

INQUIRY: AN EFFECTIVE METHOD OF TEACHING SOCIAL STUDIES

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I. THE PROBLEM

Statement of the Problem

The purpose of this study was to examine the inquiry method of teaching social studies as is related to student achievement and the building of positive attitudes toward social studies. It was also designed to examine a variety of different methods through which the inquiry approach could be applied. Finally, after synthesis of the findings of the examination, this study presents recommendations for the most effective utilization of the inquiry approach to teaching social studies.

Procedure

The procedures used in collecting the data for this study included an investigation of the literature related to: (1) the theoretical bases for teaching social studies and the inquiry approach to learning; (2) the information on student achievement through use of the inquiry method on reasoning; (3) the data on developing positive attitudes through the use of the inquiry method of reasoning; and (4) the findings on teacher approaches to using the inquiry method.

Significance of the Study

This study is significant in that it centers around the criticism of the current social studies curriculum. As

traditionally presented, the subject content is descriptive rather than interpretive, resulting in instructional techniques which encourage the accumulation of absolute facts rather than relative concepts.

The necessity to accumulate a large body of facts which the student feels are irrelevant causes a large number of students to drop out or fail to participate in any academic activities of the classes.

Many others fail in fact if not in name. They complete the course only because the teachers push them through the course whether they have mastered basic skills or not. They find the course uninteresting and boring. They fail to develop more than a tiny part of their capacity for learning and fail to use many of the basic understandings and creativity that are essential to understanding social studies.

In the minds of many, an answer to this dilemma is teaching social studies through the inquiry approach. The inquiry approach presents facts as a body of ideas, encouraging the students to make correct responses about unstated facts or ideas generated by the information already presented. Hopefully, the student is challenged to find out for himself the generalizations or inferences about the subject matter as a result of his own thinking. Through this method, the student plays a thoughtful role in his own learning.

In the teaching of social studies the inquiry approach is based on providing each student with pertinent source materials, documents, diaries, letters, pictures, recordings, slides, tapes, and relics. These materials are then subjected to careful scrutiny and from the evidence will grow the concepts which reinforce a generalization.

By using the inquiry method of teaching social studies the learning situation is turned into an adventurous discovery which enhances transfer and long-term retention of learning. Most of all, it reinforces the technique of inquiry; the student sees its value as a means of getting involved and solving his own problems.

Definition of Terms

Inquiry refers to a request for information and a systematic investigation of a matter of interest.

Problem-Solving Approach refers to teaching methods wherein pupils are taught to recognize social issues and problems arising out of the content of social studies and to use the steps of problem solving in arriving at solutions. The four steps used in this method are (1) stating the problem, (2) forming the hypothesis, (3) discussing the problem, and (4) drawing conclusions.

Traditional Approach is a strategy that makes facts important in themselves. It involves strict adherence to textbooks and places emphasis on memorization rather than

on critical or reflective thought. This method implies that (1) the text is read, (2) the facts are discussed and (3) the pupils are tested to see how much of the factual information has been learned.

Learning refers to a change in behavior exhibited by a living organism occurring as a result of some aspect of the environment.

Retention refers to changes in behavior as they exist within the structure of the mental capability of a human organism after a specified time lapse.

Reflective Thinking refers to the process of identifying problems of fact and value, assessing them in view of the assumptions in which they are grounded, and subjecting them to proof in terms of certain criteria.

II. REVIEW OF THE LITERATURE

Recent proposals for revisioning the social studies curriculum have been not only concerned with the scope sequence of the program, but also with the methodology used by the teacher. Traditionally the classroom has been characterized by an adherence to the expository method as a major approach. Under this method, the teacher was the central figure in the learning process and through lecturing, directing discussions, and assigning readings placed emphasis upon the acquisition of a body of predetermined data.

In the classroom the student acted as a passive participant in the learning process whose primary function was to assimilate knowledge and to organize it into some general framework. Although teachers carried on many activities which were designed to make learning meaningful and interesting as possible questions have been raised regarding the validity of this approach and has led to a reconsideration of the rationale underlying instruction in the social studies.

A somewhat different approach, advocated by such educators as Jean Jacques Rousseau, Maria Montessori, and John Dewey, is the inquiry approach.

