suspicion on the part of the class, or even one student, that everything doesn't quite add up. Something seems to tell the students that there is a need to protest, and that until their question is satisfied, they will not be content. Some students may need to be persuaded by others that the inconsistency exists, or that it is important enough to be examined. The teacher may be able to do this, or the hesitant ones may be more impressed by the reasoning of their peers. When the problem is one which emanates from personal beliefs or values, its recognition may be near to impossible for some; more than a gentle nudge may be required to inspire any desire for examination.

For such a problem to become apparent it must present a kind of tug-of-war in which the student is caught between alternatives or multiple choices. The only way open for decision is the investigation of possibilities. Once the inconsistency is recognized as a hurdle to further progress, the next task is to define the problem as one which can be efficiently handled. All the students should help to describe its nature, to simplify it, and to agree on its meanings. Students may, at first, be tempted to accept the problem in a broad definition, and the teacher can help them to see that there are actually several problems in one. There are as many problems as there are choices to analyze. This step is both descriptive and analytical in nature.

Hullfish and Smith suggest the necessity of posing these questions to clarify the problem being considered:

1. Exactly what is the problem? Can it be broken down into sub-problems?
2. This problem is similar to what others in my past?
3. What is the fundamental likeness of this problem and the others?
4. What is the fundamental difference?
5. What does this difference entail–new information, new method of attack?
6. Should I now redefine the problem? [1]

[1] H. Gordon Hullfish and Philip G. Smith, *op. cit.*, p. 47.

Getzels has suggested a classification of the types of problems that may exist in a classroom. His list includes problems that are "presented" and those that are "discovered" or become known. As can be seen in the list that follows, he stresses the fact that many problems involve some degree of the "known" and "unknown" and demand some degree of innovation and creativity for their solution:

1. The problem is given (is known) and there is a standard method for solving it, known to the problem-solver (student, experimental subject) and to others (teacher, experimenter) and guaranteeing a solution in a finite number of steps.
2. The problem is given (is known) but no standard method for solving it is known to the problem-solver although known to others.
3. The problem is given (is known) but no standard method for solving it is known to the problem-solver or to the others.
4. The problem itself exists but remains to be identified or discovered (become known) by the problem-solver, although known to the others.
5. The problem itself exists but remains to be identified or discovered (become known) by the problem-solver and by the others.
6. The problem itself exists but remains to be identified or discovered (become known) and there is a standard for solving it, once the problem is discovered, known to the problem-solver and to the others (as in 1).
7. The problem itself exists but remains to be identified or discovered and no standard method for solving it is known to the problem-solver, although known to the others (as in 2).
8. The problem itself exists but remains to be identified or discovered and no standard method for solving it is known to the problem-solver, or to the others (as in 3).[2]

Inquiry in the classroom continues once the problem has been recognized and properly defined. Students then deal with these questions, though not necessarily in this order:

1. What do we need to know in order to resolve the problem?
2. Where do we find the information?
3. How do we judge the information?
4. What leads does the information give us as to possible resolution?

[2]J.W. Getzels, "Creative Thinking, Problem-Solving and Instruction." *Theories of Learning and Instruction,* Sixty-Third Yearbook of the National Society for the Study of Education, Part I, Ernest R. Hilgard, ed., Chicago: University of Chicago Press, 1964

5. Which leads seem to provide the best resolutions?
6. How do we test them?
7. Is there one "best" resolution?
8. Does this satisfy our needs so that we can now proceed to the next problem or get on with the original discussion?

The above procedure describes in general terms the rather structured procedure of problem solving. However, inquiry, as it occurs in the classroom, may not occur in such a predictable fashion. It may be possible, for instance, for the student to come upon a bit of information which he suddenly realizes is a completely new idea to him. He also suspects that if this is so, then some other things he previously held to be true may now need to be changed. The problem, then, is to locate the inconsistencies and the procedure is to move from the hypothesis, "If this is true, then other things must be affected," back to the location of those items which need to be readjusted.

There is also evidence to indicate that children often do not solve complicated problem situations in a logical, step-by-step fashion, but rather tend to think about the several subordinate problems one at a time, finally combining the individual conclusions. They may "think in circles," in which case the task of the teacher is to help them learn to direct this spiral thinking toward the perceived goal.[3] This, of course, requires the ability to ask productive questions, and to proceed in logical fashion.

More inclusive than either the question-answer description of inquiry or of the problem-solving process is Earl Johnson's "purposive act of inquiry–the movement from the pole of doubt to that of belief, through inquiry." It is the process of thinking used when we wish to remove whatever blocks our way toward the goal we have set.

Doubt (Beginning)	Inquiry (Middle)	Belief (End)
Unrest	Problem Solving	Rest
Insatiety	Testing hypothesis	Satiety
Disturbance	Holding a "trial"	Quiet
Alternatives	Examining alternatives	A choice is made
Dissatisfaction	Discussion/experiment	Satisfaction
Indecision	"Making up" our minds	Decision
The way is blocked	Finding a way through	The way is open[4]

Professor Johnson notes that inquiry follows doubt rather than vice-versa, as is commonly believed. First, there must be a discrepancy in the mind of

[3]See Russell, *Children's Thinking*, Chapter IX. Also, Bruner, *The Process of Education.*

[4]Earl S. Johnson, *Theory and Practice of the Social Studies*, (New York: The Macmillan Co., 1956), pp. 173-181.

the individual which disturbs him sufficiently to bring about inquiry. Expanding on the actual process involved, he describes the purposive act of inquiry:

(a) a human being is engaged in goal pursuit, that is he is acting in his usual and habitual way;

(b) this activity is blocked by something with which habit is not able to deal;

(c) this blocking or interruption generates an emotion;

(d) doubt, dissatisfaction, or unrest ensues;

(e) reason, or intelligence is called upon to find a solution, remove the block, and permit activity to continue;

(f) this involves imagination and experimentation, overt or covert;

(g) alternative ways of solving the problem are tried;

(h) one of these proves more satisfactory than the others;

(i) this one is used to organize the behavior potentials of the person with the result that purposive conduct ensues. [5]

Inquiry pursued in the social studies class may center on problems that are of a *substantive* nature:

1. Did Lincoln actually plan to emancipate the slaves when he became president, or did he do it simply to win the war?
2. Did Hoover stand by leaving everything to chance as signs of an approaching depression became evident, or did he actually attempt to ward it off?
3. Why was it that the communist revolution occurred in agricultrual Russia rather than in Industrial England, as predicted by Marx?

The inquiry may center on problems which require *predictions as conclusions:*

1. What might have happened if the train carrying Lenin into Russia in 1917 had been captured by the Allies?
2. What might be the consequences of raising the legal driving age to 21?

Problems may be of a *hypothetical* nature:

1. If the newly located Vinland map is valid, then what ideas about the discovery and colonization of the new world need to be changed?
2. If it is true that the Piltdown Man was a hoax, what ideas about primitive man in Europe may be in error?

---

[5] *Ibid.*

3. If it is true that it is important to be loyal to one's ideas, then how should I change what I have been used to doing in the past?
4. If it is true that art is a form of communication, then what might I be able to learn from examining the paintings of a period of history?

The inquiry may center on the problems of *inquiry* itself:

1. What, exactly, is the problem?
2. What do I need to know to resolve it?
3. What is the best way to proceed?
4. How do I know when I have reached the best resolution?

The inquiry may center on problems of *what to value:*

1. What should be the goals of American democracy?
2. Is civil disobedience consistent with the ideals of democracy?
3. What should be my attitude toward persons of different cultures.
4. What is the meaning of morality and choice?

Or, problems may deal with *how to value:*

1. What exactly do I believe?
2. What exactly is my attitude toward...?
3. On what do I base these beliefs and attitudes?
4. How did my beliefs and attitudes develop to be what they are?
5. Do I perceive a need to change or adjust my beliefs or attitudes?
6. How do I go about changing them?
7. If I change one of my beliefs or attitudes, how will that affect others I now hold?

The result of inquiry, which involves some new ways of understanding or relating ideas so that behavior or belief is changed, approaches a definition of learning itself: the change that occurs in an individual's beliefs, behavior, and attitudes as a result of his experiences.

Critical thinking, a part of inquiry, requires judgment on the part of the student-judgment which is withheld until sufficient investigation and analysis have been completed. Russell suggests four conditions involved in critical thinking which indicate its relationship to the process of inquiry:

1. A knowledge of the field or fields in which the thinking is being done.
2. A general attitude of questioning and suspended judgment; a habit of examining before accepting.
3. Some application of methods of logical analysis or scientific inquiry.