The inquiry method involves a number of steps which the student must engage if he is to be successful in his problematic situation. The steps include: building a hypothesis, testing the hypothesis, drawing conclusions, applying the conclusions

to new information, and developing generalizations.

The first task of inquiry learning and teaching is to develop a reason for engaging in a particular experience.

Such a purpose might be given by the teacher or developed by the students themselves. If the learners themselves develop a purpose, their motivation is heightened and their involvement and commitment is much more intense. The most purposeful learning arises from problems which are meaningful to the students and which they feel requires a solution.

In guiding this initiatory stage of the experience, the teacher must provide opportunities for the learners to make the problem meaningful, to clarify it, and to state it in their own terms.

The key aspect of any inquiry-oriented experience is testing the hypothesis. It requires the teacher to give, and to locate additional data relevant to the hypothesis being tested.

Once the information has been collected or presented it must be analyzed. This requires the learners to engage in activities in which they are asked to translate the evidence into their own terms, evaluate it for relevancy, accuracy and validity, identify similarities, differences, trends and patterns, seek relationship among the parts, interpret it and search for significance and meaning in the results.

The next step in inquiry learning is to develop a conclusion. Once taken apart, the data must be reassembled in such a way that it can be meaningfully explained. This explanation or conclusion may be a restatement of the hypothesis, although it often represents an elaboration with substantial modification.

The final step in the inquiry process is the development of a conclusion based on extensive testing and varification of a hypothesis. It requires that the teacher build activities in which the learner must develop a statement that explains the overall significance of the data examined as well as other similar data not yet examined.

Through this procedure, the learning process in the social studies classroom becomes a learning laboratory in which students use materials and data from the social studies to seek generalizations which will help the student understand the social and political world.

The student will realize knowledge is not always memorization, but can be viewed from many directions. Some of the processes or directions through which the student might inquire are:

1. Learning to observe or "look well".
2. Categorizing, organizing, and recording data in some manner.

3. Vicarious experience of the lives, times, and roles of others.
4. Differentiating between fact and opinion.
5. Learning to be skeptical of ones own hypothesis and generalizations.
6. Taking and defending a position.
7. Searching for additional evidence-especially that which might refute one's position re-examining the validity of generalizations.
8. Predicting.
9. Examining value conflicts.
10. Extending ones appreciations.
11. Seeking relevance and truth for oneself.(1)

Through these various ways of viewing knowledge the student may be able to find that particular process or technique from which he benefits.

The inquiry approach has also been found by researchers to be effective in building positive attitudes because it engages the student in a number of experiences. Some of the experiences are:

1. Recall of significant information.
2. Differentiate between fact and opinion.
3. Define problems sharply.
4. Bring appropriate knowledge to bear upon a given situation.

5. See relationships.
6. Draw inferences.
7. Raise future questions and transfer knowledge gained from one media to another.
8. Employ social studies skills and methods.(2)

Through these experiences each student can seek answers for himself and to those questions which have perplexed him for sometime.

Today's students are deluged with information. Data and stimuli flood in upon them from every source imaginable. Books, billboards, television, radio, newspapers, even lapel buttons and bumper stickers all shriek their messages and compete for attention and belief. Therefore, more than ever before, students need continuing experiences in inquiry to learn how to order and to decode these data. Classrooms must increasingly become learning laboratories in which many viewpoints, data, propositions and convictions are examined and re-examined; the student will want to know more, and that which he finds will be retained longer because that knowledge will be meaningful.

Literature on Developing Positive Attitudes Through Use of the Inquiry Method

Most students come into social studies courses with the idea that the course is boring and uninteresting. A large

number of students fail to participate in the activities of the class because they feel that what is being taught is irrelevant.

Studies have shown that when lessons are made relevant to the student's life today there is a change in student's attitude towards social studies. The inquiry method places emphasis on dealing with problems that are of interest to the student. When daily lessons are made relevant to the students they tend to take a greater interest and a more active interest in the class.

Students playing an active part in their learning (1) promotes participation, (2) constrains us to consider the relevance of problems posed, and (3) promotes a commitment to the task not so readily engendered by conventional teaching patterns. (3)

It should be remembered that inquiry strategies require extensive and intensive student involvement in the learning process. If students are to become involved in their studies, an appropriate social climate must be set so the student will feel free to express any opinions he has concerning the lesson.