4. Taking action in light of this analysis or reasoning.[6]

The attitudes necessary for critical thinking will develop best in actual critical thinking activities rather than by practicing the isolated stages involved, and when some action can be taken based on the conclusions drawn. Testing permits the student to evaluate his procedures and results.

Naturally, creative thinking is also necessary, most obviously where it is necessary to develop hypotheses. The inquiry will proceed according to the concepts held by the inquirer; the evidence must be critically examined, hypotheses created, and then tested against criteria.

To deny that inquiry may also involve the elements of insight and chance would be to ignore some of the most brilliant instances of inquiry that man has experienced. We would find ourselves discounting the work of a Pasteur, a Fleming, and a Newton as unworthy of the inquiry process. However, millions of scientists had observed mold on cheese without making the creative association and the hypothesis that led Fleming to "discover" penicillin. The "accident" was meaningful to him because he was involved in a goal-directed search, and possessed the necessary insight and knowledge to see a relationship between that mold and his problem. As Professor Bruner says, "Discovery, like surprise, favors the well-prepared mind."[7]

The Personal Nature of Inquiry

Inquiry is a process which requires active involvement on the part of the inquirer as he reaches out for the necessary raw materials or data. It is therefore a very personal process which no one may carry out for another. The teacher may devise methods to induce inquiry on the part of the student, may even raise questions to aid and direct the student in the process of inquiry, but the teacher is not the inquirer.

The emphasis on "self" again points to the personal quality of the process of inquiry. The student inquires in order to satisfy himself, not someone else. He is not necessarily trying to prove anything to others at the moment, although his findings may lead him to do that later. He is directing his efforts toward inner decision. Along the way he must weigh the choices, make the tests, check the conclusions. If he hands the decisions over to someone else, he has relinquished the search.

Inquiry, related to values, may help a child to understand how his own values and attitudes have been formed, and enable him to analyze them. He is encouraged to enlarge his concepts of viewpoint, objectivity, and skepticism in order that his value judgments may be based on something more reasonable than stereotypes. When a person actually realizes what he is thinking he can begin to understand himself. "This is who I am; this is what I think: this is

[6]Russell, *op. cit.*, p. 283.

[7]Jerome S. Bruner, *On Knowing: essays for the left hand,* (Cambridge: Harvard University Press, 1963), p. 82.

why I think it." Development of concepts of value through the process of inquiry help the student to see himself as an individual who may share the ideas of others or create his very own, but who always has responsibility for the values he holds.

An inquiry takes on personal characteristics as it suits the needs of the inquirer. The teacher should seek to help each student identify those inquiry strategies which will allow the most efficient and productive use of his abilities. In order to do this he provides the student with sufficient opportunity to become involved in the process of inquiry. As Professor Bruner notes, one does not learn how to inquire without practicing. By testing his strategies of inquiry in many types of situations, the student has the opportunity to weigh them and to get a feel for the efficiency of a particular strategy in appropriate situations.

The significance of inquiry in the social studies in indicated by the need for all ideas and values to be held, not by dictate, but because they have been examined and found to be true or valuable by the individual who subscribes to them. A major goal of inquiry in the social studies classroom is to help the student develop ways of thinking which utilize the intellectual skills and abilities necessary for self-discovery and self-determination of truth and value. The process of inquiry is based upon these skills and intellectual abilities, as well as the goal of increasing the student's store of useful knowledge. The process of inquiry appears to be the most productive method for internalizing knowledge so that it can be used purposively.

Discovery, a Goal of Inquiry

Discovery comes when the student recognizes a relationship between ideas, values or processes which until that moment he had not understood. He gets the idea; he perceives new meaning. The realization may be a product of inquiry, but it is not necessarily the end result, for any inquiry may involve many such discoveries along the way. However, each act of discovery, according to Bruner, "...whether by a schoolboy going it on his own, or by a scientist cultivating the growing edge of his field, is in its essence a matter of rearranging or transforming evidence in such a way that one is enabled to go beyond the evidence so reassembled to new insights."[8]

In such a process, facts and information are tied together to build concepts; concepts are related to form generalizations; the inter-relatedness of knowledge becomes more clearly visible. As the student discovers for himself, he is relieved of some of the need for memorizing and draws on understanding instead; the foundation for forming additional concepts and generalizations is stronger and more conditioned to stand the test of time. Discovery and concept development are inseparable, since discovery is the realization of new relationships, which is, in effect, concept formation.

---

[8] *Ibid.*, pp. 82-83.

The Effective Surprise

Discoveries, to Bruner, are "effective surprises" which seem to have a "quality of obviousness about them when they occur, producing a shock of recognition following which there is no longer astonishment."[9] One is jolted by the impact of new understanding, then gratified by its power to bring order to other thoughts. In a very simple way, it seems to be similar to what we feel when we have learned the meaning of a new word then are amazed at the number of other people who are suddenly using it. In the classroom the teacher is witness to the surprise of the student who develops a completely new idea, waves his hand violently, and if unrecognized tends to ignore tradition and shouts it out so that all may enjoy his creation.

The discovery may come when a foreign visitor explains to the class that all Swiss do not live with their goats on the sides of mountains, all Dutch do not wear wooden shoes, nor all Czechs wear picturesque costumes. The shock of learning that many of these things are more closely related to the desires of American tourists than to the desires of the people themselves, that once the tourists have passed through the village, the natives shed their costumes for modern styles and their goat carts for cars, is often so great that Bruner's "lack of astonishment" does not follow immediately. What comes is a need to question other notions. The student says, "If this is so, then what other ideas do I have that may be wrong? Exactly where does this put me? Where do I go from here?" Within a short time, he may find himself immersed in an act of inquiry. This is discovery through exposition; a case of the teacher or lecturer furnishing food for *thought.*

Some Conditions for Discovery

Discovery is a creative act. Even when what is to be discovered has been carefully determined by the teacher, the relationships themselves must be patterned in the mind of the individual student. Such an act requires that the student engage in the process of reflecting upon what he hears or sees, and perceiving connections between what he knows or feels. The richer the conceptual resources brought to the act, the more probable are his chances for success. Critical and creative thinking abilities on the part of the student are crucial elements in this process. All discovery may not result from the inquiry process, but even the most accidental, unplanned, non-purposive, even undesirable of discoveries is the result of a new way of viewing things. The world has taken on a slightly different character, and the observer, a slightly different view.

Professor Bruner sees six prerequisites for the creation of these effective surprises.

---

[9]*Ibid.*, p. 183.

- *Detachment and commitment* - -a willingness to divorce oneself from the obvious.
- *Passion and decorum*-- the ability to let one's impulses express themselves in one's life through one's work and an etiquette toward the object of one's efforts.
- *Freedom to be dominated by the object being created.*
- *Deferral and immediacy*-- a sense of direction, an objective with completion deferred.
- *The internal drama*-- the working out of conflict and coalition within the set of identities that compose the person.
- *The dilemma of abilities*-- important yet trivial for creativity; occurs at any level of energy or intelligence.[10]

Possible Outcomes

What is to be expected as outcomes of the use of the discovery method? Do we intend to make an inventor out of each and every child in the classroom? What happens if he discovers the wrong thing? Is it expected that discoveries will pop like corn, day after day, class after class? Must the child always discover only what the teacher has designated as the proper treasure? These and a multitude of other pertinent questions are being raised, examined, and put to the test in classrooms all over the country today.

Not everyone is convinced of the efficacy or superiority of the discovery approach to learning. It is contended by Ausubel, for example, that (a) students do not have to solve all problems independently, (b) problem-solving methods are too time-consuming without sufficient compensating gains in retention and transfer, and (c) inductive derivation of concepts and generalizations is only necessary in the elementary school years when the child has not yet mastered a sufficient amount of subject matter for verbal learning to be effective. [11]

While evidence of the superiority of the discovery approach is somewhat inconclusive at present, what has been learned to date justifies the time and effort of the teacher in experimenting with at least limited use of the discovery approach. For purposes of the present discussion it is assumed that the methods of inquiry and discovery are deserving of increased use in the classroom. Never, however, lose sight of the need to combine methods. After all, students do not have time to discover everything, and after graduation will seldom be exposed to educational films, tapes, discovery sessions, and laboratory exercises. Instead, they will live in a world in which books, periodicals, and commentators pour out facts and theories by exposition. Learning should not stop then, just as the voting citizen emerges.

---

[10] *Ibid.*, pp. 23-29.

[11] David P. Ausubel, "In Defense of Verbal Learning.", *Educational Theory*, Vol. 11, January 1961, pp. 21-24.

Learning by discovery does not imply that the teacher is charged with the task of producing a generation of inventive individuals who are able, on a moment's notice, to create a cataract of ideas that are actually new. Instead, the implication is that its use will improve the student's ability to learn what it is important for him to learn in school, and that in doing so he may develop a method of learning that will enable him to create and entertain new ideas, now or later in life. There is no rule that the teacher must not "put the rabbit in the hat." His knowledge and training are precisely what have placed him in the position of educator. It is the teacher who directs the course of the inquiry and provides the atmosphere where discovery becomes possible. Nor should discovery be associated only with the cognitive domain; indeed, the most powerful of all discoveries made by students may lie in the area of values, attitudes, opinions, feelings, and appreciations since what they do and how they use their knowledge will be determined by the way they feel.

And what of the dangers created by wrong discoveries? Incorrect knowledge, undisclosed, may lead to confusion and failure for the student. Certainly this is not to be desired, but inaccuracies lend themselves as powerful hypotheses to be put to a test. Wrong answers, once explained, are sometimes the very best tool for real learning. The analysis of error clears the way for the student to put aside those inaccuracies that may prevent further learning; if an error is put to a rigorous test the student is apt to be more convinced of its fallacies than if simply exhorted, "You're wrong." Actually he is in a position little different from the researcher in the laboratory or in the field of education; he has examined his belief, found it to be in error, and moves on to a new hypothesis or perhaps to immediate understanding. It may even be that we would do great damage if we were to insist that the student be protected from all error; he would be stripped of the opportunity to learn from mistakes such as he will undoubtedly make throughout life. If we hope in any way to lessen the damage that results from errors in thinking, we might help him learn what not to do as well as what ought to be done.

Discovery, a Personal Possession

Just as inquiry belongs to the inquirer, discovery is the personal possession of the discoverer. The same discovery may, indeed often does, come to several people at the same time; nevertheless, it belongs to each one individually. The results of an inquiry (a discovery) may be shared by millions, but the phenomenon itself is the personal possession of the doer. Columbus inquired and discovered; others experienced only the results of his act – which incidentally, may have led them to their own acts of inquiry and discovery. When a child changes his behavior or belief as a result of the processes of inquiry and discovery, we may sense or see or be affected by the change, but he and he alone moved through to new understanding.

The creation of thought is exciting. As far as we know, at least, this is a creation of our very own, and its existence justifies our faith in our own ability to think. The thought sometimes escapes us, losing itself in the depths of our memory, only to be rediscovered at a later date. Discovery or rediscovery suggests to us that in the classroom where the teacher has some power to control the course of thought, discoveries ought to be brought out into the open and put to use so that the need for rediscovery is lessened.

What the teacher can do for the student is to guide, direct, advise, provide clues and make suggestions; he cannot perform the act of inquiry nor experience the discovery for him. These the student must do for himself. Because at this time there are many problems and questions posed about the use of the discovery method in the classroom, and there is much research to be done, the teacher plays a crucial role in the innovating, testing, and evaluating that must be done. The plans he makes, the classroom atmosphere he helps to create, the style of his teaching methods, will all be affected if he attempts to encourage learning through inquiry and discovery.

The Teacher and the Inquiry Approach

The ideal climate for inquiry cannot be described as teacher-dominated, nor is it permissively non-directed. It is not just one more instance of the student copying into his notebook exactly what the teacher says; neither is it one in which facts are ignored and memory scoffed at. In the activities of everyday teaching, the teacher who uses the inquiry approach listens more, talks less, and when he talks, raises questions, suggests a clue or provides directions needed to move thinking along fruitful lines. When a question fails to elicit an immediate answer he refrains from answering it himself and gives time for the students to think or to attempt a new direction.

His skills include the ability to stimulate interest when it flags, recognize hurdles as they present themselves, raise provocative and productive questions, and lead discussion so that it moves toward warranted conclusions. When a "hunch" is expressed which the teacher knows to be weak, he allows it to be tested so that the student sees the error for himself.

The teacher who uses the inquiry approach must know the subject matter of his field thoroughly, and he must be as curious as he wishes his students to be. If the attitude of inquiry has not become a habit, he strives to make it so; he trains himself to recognize inconsistencies in the ideas expressed, in the attitudes of the students, and in his own methods of teaching. His vision of his role as teacher comes close to the original meaning of the word "educator"–one who leads out.

The prime importance of inquiry has been well stated by J. Richard Suchman:

> If man could not inquire, he could not gather and process data, raise and test hypotheses, build theories and test them empirically; all of his learning would have

to be programmed for him by others. Data would have to be fed to him, inferences would have to be drawn for him, and he would have to be told at every turn what conclusions could be drawn. In short, he would be totally dependent as a learner and a thinker. It is obvious therefore that being able to inquire is a necessary condition for the independence and autonomy of learning.[12]

[12] J. Richard Suchman, "The Child and the Inquiry Process," *Intellectual Development: Another Look*, (Washington: Association for Supervision and Curriculum Development, 1964), p. 59.

Chapter V

CONCEPTS AND INSTRUCTIONAL ACTIVITIES

Interest in the basic concepts and generalizations needed in social studies instruction is not new. Quillen and Hanna note that since 1910, numerous studies have attempted to identify objectively the information, concepts and generalizations which should be emphasized in the social studies program.[1] Since World War II, there has been renewed effort in this direction, with the scholars in the social science disciplines cooperating with educators to a greater extent than heretofore.

As the attempt to identify basic concepts is not new, neither are the principles of instruction for concept building. Henry Johnson pointed out during the first World War that any material could be taught to children of any age provided it was put in terms of their own experience. Writing with special reference to history he said:

> Any kind of history is elementary if it is presented in the form of concrete examples--material remains, physical representations of material remains and of actions, verbal description and narration rich in material for imagery, mental states directly and obviously related to things which can be clearly imaged. Elementary history, whatever its content, is history brought within the sensory experience of children. Any other history is advanced . . . A clearer recognition of the principle of bringing materials within the direct experience of pupils would solve many difficulties in dealing with the slow-learning pupil at any level of instruction.[2]

More recently Jerome Bruner's hypothesis that "any material can be taught effectively in some intellectually honest form to any child at any stage of development" has been widely quoted.[3] A statement appearing in a bulletin of the National Council for the Social Studies neatly summarizes the approach to building concepts and generalizations:

> The road to inducing greater interest in abstract concepts and generalizations lies in humanizing the content, in providing the raw materials for better imagery, and in sharpening of the relevancy of the events or places under study.[4]

---

[1]Quillen and Hanna, op. cit., p. 187.

[2]Henry Johnson, *Teaching of History*, (New York: The Macmillan Co., 1940), p. 103. The author includes chapters titled "Making the Past Real," and "The Use of Models and Pictures." The volume was first published in 1915.

[3]Jerome S. Bruner, *Process of Education*, p. 33.

[4]Ralph C. Preston, *et al.*, *Guiding the Social Studies Reading of High School Students*, (Washington: The Council, Bulletin No. 34, 1963), p. 9.

Despite the fact that interest in concept building is not new and that approaches to instruction which expedite the process have long been recognized, achievement to date has been uneven. Although reviewed here in the context of concept development, the principles and techniques of effective instruction have long been a part of good teaching under any method.

The Selection and Grade Placement of Concepts

Ideally the major concepts a school or school system seeks to develop should be identified by the entire faculty in order that all departments can help to broaden and deepen the understanding required by students. Best results in reaching decisions on the selection and grade placement of concepts are likely to be achieved when teachers are part of a team, each contributing his special knowledge of content and of children's learning characteristics and helping to describe the continuum to be established. Isolation of the teacher within a single grade or subject area may allow for greater specialization, which is certainly of value, but that isolation may be a distinct detriment in designing a curriculum which organizes concepts if it narrows the base upon which decisions are made.

Teachers must determine the appropriate time for the introduction of a concept. It may be according to a neat time-table developed in curriculum conferences, or it may be when the students begin to ask questions about that concept at some completely unplanned time. Regardless of when introduced, it is essential that a concept be reinforced as the child continues his education.

This reinforcement cannot take place if the teacher is concerned with a single segment of the entire process. Opportunities to build at one level on what has already been established at a preceding level may be overlooked. Lack of communication will result in haphazard progress and what is done at one level may be sacrificed at another. Communication between teachers at all levels must continue after concepts have been selected and incorporated in the curriculum. Evaluation will be required, again involving the team approach, and adjustments will be made.