An appropriate social climate within the classroom is essential for a worthwhile discussion and is an important factor in gaining maximum student participation. All that is meant by the term social climate is a classroom environment in which the students feel free to express their opinions, knowing that their opinions will be courteously, and fairly entertained,

but rigorously analyzed. If an idea expressed by a student is met with sarcasm, that student, and probably others, will hesitate to participate in class in the future. If the teacher indulges in personal attack rather than in an examination of the ideas presented by the students, he will dry up the flow of honest discussion. This does not imply that the teacher should praise or accept without critical examination an inane or irrelevant comment of a student. The purpose of establishing a permissive atmosphere is to promote a worthwhile discussion, not to stimulate participation for the sake of participation. The point is that the teacher should see to it that ideas expressed by students in the course of a problem solving discussion are energetically and carefully examined.

The teacher will have some students who are shy and reluctant to express their ideas in the classroom. This reluctance to express their ideas may be due to any one of a variety of reasons. The student may have been "cut down" by a teacher in some other class. He may lack confidence in the worth of his opinions. By carefully observing the facial expression of pupils during the course of discussion, the teacher can often detect a student whose expressions suggest a halt-willingness on his part to enter into the discussion. His eyes reveal a sparkle of interest and his frown bespeaks an unasked question or an unvoiced objection or confirmation of a point just made by another student. Yet, the students

habit of refraining from entering into a problem solving discussion is sufficiently compelling to prevent him from voluntarily participating. It is at this point, the point of apparent high interest, the teacher invites the student to react in a relaxed fashion; the probability is good that the student will participate. Once he has contributed to the discussion, the change is good that he will participate in future problem-solving discussions. Once the student sees that his answer is accepted and that he made a contribution to discussion, he feels that the teacher is as much a friend to him as to the other members of the class. This establishes rapport between the teacher and the student.

Good rapport between teacher and student is desirable in all methods of teaching. It is imperative in the inquiry approach. Many intangible and indefensible 'subtleties' are involved in the creation of a classroom climate conducive to the critical and reflective thinking required in the study of problems. Students for example, should feel free to question usual sources of authority such as the textbook, reference books, or the teacher.

Among the characteristics of a classroom climate that permits and encourages the inquiry approach are the following:

1. Students feel emotionally secure in dealing with ideas that may be contrary to strongly held beliefs.

2. The teacher and students recognize that there may be more "misses" than "hits" in their creative thinking about the problem.
3. The teacher assures students that he recognizes the difficulty of the reasoning processes involved in the analysis of the problem.
4. Students are free to suggest unconventional, even seemingly absurd, possibilities in regard to the problem.
5. There is recognition of the fact that no simple or major formulas can be used for the solution of the problem.
6. Since most problems do not have an either-or solution, students should realize that there may be no necessarily "right" answer.
7. In establishing priorities among possible problems to consider, students should recognize the need for giving precedence to those problems that affect the largest number of people.
8. Students should have a belief in the ability of man to act intelligently in directing his own destinies.(4)

Library practices, school scheduling, as well as teaching practices will need re-shaping. Classroom schedules will have to be made more flexible so that the students will be permitted to roam about in the library, as class visits to the library

prove to be inadequate it will mean giving students time to browse and search in the library. Individual study carrels are among the new facilities that will have to be provided. To do independent study, students must have the time, space and facilities to carry on their work. School libraries are designed to become learning laboratories; open in the evening and on weekends.

With some classes the teacher may find it difficult to establish rapport-the class remains frozen. Problems which other classes attack with enthusiasm, that class views with difference. The way of life in that particular class may be truculent silence. A promising way to break through that wall of silence is to center the discussion around problems that are important to the student. The teacher may be able to arouse discussion. Once the teacher has established an atmosphere of free, uninhibited discussion, then he can gradually proceed to a consideration of more vital, substantial problems.

One tradition has grown up with the schools and that is the good teacher is the one who has a "quiet" room. Perhaps, in the beginning, and for too many teachers today, this grew out of the existence of large classes and too few appropriate instructional materials. There was also the mistaken notion that consisted solely of a child interacting with either a teacher or a book. As a result, many teachers are evaluated

on the basis of the quiet and smooth routine of their classrooms.

There are times when the nature of the task requires quiet, routine behavior. But inquiry requiring an open search, invites verbal interchange, exploration and the defense of one's position. Problem solving is the consequence of being frustrated or blocked in one's advance toward a goal. Such frustration evokes feelings - anger, wonder, excitement, and urgency with all their accompanying behaviors.

In the inquiry classroom the teacher's behavior is crucial, and involves procedures such as the following:

1. Encourage question-asking and respond to children's questions.
2. Provide group attention for important questions.
3. Follow through individually, with questions that are of more limited interest.
4. Reward exploratory thinking.
5. Help children to recognize that a search involves trial and error behavior.
6. Whenever possible, emphasize the search along the more routine learnings.
7. Help the class to understand the importance of delaying action, whenever possible, in order to think the problem through.
8. Establish the understanding that not all problems are immediately solvable, but that we make progress by

working on them.

9. Make it safe to have ideas, try them on for size, and abandon them for better ones.
10. Provide opportunity for children to experience the realization that hypothesis can be proven false as well as true.
11. Demonstrate your faith in problem solving thinking by participating in it yourself.
12. Ask yourself continuously, "does the curriculum I plan permit the energies of problems that are real for the children."
13. Be a guide to problem solving.(5)

Being a guide to student learning is an important duty of the teacher if students are to be successful in the inquiry approach. Through the guidance of the teacher, the student learning is more effective, retention is greater and it enhances the students chances of being successful in finding solutions to his problems. The inquiring child should not be entirely on his own. It would be foolish to deprive the child of guidance and the support of teachers. There is no purpose in requiring a child to discover anything for himself.

A study was done entitled "Directed Versus Independent Relations". Robert C. Craig was the investigator. The study sought to find the effect of external direction to aid the learner in his search for established relations among given

concepts upon the learning and application of the relations. The results suggested that learner activity should be directed for efficient learning of principles. The hypothesis tested in the experiment was that increased direction discovery activity effect increases the learning with accompanying losses in retention and transfer.

The subjects for the experiment were two groups of fifty-three sophomores and juniors at the State College of Washington. Forty-nine were men, fifty-seven were women. Each group was a fifty percent random sample of the authors undergraduate students during the fall semester of 1953-54.

A pre-test was used to measure initial knowledge of relations. The number of relations actually learned by each subject was the difference between the number known at the final learning trial and the number known before training. The pre-test was given a second time as a post-test to measure the relative effects of the two degrees of direction on retention. A second post-test measured the post-training ability of each group to discover the basis for the solution of new situations independently. Confirmation of each learners knowledge of post-test relations was obtained by asking each learner to write out the reasons determining the answer.

The results of the experiment affirmed Thorndike's conclusion that the widespread limitation of guidance to designating errors is a sign of weakness in the technique of teaching.

The hypothesis that increased external direction helps learners in their search for established relations, effects an increase in the number of relations learned without an accompanying loss in retention or transfer was confirmed. Further, the results suggested that as the interval of time after learning increases to about one month, the group receiving more direction retain a greater proportion of what was learned than the other group.(6)

Table 1 shows the number of relations learned by the directed and independent group. Through the guidance of the teacher as indicated in the chart the directed group learned more relations than the independent group.

Table I - Group and Variance for Each Set

Set of Principles	Statistic	Directed Group	Independent Group	Significance Test
A	mean	2.280	1.520	t 3.84
	Variance	0.910	1.176	f 1.29
B	mean	2.560	1.520	t15.84
	Variance	0.923	.760	(t)1.21
C	mean	2.560	1.920	(t)3.03
	Variance	1.257	1.110	(t)1.09
All Sets	mean	7.400	5.080	(t)5.10
	Variance	4.667	6.327	(f)1.36

Student's t's all significant at 0.01 level, all f's not significant at 0.05.(7)

Table 2 on page 20 shows the percentages of learned relations relearned by both groups. The table indicates that those students guided by the teacher retained the relations longer.