If total staff involvement in the selection of significant concepts is impossible, teachers who are responsible for instruction in social studies can agree on the most significant concepts in their field of knowledge. With these in mind a flexible plan can then be developed to provide students with opportunities to build concepts as they proceed through the social studies program, K-12. Recognizing that concepts develop slowly and over many years, provision must be made for frequent use at increasing levels of abstraction and difficulty so that they may be built in ever more meaningful ways.

Each teaching unit in social studies should indicate those concepts which are inherent and therefore should be emphasized. Again and again units of study should involve concepts previously introduced, for reiteration not only favors retention, but also demonstrates to the student the usefulness of the concepts as tools for thinking. Such a practice is encouraged by the fact, as Russell notes, that concepts "seem to move along a continuum from simple to complex, from concrete to abstract, from undifferentiated to differentiated, from discrete to organized, and from egocentric to more social."[5]

Fortunately, a considerable amount of information is now available from the social science disciplines to aid in the selection of the most significant concepts. Teachers can also draw on their own knowledge and experience to select those concepts which are basic to the social studies and which suit the specific needs and abilities of the children in their particular community. Deciding which concepts to include should be on the basis of answers to questions such as:

- Do these concepts represent the most significant ideas in the substance, methods, and values of the disciplines represented in the social studies?
- Does the understanding of these concepts enable the student to develop more advanced concepts?
- Are these concepts needed for the student to arrive at generalizations important in his own life and to the understanding of man in society?
- Do the concepts represent what we believe the student needs to know by the time he has completed his formal education?

Reaching a consensus on the answers to these questions may prove to be a lengthy, even agonizing, task. However, it is a necessary first step and the benefits that accrue may go far beyond any "list" that results. During the inquiry teachers reflect upon goals in social studies, knowledge from the disciplines, children's needs and abilities and the total teaching-learning process. They examine their own concepts and those held by their colleagues. What may be most important is that they have the opportunity to evaluate what has been done and help make decisions about what is to be done in the future.

Once concepts have been agreed upon they may be analyzed for inclusion in the curriculum. At this point decisions will result from answers to a different set of questions:

- What factual background is necessary to develop an understanding of this concept?

---

[5]Russell, *op. cit.*, p. 249.

- How is the concept related to other concepts which have been selected? Is it needed to understand them or is it more readily understood after they have been introduced?
- What intellectual skills and abilities are necessary for an understanding of this concept?
- Considering the student's interests, abilities, and maturity level, when should the concept be introduced?
- When and where might the concept be reinforced? Extended?

Elective offerings in individual disciplines such as economics, sociology, anthropology provide a temptation to postpone the introduction of a concept until later years when, in theory, it may be fully developed. Such a decision denies the student the benefits of that gradual extension of understanding which is essential to concept building. Moreover, many students may not elect to take such courses, and some may never reach those later grades. In the planning stages teachers must agree that initial decisions are highly tentative and that the placement of concepts in the curriculum must be subject to continuing experimentation and re-evaluation.

Planning Instructional Activities

The student should be helped to see a conceptual framework for what he is to do.

Confronted with a body of knowledge that is to be taught, the teacher plans with that conceptual framework in mind, having asked himself:

- What concepts must the student know in order to deal with this content?
- What added concepts are inherent in this content?
- If the student understands these concepts will he be able to relate important ideas and reach for important generalizations?
- What methods, techniques, materials will facilitate learning in this particular instance?

For example, if the body of knowledge to be learned involves the French Revolution, a first step might be to determine which of the major concepts lend themselves as foci for the study. The decision will differ from teacher to teacher, class to class, but once made, will give direction for the next steps in planning what students will read or do. The concepts chosen might be *multiple causation-multiple effects* or perhaps *conflict and its resolution, freedom and equality* or *power.* More than one may be selected as appropriate unifying elements. If the choice includes *conflict and its resolution,* students might first examine their present understanding. Some adjustment, correction of error, even development of the concept may occur in this initial phase, and a set of questions can be framed to guide the investigation that is to

for what he is expected to do; the data he assembles takes on importance as it helps to explain the conflicts that preceeded the revolution. He asks himself what groups or ideas or situations were in conflict, and may come up with a variety of examples: nobility versus bourgeoisie; individualism versus conformity; poverty versus affluence; secularism versus spiritualism. If he must justify his decisions at this point, the details assume a very significant role in his mind. In a backward look at the revolution, he asks himself whether or not those conflicts were resolved. If so, how. If not, why not? How does this example of *conflict and its resolution* compare with other conflicts I have met? Has my understanding of this big idea expanded in any way? What is my new understanding? In this type of procedure, students are given some help in making decisions about the relative importance of individual persons, places, dates, events, and since data is used to explain an idea, they may be more readily retained.

Students should be given assistance in developing the intellectual skills and abilities needed for concept development.

From the student's answers to his initial questions, "What do I see?", "What do I hear?", "What do I feel?", come the raw materials for concept development. It is important that he learn to observe, listen, and report accurately. Practice in assembling data from a graph, taking notes, or reporting what was observed on a field trip, then putting what he has learned to use will emphasize the need for precision and objectivity at the earliest stages of concept formation. He must learn to group and classify, assign order and sequence, find a main idea, compare, contrast, and generalize. These skills, plus the ability to recall, hypothesize, weigh and judge, analyze and synthesize, will improve according to the opportunity the student has to use them.

Students should be given help in reading social studies materials.

The social studies teacher is not the language arts teacher nor the reading instructor. Yet when he assigns reading for the purpose of concept development he involves students in problems of meaning that go far beyond simple word recognition and spelling. Ideas contained in the reading must be organized and related. Major concepts must be recognized and supporting detail identified. Events must be interpreted and put in logical sequence. If these things are not accomplished the teacher's purpose in assigning the reading cannot be realized.

Before assigning a reading selection the teacher might prepare students by:

- Establishing the "conceptual" framework necessary for understanding the material. This may require a review of previous material and ideas held so that new ideas can be related to the concept as previously understood.

- Identifying and clarifying key terms related to the concepts being developed.
- Establishing a purpose for the reading so that students are prepared for what they must do if they are to understand the concept.

Students need help in avoiding verbalization, a problem which arises because of the abstract nature of many social studies concepts.

We have already noted the careful attention which must be given to vocabulary development in the social studies classroom. Direct teaching is sometimes necessary in order for students to learn the meaning of specific words. A concept, which is not merely a word, requires special attention. Children possess an amazing sense for using the appropriate word in the appropriate context without actually understanding either. This is the problem of verbalization. Parents are well aware of this tendency when a young child breaks into adult conversation with a comment far beyond his experience or understanding. In the classroom if the student uses the proper terminology in the proper place the teacher may assume that he understands the concept when in fact his understanding may be incomplete or even completely erroneous. The more such an error is verbalized the more it tends to become set and the more difficult it may be to correct. Constant checking is required to ascertain the accuracy and completeness of the student's understanding. If the student's concept is too narrow the teacher must help him to extend it as far as seems appropriate at that particular point in his life.

Another problem involving language and concept development is created when the meanings of a word change with the context. When the word *party* is brought up in an elementary social studies class it may call to mind anything but a political group: birthday party, Indian party, scouting party, hunting party. The student might conceive of *culture* as something grown in the biology laboratory or as "what people who go to the opera have." Such terms as race, class, source, progress, and civil are but a few of the many-meaning concepts in social studies classes. Some words change their meanings within the social studies, from discipline to discipline. *Conflict,* for example, will project itself in different ways for the historian, the social psychologist, the geographer, the anthropologist, and the economist. The same problem exists when terms such as authority, resources, and value are used.

Some words, far apart in actual meaning, are confusingly close in the way they are spelled: habit, habitat, habitate; migration, immigration, emigration; nationality and nationalism; democratic and Democratic, longitude and latitude; culture and acculturation. Concepts present a basic problem when they are entirely new to a student. If, in addition, he has had no experience to which to relate the new concept he may revert to pure memorization, relying on recall rather than on understanding when required to use the concept again.

The terms we use to explain some concepts are in themselves so vague that students become confused. Numerous studies substantiate this in relation to concepts of time and space. Clark C. Gill notes the frequent breakdown in communication caused by terms such as "many years ago," "in early days," "in colonial days," "recently," "in the near future," and "many years from now."[6] He reports the results of a test, administered on a limited basis to high school juniors and seniors, indicating that the widest range of responses to questions based on indefinite quantitative concepts seemed to be in estimating sums of population, money, and distance.[7]

The teacher can help the student develop accurate meanings by asking for illustrations to make his meaning clear. If inaccuracy is evident the correction can be made at once, either by referring the student to material which will correct his misunderstanding or by exposition. The teacher who suspects a confusion in terms can administer a brief test to find out what meanings students do associate with commonly used words.

Students should be encouraged to improve their questioning strategies.

The extent to which a student is successful in his search for the meanings of concepts will be determined to some degree by his ability to pose productive questions. Development of this skill may require considerable practice and repeated opportunities to analyze his own particular strategy of questioning. Is my question clear and specific? Do I need to know other things before I can ask this question? Can this question be answered? Will its answer narrow my field of search? Is it economical? If answered, will it take me closer to an understanding of this concept? The game of "Twenty Questions," long used by teachers, is an appropriate means for students to use in analyzing their questioning strategies. Taped classroom sessions may be useful in identifying questions which paid off and those which actually blocked progress.

The student should also learn to ask some of the questions the social scientist asks. He should recognize that all social scientists, regardless of discipline, ask the basic question, "What is man, and how does he react with his environment and with his fellow man?" Further, he should understand that each discipline, because it is concerned with a specific phase of man's complex activities, strives to answer slightly different questions. Because the questions differ, so do the techniques which the social scientist uses to locate answers or arrive at the resolution of problems. The geographer asks about man's relations to his physical environment, employing tools such as maps and charts. The economist is concerned with man's attempts to resolve problems of scarcity, so he uses statistics, graphs, and formulae. The historian turns to documents, artifacts, and testimony as he seeks answers to questions about what man has done.

[6]Clark C. Gill, Interpretations of Indefinite Expressions of time," *Social Education*, Vol. 26, No. 8, December, 1962, pp. 454-456.

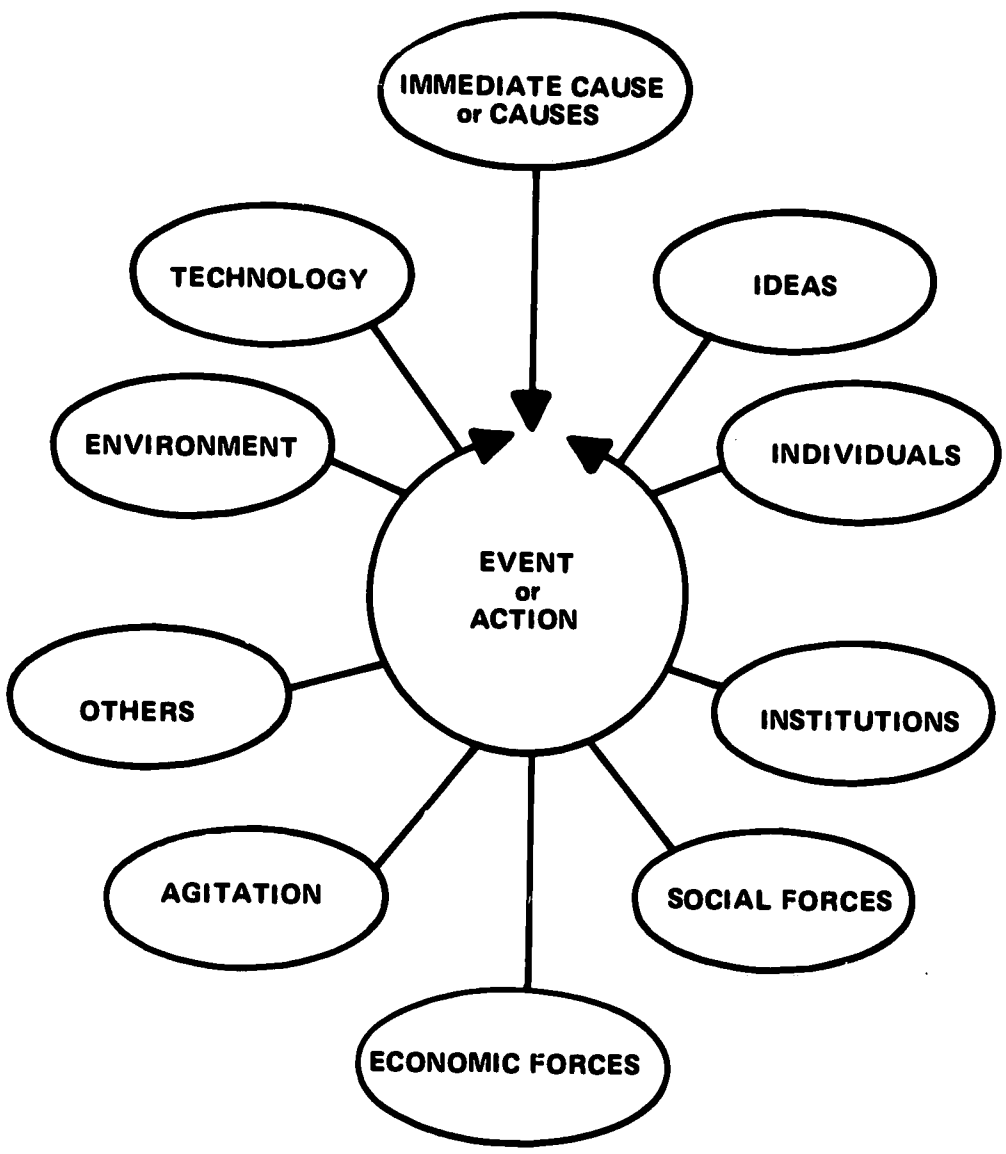
[7]Clark C. Gill, "Fractured Facts: How High School Students Interpret Indefinite Quantitative Concepts in United States History," *The Clearing House*, Vol. 39, Sept., 1964. pp. 35-39.

If the student's inquiry is to be productive, he must learn to ask similar questions within the limits of his ability. His questioning strategy is important also when he is inquiring into the meaning of a single basic concept. The mode developed will help him whenever he faces a new situation in which that concept is present. The concept of "Multiple Causation-Multiple Effect" might serve to illustrate. The first nine questions are adapted from Professor Carl Gustavson's "Nine Questions to Ask About Cause."[8]

Questions to raise about the concept of *Multiple Causation:*

1. What happened to begin the action?
2. Had there been a series of previous related events?
3. Were there any new ideas which motivated the action?

MULTIPLE CAUSATION: A MODEL



[8]Carl G. Gustavson, *A Preface to History,* (New York: McGraw-Hill Co., 1955), p. 62.

4. Were there any people whose strengths or weaknesses helped to bring on the action?
5. Were there any institutions, strong or weak, which helped to bring on the action?
6. Did the physical environment influence what happened?
7. Were there religious implications in what happened?
8. Were there any economic forces at work?
9. Were there technological developments which influenced the action?
10. How were the various elements related to each other?

Questions to raise about the concept of *Multiple Effects:*

1. What changes were evident immediately following the action?
2. Were there any changes that became evident only after a long period of time?
3. Did the changes act as causes of still further changes?
4. Which elements of society were affected by the action?
5. What ideas were changed by the action?
6. How were the changes (1-5) related to each other?
7. Was there any evidence of feedback from effects to causes? (Did any of the effects serve to increase the power of the causes?)

In much the same way questions can be identified to facilitate the understanding of concepts of substance and concepts of value.

Questions to raise about the substantive concept, *Social Change:*

1. What changes? (institutions, culture, society)
2. What causes the change? (diffusion, invention, innovation, population changes, natural occurrences, physiological changes, population movements, cultural contacts, social movements, changing values)
3. By what processes does it occur? (accommodation, amalgamation, competition and conflict, social movements, reform, revolution)
4. What inhibits social change? (habit, tradition, vested interests)
5. What results from social change?

Illustrative of the many questions to be raised about the value concept, *Empathy:*

1. Exactly how does this person's behavior differ from mine?
2. What does he give as reasons for his actions?

3. What conceptual understandings may have led him to his principles? How do they differ from mine?
4. How might his background of experience have led him to develop the concepts he has? How does his background differ from mine?
5. If my principles were based on similar concepts and experiences might I understand better why he acts as he does?
6. Because of the differences that exist between us, should I change my behavior with respect to him?
7. Is it possible to understand why he behaves as he does without changing my own beliefs or behavior? Should this be done?