In order to make inquiry work, the teacher must first be sensitized to children's needs, interests, and abilities. She must also be able to stimulate children at the proper moment with materials and questions. She must challenge and, most importantly, allow the unorthodox idea to be considered and tested along with the obvious.

Finally, if the teacher is seriously interested in inquiry, she need not wait for the arrival of specially packaged kits of materials. Opportunities for inquiry exist everywhere, both in the traditional curriculum and in the most unusual and unlikely places.

The problem oriented teacher cannot teach inventiveness, openness or the exploratory attitude as a set of procedures. He can only create a "climate" that fosters the emergence of these qualities.

Literature on Student Achievement Through Use of the Inquiry

Method

Many of us have seen the native enthusiasm for learning of young children dwindle, deteriorate, and almost disappear with the passing of years in school. Most persons who have taught have known the frustration growing out of struggling

Table II - Percentages of Learned Relations Retained by
Groups at Three Intervals After Learning

		<u>No. of Subject by Per Cent Retained</u>						
Group	N+	Mean	00.0	20.0	33.3	75.0	10.00	Chi-Square
		Per Cent Retained						
				25.0	50.0	80.0		
					66.7			

Three days after learning (Set C)

Directed	51	92.61	0	0	4	9	38	4.276†
Independent	46	90.61	2	0	2+	2	40	

Seventeen days after learning (Set B)

Directed	53	79.57	4	0	13	4	32	2.256†
Independent	47	75.47	6	2+	9	0	30	

Thirty-one days after learning (Set A)

Directed	53	80.49	0	0	19	2	32+	15.392
Independent	47	62.32	12	0	13	0	22	

Number in group who learned at least one relation.

+The bar connects frequencies that were combined for the
chi-square computation.

†Not significant at the 0.05 level.

Significant at the 0.001 level.(8)

with students who fail to learn at a rate anywhere near their potential.

In the minds of many the answer to this dilemma is teaching social studies through the inquiry approach. Learning by inquiry offers the promise of a great step forward in the struggle against the failure of children.

The problems approach differs from other methods in several ways, one of the most important being that it emphasizes the development of the student's mind by having him deal intelligently with social problems which actually confront him. In this respect it is linked closely to the philosophy, of John Dewey. In addition, by focusing the student's attention upon the content of contemporary issues and relating that content whenever necessary to its pertinent historical development, it is felt that the student will study and learn subject matter more effectively since he can see its significance and relevancy to his own needs. The retention of the subject matter is greatly increased. Concisely defined, then, the problem approach seeks primarily to bring about change in ways of thinking, organizing content learned, reaching decisions, participating in social action, and mastering content. The method of discovery is very important in introducing material, since facts and details put into a structured pattern are retained longer and can be more easily retrieved.

The inquiry method has been found to be a successful

teaching method in social studies. Research shows that inquiry aids the learner in several ways: (1) it increases the learners ability to learn related materials, (2) fosters an interest in the activity itself rather than in the rewards which may follow from the learning, (3) develops ability to approach problems in a way that will lead to a solution and (4) tends to make the material that is learned easier to retain and reconstruct.(9)

Learning under these conditions is more meaningful than in the case where the learner simply memorizes the answer. More precisely the learner is forced to rely on his own cognitive abilities, he becomes cognizant of the relationships of the learning task to his previous experiences, or to the pattern of relationship among the elements of the task. He takes an active role in his own learning and makes the knowledge functional.

Functional knowledge is that which has real meaning for the student. In order for knowledge to have meaning for the student, it must be related in some way to his experience or in susceptible relationship in some manner to what he already knows. If knowledge is too far out of range the student will not be able to encompass what has been said in his own system of knowledge. That which has meaning for the student is apt to interest him. If the teacher can discover student needs and work with them, he is more likely to discover content which

has interest for the student.

One of the distinguishing features of the inquiry method is its emphasis on matters that are of direct concern to the student. Unless the student sees the relevance of the problem to himself and as a member of society, it becomes merely another exercise to be performed.

A study entitled "Developing a Method of Inquiry In Teaching World History" was developed by Byron G. Massialas.(10)

The problem grew out of an intensive and systematic effort on the part of a group of students concerned with instruction in the high school.

The study attempted to describe a method of teaching world history and to analyze and evaluate its consequences and results in terms of demonstrable pupil performance in class discussion and paper and pencil test.

The study involved four classes in world history, two of which were designated as group A and two of which were designated as group B. Students were placed in these classes at random.

The subjects in the study involved ninety-five students at the beginning of the study, ninety-three of whom completed the course at the end of the semester, a period of eighteen weeks.

Method A focused on the inquiry method, which involved

the use of spring-boards which were thought provoking. Method B reflected a logical adaptation of a traditional attitude toward learning.

Pre-test and post-test analysis were used to analyze and compare the achievement of the groups. Post-tests were administered during the eighteenth week of the experiment. Equivalent forms of the Cooperative World History Test and the STEP test were given.

Table 3 contains the scores obtained by the two groups on the post-test.

TABLE III - Post-Test Comparison of Mean Scores on the Cooperative World History Test, Form Z, and the Step, Social Studies Test

	Group A (N=44)		Group B (N=49)		Difference in means	t(1.98)	F(1.63)
	means	S.D.	means	S.D.			
Coopera- tive, Z Step, 2B	49.86 284.73	8.98 14.9	48.57 280.73	7.25 12.6	1.29 4.0	77 1.40	1.53 1.40

+A t of 1.98 is significant at the five per cent level.

+ An F of 1.63 is significant at the five per cent level.(11)

A test for significant difference revealed that T (means) and f (standard deviation) were too small to be significant. Thus, the null hypothesis was retained that there is no significant

difference between group A and group B students, taught by method A and B respectively, in the acquisition of a body of knowledge pertinent to world history as measured by the Cooperative World History Test.

Even though the hypothesis of this study was retained other writers and researchers affirmed that when learning is made meaningful and the student is actively involved the transfer of learning is enhanced and creates long term retention.

Several studies, relating to the inquiry approach, reported in issues of Social Education indicate that the inquiry approach proved to be a most effective method. Arnsdorf attempted to study the effectiveness of using map-over-lays of the United States in an "inquiry-discovery" approach to teaching map reading skills and geography understanding with fifth graders in endeavoring to increase students ability to read and interpret maps, and to comprehend the relationship between physical, biotic, and cultural phenomena. The inquiry discovery approach facilitates the exploration of the relationships through questions and hypothesis. Arnsdorf concluded on the basis of gains in scores on several standardized tests that regardless of marked differences involved in reading and interpreting maps, the inquiry discovery approach with map-over-lays did contribute to growth in work-study skills and to an interest in maps and geography.

Cox and Massialas experimented with "inquiry - directed processes" in teaching United States history and world history. Each study involved a control group, a highly structured teacher-centered class, and an experimental group, a less structured-inquiry-oriented class. The use of standardized instrument tapes, and a log of daily activities indicated a comparable or superior performance for the students in the experimental group compared to those in the control group.

Another study developed by Robert T. Elsmere entitled "An Experimental Study Utilizing the Problem Solving Approach in Teaching United States History". This study determined whether pupils taught United States History by a problem - solving approach obtained significantly greater mean test score than pupils taught by a traditional approach.

The major hypothesis in the study was that a problem solving approach to teaching United States History produces significantly greater pupil achievement in knowledge of historical facts and problem solving ability than does a traditional approach.

Elsmere's study was confirmed to four areas:

1. Learning of historical facts.
2. Retention of historical facts.
3. Learning of problem solving steps.
4. Retention of problem solving steps.(12)

The specific hypotheses were:

Hypothesis I. Pupils in the experimental group who are taught by a problem - solving approach will make a significantly greater mean score gain on test measuring historical facts than will pupils in the control group who are taught by a traditional approach.

Hypothesis II. Pupils in the experimental group who are taught by a problem - solving approach will make a significantly greater mean score gain on tests measuring retention of historical facts than all pupils in the control group who are taught by a traditional approach.

Hypothesis III. Pupils in the experimental group who are taught by a problem - solving approach will make a significantly greater mean score gain on tests measuring for ability to use the problem - solving steps than will pupils in the control group who are taught by a traditional approach.