When models of any sort are used students should be cautioned that they are only guides which are constantly open to extension and revision; otherwise their value as tools is likely to be distorted. Openendness should be a part of any model, including the diagram which may help students to visualize a pattern or structure and to retrieve knowledge previously explored. Based on the questions posed above about causation, a diagramatic model such as the one below might enable students to more readily employ the concept in a variety of situations. It emphasizes the multiplicity of causation, the inter-relatedness of elements involved, provides a framework, and allows for the inclusion of added categories.

Such a model serves a variety of purposes. It may guide the student's search for causes of an event by providing more direction than the commonly used categories; social, political and economic. Once causes have been determined, they can be assigned some order of significance by enlarging or diminishing the circles of the model. At this point the student must justify what he has done by citing relevent data and information, and it may be the time during which most learning occurs. Later, when a similar action is examined, the same procedure can be followed and the results compared with the previous model for comparison.

Experiences Selected Should Serve a Specific Purpose Related to the Concept Being Developed

The teacher must decide which of the variety of possible experiences will be most profitable for the student at a particular stage of his learning. Does he need to sharpen skills? Is there a need for widening the base of his experiences so that the concept can be extended? Is he ready to use and test his understanding? Whatever decisions are made, the learning experiences selected should serve the purpose the teacher has set and should involve the student actively. This does not always require physical activity. The student may become even more involved when he listens to exposition and is moved to think about it.

Experiences Should be Varied if Concepts are to be Built in Breadth as well as Depth

Most major concepts in the social studies have additional meaning and value because of their cross-disciplinary character. Therefore, students should be placed in situations which allow them to examine a concept from a variety of viewpoints by changing their frame of reference. It may be appropriate at times to draw on another field of knowledge, the humanities for instance, which also deals with man in society.

The humanities contain the creative expressions of man's view of his world. Examined as such, they help to explain what man *may* have believed and why he *may* have held it to be true. In the social studies, where the children deal with cultures, times, and places vastly different from their own, serious inquiry into the concepts which motivated other people's actions becomes as necessary as clarification of their own personal concepts. The humanities provide the social studies teacher with tools for concept development when they are used to:

- develop skills of observing, listening, abstracting and relating elements from creative work
- emphasize the power of concepts to direct human behavior and belief
- examine value concepts and viewpoint
- illustrate the changes in meaning of concepts over a period of time
- illustrate the differences in concepts held by people or another time, place, or culture
- generate hypotheses to be tested from a creative expression
- vary the context in which a concept is examined
- accent man as the focus in society.

Students should recognize the subjective nature of creative work and the need to adjust their method of inquiry. In its early stages the inquiry should be as objective as possible in describing accurately what the artist painted, the poet wrote, or the builder created. As an attempt is made to explain and interpret the data the inquirer becomes more and more subjective. The student will find it difficult to generalize about an imaginative, emotional, value-laden creation which was meant to express one man's view of his world. At the same time his own reactions to what he examines will be influenced by emotions and values. Any conclusions he draws will be acceptable only in relation to the particular subject at hand, tentative and personal.

When the content of another body of knowledge is used to develop a social studies concept the teacher might ask himself:

- To what extent will this material be useful for developing a concept in the social studies?

- Will the maturity and background of the students prepare them to learn from this material?
- Am I competent to direct inquiry about this material, or should I seek assistance?
- How can I assess the effectiveness of the inquiry into this area of knowledge as it relates to objectives in the social studies?

Experiences Should Include the Use of Original Data and Primary Sources

If students are to learn to think along the lines that guide the social scientists' search for knowledge, they must have practice using raw data. From these data students can work toward the development of concepts and generalizations which grow out of the relations between concepts.

Not a new idea in itself, but now more readily available for use in a class, is the realia kit. These kits vary in size from a match box or a shoe box to a seaman's chest, and contain objects related to a single concept or a single generalization. The authenticity of the objects in the kit enhances its value, but accurate copies or reproductions will do. Coins, tools, utensils can be handled by students as they question and hypothesize about the people who used them. Kits are available commercially and from museums, or they can be assembled by the teacher. There may even be value in having students decide what a concept kit ought to contain, assemble the items and test the kit on their fellow students.

Original documents, eyewitness accounts, diaries, letters, government reports, statistical data, artifacts help to create a one-to-one relationship between the student and what he is studying.

Experience Should Be Realistic and Pertinent to the Lives of Students, So That They Can Become Actively Involved with the Concept

Many activities that have become an accepted part of the social studies program over the years were designed specifically to provide experiences for concept development. Committee work, classroom elections, student government, student courts—all include in their rationale the development of such concepts as government by the consent of the governed, justice, social interaction and citizenship. When these activities are perceived by students to be serious, responsible, and related to their own needs they are valuable. Problems are analyzed, decisions reached, and action taken on the basis of concepts. Discussing the responsibility for the consequences of the action provides the opportunity for evaluation and adjustment of belief.

Similar in its usefulness for concept development (and in its requirement of skillful implementation) is the activity which calls on the student to play a role. He is asked to be someone he is not, and to act on the basis of concepts

he may not hold. In actuality, he probably can never be expected to do this fully, but if he is to make an attempt he must prepare carefully for his role. To play a role successfully the student must become involved in the meanings of empathy, interaction, culture, choice. On a large scale, model assemblies and United Nations meetings have proved to be a valuable means of extending concepts in the social studies.

One of the more recent innovations directed toward concept growth is the *simulated* or *educational game.* The game is based on an actual historical event or a current situation and uses a systems approach to the analysis of the concept. Elements of chance and skill are avoided in many of the games which place the emphasis on the alternative strategies for decision-making and problem solving. The student is told who he is and what he has to work with in order to attain his goal. From then on the decisions are his. The game may be replayed several times with the student assuming other roles or replaying his original one. Evaluation of the choices made is an important part of the philosophy of the educational game. Examples of games available at present are those designed around several social studies concepts: scarcity, investment, industrialization, urbanism, social organizations, diplomacy, and the legislative process.

Producers of games see many benefits accruing from their use: a high degree of motivation and student involvement, an increase in facility of learning significant facts and processes involved in the concept, a realization of the need to examine alternatives in decision-making, a recognition of the relevance of what he is doing during the game to what he is studying in class; a sense of dealing with issues that are real; and a growing sense of the meaning of the concept simulated by the game. Producers recognize limitations in the device and are attempting to resolve the problems which arise.

The *open-ended case study,* in written or filmed form, also places the student in a position of decision-making. He is presented with information and events up to the point where a decision must be made in order to resolve a problem. Then he is asked to draw his own conclusions. Actual decisions made when the event occurred are disclosed only after this step has been taken. If the case study is imaginary, class discussion of the many possible conclusions is used to develop the ideas involved. Teachers may convert expository films or reading materials into this mode by stopping the film or withholding written material at the appropriate point.

Designed especially as an aid in concept development is the *8 mm film loop* which may be inductive in approach and open-ended. Data are presented and the student is asked to abstract similarities and establish necessary relationships. The film may be stopped to allow discussion and questions, and it is sufficiently brief (2-5 minutes) to be viewed several times if needed. Sound is provided only as it facilitates learning of the concept. If action is not necessary to an understanding of the concept sets of pictures or slides can be

assembled to serve the same purpose. Another technique which is useful in emphasizing similarities and differences is the use of two slide projectors, presenting students with two contrasting slides simultaneously; they can then be asked to make cross-cultural comparisons.

The *multi-overlay projectual,* another tool which is useful in teaching inductively, develops a concept from the simple to the complex by disclosing progressively the information needed in the inquiry. Because teachers can create their own, this medium is adaptable to the specific needs of the students at a particular moment.

The student is most alert to his involvement when he joins in a *discussion* about something he considers important, such as when he explains his own idea or tries to understand what someone else is explaining. This pinpoints the concept. The discussion may serve the purpose of concept development when it is intended to resolve the problem of the meaning of an idea, to clarify relationships between the elements of a concept, to analyze a belief or behavior, or to develop the skills and abilities necessary to thinking conceptually. Although a degree of consensus may be the goal in the discussion, complete agreement may never be achieved.

It has been said that a student engages in independent study for the purpose of discovery; when he is interacting with others he is engaging in a dialogue or a discussion. The teacher's role is that of guide and questioner, drawing ideas from students, clarifying obscure contributions, and directing the exchange of beliefs and opinions toward the discovery of meaning. He participates but does not dominate, listening closely to what the students say so that the search moves forward for each participant.

Many other devices are used by teachers of the social studies in concept development: surveys, interviews, questionnaires, group planning, content analysis to identify ambiguous and precise statements; tape recordings and commercial recordings; videotapes, filmstrips. It is not possible here to describe the use of each; many descriptions of their use are readily available elsewhere. They are mentioned here because of their special relevance to concept development and because they represent varied ways of presenting material.

Some General Principles: A Summary

A review of some general principles to keep in mind in planning instructional activities for concept development may serve to summarize and apply much that has been said in previous chapters:

- All concepts must develop out of experience.
- Individual differences on the part of students play a major role in concept attainment–background of experiences, academic ability,

vocabulary development, reading ability, degree of interest, work habits and skills, and the maturity of the learner.

- The number of new concepts introduced in any single unit should be limited and appropriate for the ability level of the students.
- Concept development is likely to be increased when unit objectives are clearly stated in terms of behavioral change, with specific mention of the concepts to be emphasized.
- Since concepts develop slowly, students need time to reorganize and classify what they perceive.
- Students need to respond actively by putting new concepts to work at once.
- Concepts are reinforced by their frequent use and application in as many contexts as possible.
- Relevant and varied materials related to the concept aid understanding by presenting it in several contexts.
- Since the number of direct experiences that can be provided is limited, the teacher should be alert to provide as many vicarious experiences as possible.
- The dangers of verbalization without understanding are reduced if students are required to produce illustrations of what the concept means to them.
- Out-of-class experiences promote concept development and can be utilized by the teacher in helping students to see relationships. Similarly, current happenings can be utilized to draw parallels between the events and what the students have studied.
- As in other forms of learning, the effectiveness of conceptual development on the part of students depends to a considerable extent on the personality and knowledge of the teacher.

BIBLIOGRAPHY

American Council of Learned Societies and the National Council for the Social Studies, *The Social Studies and the Social Sciences*, New York: Harcourt, Brace and World, Inc., 1962.

Amster, Harriett, "Concept Formation in Children." *Elementary English*, Vol. 42, May, 1965, pp. 543-52.

Anderson, G. Lester and Arthur I. Gates, "The General Nature of Learning." *Learning and Instruction*, Forty-Ninth Yearbook of the National Society for the Study of Education, Part I, Nelson B. Henry, ed., Chicago: University of Chicago Press, 1950, pp. 12-35.

Ausubel, David P., "In Defense of Verbal Learning." *Educational Theory*, Vol. 11, January, 1961, pp. 15-25.

Ausubel, David P., "Learning by Discovery: Rationale and Mystique." *Bulletin of the National Association of Secondary School Principals*, Vol. 45, 1961, pp. 18-58.

Berg, Harry D., (ed.), *Evaluation in Social Studies.* Thirty-Fifth Yearbook of the National Council for the Social Studies, Washington, D.C.: The Council, 1965.

Berlyne, D.E., *Conflict, Arousal and Curiosity.* New York: McGraw-Hill, Comp., 1960.

Billings, Neal, *A Determination of Generalization Basic to the Social Studies Curriculum.* Baltimore: Warwick and York, 1929.

Bloom, Benjamin S., (ed.), *Taxonomy of Educational Objectives: The Classification of Educational Goals, Handbook I: Cognitive Domaine.* New York: Longmans, Green and Company, 1956.

Broudy, Harry S., et. al., *Democracy and Excellence in American Secondary Education.* Chicago: Rand McNally Comp., 1964.

Brownell, William A., and Gordon Hendrickson, "How Children Learn Information, Concepts, and Generalizations." *Learning and Instruction,* Forty-Ninth Yearbook of the National Society for the Study of Education, Part 1, Nelson B. Henry, ed., Chicago: University of Chicago Press, 1950, pp. 92-128.

Brownell, William A., and Verner M. Sims, "The Nature of Understanding." *The Measurement of Understanding*, Forty-Fifth Yearbook of the National Society for the Study of Education, Part I, Nelson B. Henry, ed., Chicago: University of Chicago Press, 1946, pp. 27-43.

Bruner, Jerome S., "Education as Social Invention." *Journal of Social Issues*, Vol. 20, 1964, pp. 21-33.

Bruner, Jerome S., *On Knowing: Essays for the Left Hand.* Cambridge: Harvard University Press, 1963.

Bruner, Jerome S., *The Process of Education*. Cambridge: Harvard University Press, 1960.

Bruner, Jerome S., *Toward a Theory of Instruction*. Cambridge: Harvard University Press, 1966.

Bruner, Jerome S., Jacqueline J. Goodnou and George A. Austin, *A Study of Thinking*. New York: Wiley, 1956.

Carpenter, Helen M., (ed.), *Skill Development in Social Studies*, Thirty-Third Yearbook of the National Council for the Social Studies, Washington, D.C.: The Council, 1963.

Carroll, John G., "Words, Meanings and Concepts." *Harvard Educational Review*, Vol. 34, 1964, pp. 178-202.

Combs, Arthur W., (ed.), *Perceiving, Behaving, Becoming.* Washington, D.C.: Association for Supervision and Curriculum Development, 1962.

Cox, Benjamin G., and Jack E. Cousins, "Teaching Social Studies in Secondary Schools and Colleges." *Current Research in Social Studies*, B.G. Massialas and F.R. Smith, eds., Bloomington: Bureau of Educational Studies and Testing, School of Education of Indiana University, 1964, pp. 43-61.

Deutsche, J.M., *The Development of Children's Concepts of Causal Relations.* Minneapolis: University of Minnesota Press, 1937.

Dewey, John, "An Analysis of Reflective Thinking." *School and Society*, Carl H. Gross, *et al.*, eds., Boston: D.C. Heath and Co., 1962, pp. 633-40.

Dewey, John, *Experience and Education*. New York: Macmillan Company, 1965.

Dewey, John, *How We Think*. Boston: D.C. Heath and Company, 1933.

Donaldson, Margaret, *A Study of Children's Thinking*. London: Tavistock Publications, 1963.

Douglass, Carl R., and Herbert J. Spitzer, "The Importance of Teaching for Understanding." Forty-Fifth Yearbook of the National Society for the Study of Education, Part I, Nelson B. Henry, ed., Chicago: University of Chicago Press, 1946, pp. 7-26.

Findley, Warren G., and Douglas E. Scates, "Obtaining Evidence of Understanding." *The Measurement of Understanding*, Forty-Fifth Yearbook of the National Society for the Study of Education, Part I, Nelson B. Henry, ed., Chicago: University of Chicago Press, 1946, pp. 44-64.

Frandsen, Arden N., *How Children Learn: An Educational Psychology*. New York: McGraw-Hill Book Company, Inc., 1957.

Fraser, Dorothy M., and Samuel P. McCutchen (ed.), *Social Studies in Transition: Guidelines For Change*. Curriculum Series No. 12, National Council for the Social Studies, Washington, D.C.: The Council, 1965.

Friedlander, Bernard, "A Psychologist's Second Thoughts on Concepts, Curiosity and Discovery." *Harvard Educational Review*, Vol. 35, Winter, 1965, pp. 18-38.

Friedlander, Bernard, "Today's Innovations in Teaching." *NEA Journal*, Vol. 55, no. 2, March, 1966, pp. 11-14.

Gage, N.L., (ed.), *Handbook of Research on Teaching*. Chicago: Rand McNally, 1963.

Getzels, J.W., "Creative Thinking, Problem-Solving and Instruction." *Theories of Learning and Instruction*, Sixty-Third Yearbook of the National Society for the Study of Education, Part I, Ernest R. Hilgard, ed., Chicago: University of Chicago Press, 1964.

Gill, Clark C., "Fractured Facts: How High School Students Interpret Indefinite Quantitative Concepts in United States History." *The Clearing House*, Vol. 39, No. 1, September, 1964, pp. 35-39.

Gill, Clark C., "Interpretations of Indefinite Expressions of Time." *Social Education,* Vol. 26, No. 8, December 1962, pp. 454-56.

Gottschalk, Louis, (ed.), *Generalization in the Writing of History*, Chicago: University of Chicago Press, 1963.

Gross, Richard E., and William V. Badger, "Social Studies." *Encyclopedia of Educational Research*, Third Edition, O.W. Harris, ed., New York: Macmillan Company, 1960, pp. 1296-1319.

Gustavson, Carl G., *A Preface to History*, New York: McGraw-Hill Book Company, 1955.

Hanna, Paul R., and John R. Lee, "Content in the Social Studies." *Social Studies in Elementary Schools*, Thirty-Second Yearbook of the National Council for the Social Studies, Washington, D.C.: The Council, 1962.

Heidbreder, Edna, "The Attainment of Concepts: III, The Process." *Journal of Psychology*, Vol. 24, 1947, pp. 93-138.

Helgard, Ernest R., *Theories of Learning.* New York: D. Appleton-Century-Crofts, Inc., Second Edition, 1956.

Henry, Nelson B., (ed.), *Learning and Instruction*. Forty-Ninth Yearbook of the National Society for the Study of Education, Part I, Chicago: University of Chicago Press, 1950.

Henry, Nelson B., (ed.), *The Measurement of Understanding*. Forty-fifth Yearbook of the National Society for the Study of Education, Chicago: University of Chicago Press, 1946.

Herber, Harold, "Teaching Students to Read History." *Reading Instruction in Secondary Schools*, Newark, Delaware: International Reading Assoc., 1964.

Holmes, Cleo O., "Developments in Simulation of International Relations in High School Teaching." *Phi Delta Kappan*, Vol. 46, No. 5, January, 1965, pp. 227-31.

Hook, Sidney, *Education for the Modern Man*. New York: Dial Press, 1946.

Horn, Ernest, *Methods of Instruction in the Social Studies*, New York: Charles Scribner's Sons, 1937.

Hullfish, H. Gordon, and Philip G. Smith, *Reflective Thinking: The Method of Education*. New York: Dodd Mead and Comp., 1961.

Humphrey, George, *Directed Thinking*. New York: Dodd, Mead, 1948.

Jersild, Arthur T., *Child Psychology*. Third Edition, New York: Prentice-Hall, Inc., 1947.

Johnson, Earl S., "The Social Studies Versus the Social Sciences." *The School Review*, Vol. 71, No. 4, Winter, 1963, pp. 389-403.

Johnson, Earl S., *Theory and Practice of the Social Studies*. New York: Macmillan Company, 1956.

Johnson, Henry, *Teaching of History*. New York: Macmillan Comp., 1940.

Jones, Samuel H., "Generalizing in the Social Science Classroom." *Social Education*, Vol. 21, No. 8, December, 1957, pp. 358-62.

Joyce, Bruce R., *Strategies For Elementary Social Science Education*, Chicago: Science Research Associates, Inc., 1965.

Kaplan, Abraham, *The Conduct of Inquiry*, San Francisco: Chandler Publishing Co., 1964.

Kates, S.L., and L. Yudin, "Concept Attainment and Memory." *Journal of Educational Psychology*, Vol. 55, 1964, pp. 103-09.

Klausmeier, Herbert J., Chester W. Harris and William Wiersma, "Strategies of Learning and Efficiency of Concept Attainment by Individuals and Groups." Cooperative Research Project, No. 1442, University of Wisconsin, 1964.

LaGrone, Herbert F., *A Proposal for the Revision of the Pre-Service Professional Component of a Program of Teacher Education*. Washington, D.C.: The American Association of Colleges for Teacher Education, 1964.

Leeper, Robert, "Cognitive Processes." *Handbook of Experimental Psychology*, S.S. Stevens, ed., New York: John Wiley and Sons, Inc., 1951, pp. 730-757.

Lewenstein, Morris R., *Teaching Social Studies in Junior and Senior High Schools*, Chicago: Rand McNally, 1963.

Martin, Frank W., "Concept Development Through Reading: What Research Says." *Journal of Education*, Vol. 137, February, 1955, pp. 24-26.

McLendon, Jonathon C., (ed.), *Reading on Social Studies in Secondary Education*. New York: The Macmillan Company, 1966.

McLendon, Jonathon C., *What Research Says to the Teacher: Teaching the Social Studies*. Washington, D.C.: National Education Association, 1960.

McLendon, Jonathon C., and John R. Lee, (ed.), *Readings on Elementary Social Studies–Prologue to Change*, Boston: Allyn and Bacon, Inc., 1965.

Metcalf, Lawerance E., "Research on Teaching the Social Studies." *Handbook of Research on Teaching*, N.L. Gage, ed., Chicago: Rand McNally, 1903, pp. 929-65.

Metcalf, Lawerance E., "Some Guidelines for Changing Social Studies Education." *Social Education*, Vol. 27, April, 1963, pp. 197-201.

Michaelis, John U., *Social Studies For Children in a Democracy: Recent Trends and Developments.* Englewood Cliffs: Prentice-Hall, Inc. 1963.

Michaelis, John U., (ed.), *Social Studies in Elementary Schools.* Thirty--Second Yearbook of the National Council for the Social Studies, Menasha, Wisconsin: George Banta Company, 1962.

Moor, O.K., and S.B. Anderson, "Search Behavior in Individual and Group Problem-Solving." *Psychological Review*, Vol. 65, 1958, pp. 151-66.

Morse, Horace T., and George H. McCune (eds.), *Selected Items for the Testing of Study Skills and Critical Thinking.* Bulletin No. 15, The National Council for the Social Studies, Washington, D.C.: The Council, 1964.

Odegard, Peter, "The Field of the Social Sciences." *Readings on Social Studies in Secondary Education*, Jonathon McLendon, ed., New York: The Macmillan Co., 1966.

Piaget, Jean, *The Child's Conception of the World.* (trans. by J. and A. Tomlinson), New York: Harcourt Brace and Co., 1929.

Platt, Myles M., "Concepts and Curriculum." *Social Education*, Vol. 27, January 1963, pp. 21-22.

Preston, Ralph O., *et al., Guiding the Social Studies Reading of High School Students,* Bulletin No. 34, National Council for the Social Studies, Washington, D.C.: The Council. 1963.

Price, Roy A., *Needed Research in the Teaching of Social Studies.* National Council for the Social Studies, Research Bulletin No. 1, Washington: The Council, 1964.

Price, Roy A., Warren Hickman and Gerald Smith, *Major Concepts For Social Studies.* Syracuse, Syracuse University Press, 1965.

Quillen, I. James, and Lavone A. Hanna, *Education for Social Competence.* Chicago: Scott, Foresman and Co., 1961.

Robinson, James H., *The Mind in the Making.* New York: Harpers and Brothers, 1921.

Russell, David H., *Children's Thinking.* Boston: Ginn and Company, 1956.

Serra, Mary C., "How to Develop Concepts and Their Verbal Representations." *Elementary School Journal,* Vol. 53, 1953, pp. 275-85.

Skiff, Stanley O., "Concept Formation and Education." *Peabody Journal of Education,* Vol. 30. March, 1953, pp. 296-99.

Skinner, B.F., *Verbal Behavior.* New York: Appleton-Century-Crofts, 1957.

Suchman, J. Richard, "The Child and the Inquiry Process," *Intellectual Development: Another Look,* Washington, D.C.: The Association for Supervision and Curriculum Development, 1964.

Taba, Hilda, "The Teaching of Thinking." *Elementary English,* Vol. 42, May, 1965, pp. 534-542.

Taba, Hilda, and Freeman F. Elzey, "Teaching Strategies and Thought Processes." *Teachers College Record,* Vol. 65, March, 1964, pp. 524-34.

Vinacke, W. Edgar, "Concept Formation in Children of School Ages." *Education,* Vol. 74, 1954, pp. 527-34.

Vinacke, W. Edgar, *The Psychology of Thinking.* McGraw-Hill Book Company, 1952.

Whipple, Gertrude, "Geography in the Elementary Social Studies Program: Concepts, Generalizations, and Skills to be Developed." *New Viewpoints in Geography*, Twenty-Ninth Yearbook, The National Council for the Social Studies, Washington, D.C.: The Council, 1959.

Wittrock, M.C., "Verbal Stimuli in Concept Formation: Learning by Discovery." *Jornal of Educational Psychology*, Vol. 54, 1963, pp. 183-90.

Woodruff, Asahel D., "The Uses of Concepts in Teaching and Learning." *The Journal of Teacher Education*, Vol. 15, March, 1964, pp. 81-99.

BOBBS MERRILL REPRINTS

(Available from Bobbs Merrill Publishing Comp.)

Allport, Gordon W., "Values and our Youth." #8400.

Denemark, George W., "Concept Learning: Some Implications for Teaching." #8821.

Eikenberry, Alice, and Ruth Ellsworth, "Organizing and Evaluating Information." #8824.

Henderson, Kenneth B., "A Logical Model for Conceptualizing and Other Related Activities." #8402.

Johnson, Earl S., "Ways of Knowing." #8000.

Roth, Louis E., "Clarifying Values." #8410.

Thelen, Herbert A., "The Concept, Characteristics and Use of Discovery Materials in Teaching." #8822.