Hypothesis IV. Pupils in the experimental group who are taught by a problem - solving approach will make a significantly greater mean score on tests measuring for retention of the ability to use the problem - solving steps than will pupils in the control group who are taught by traditional approach.(13)

Thirty boys and thirty-four girls made up the experimental and control groups. These were high school juniors of middle class Caucasian background and of Northern European stock.

Two groups were organized, an experimental group, group A, and a control group, group B. The control group was taught by the traditional approach and the experimental group by problem solving approach.

The groups were formed by selecting thirty-two matched pairs on the following variables: (1) intelligence, (2) previous history grades, (3) achievement on factual history test and

achievement on subjective and problem solving test.

Hypothesis I stated that pupils in the experimental group who are taught by a problem-solving approach will make a significantly greater mean score gain on tests measuring historical facts than will pupils in the control group who are taught by a traditional approach.

The t test for Differences Between the Experimental and Control Groups, as measured by form eleven of the objective instrument, indicated a t value of 2.366 between the experimental and control groups as calculated from the raw scores (Table 3) obtained from administering form eleven of the objective tests after twelve weeks of treatment by the independent variable. With thirty-one degrees of freedom, a t value of 2.040 is required at the .05 level of confidence to claim a significant difference between the group means.

Since the obtained t value of 2.366 was higher than the requirements at the .05 level of significance, hypothesis I was accepted.

Hypothesis II stated that pupils in the experimental group who are taught by a problem-solving method will make a significantly greater mean score gain on tests measuring retention of historical facts than will pupils in the control group who are taught by traditional approach.

The t test for differences between the experimental and

control groups, as measured by Form 1 of the objective instruments, indicated a t value of 3.492 between the experimental and control groups as calculated from the raw scores (Table 3) obtained from administering Form 1 of the objective tests after twelve weeks had elapsed after treatment by the independent variable. With thirty-one degrees of freedom a t value of 2.745 is required at the .01 level of confidence to claim a significant difference between the group means.

Since the obtained t value of 3.492 was higher than the requirement at the .01 level of significance, Hypothesis II was accepted.

Hypothesis III stated that pupils in the experimental group who are taught by a problem-solving approach will make a significantly greater mean score gain on tests measuring ability to use the problem solving steps than will pupils in the control group who are taught by a traditional approach.

The t test for differences between the experimental and control groups, as measured by problem two of the subjective instruments, indicated a t value of 10.092 between the experimental and control groups as calculated from raw scores (Table 2) obtained from administering problem two of the subjective tests after twelve weeks of treatment by the independent variable. With thirty-one degrees of freedom a t value of 3.561 is required at the .001 level of confidence to claim a significant difference between the group means.

Table I

Case Number	Otis intelligence scores		Previous history grade in percent		Objective part of test		Subject part of pre-test	
	Group A	Group B	Group A	Group B	Group A	Group B	Group A	Group B
1	85	90	63	69	28	30	4	11
2	90	89	71	71	34	34	9	16
3	98	96	73	68	28	27	18	14
4	98	97	74	72	27	33	7	12
5	93	93	77	72	24	22	10	12
6	102	100	71	64	19	17	17	8
7	99	98	79	85	34	32	13	11
8	96	94	80	75	30	29	10	11
9	93	91	85	86	23	31	4	3
10	97	97	84	81	31	29	19	10
11	101	102	77	83	21	31	10	10
12	104	104	80	80	24	31	7	14
13	102	101	81	85	34	26	14	15
14	108	108	80	79	30	38	14	16
15	113	113	78	71	31	31	7	12
16	106	103	84	85	30	31	12	15
17	111	112	80	81	35	33	18	14
18	108	104	88	91	38	38	13	18
19	117	119	78	73	39	39	10	17
20	108	104	88	91	35	33	14	19
21	105	105	90	92	38	36	24	15
22	110	111	89	87	40	36	9	4
23	112	113	93	90	45	47	20	20
24	109	107	90	96	41	42	13	18
25	111	111	87	92	36	37	14	10
26	117	118	98	97	42	48	15	18
27	113	115	92	93	29	41	15	15
28	116	115	93	93	42	48	10	20
29	117	122	95	95	44	38	27	26
30	125	122	95	95	40	46	25	18
31	129	128	93	90	44	47	19	15
32	130	127	98	98	43	45	27	25

Since the obtained t value of 10.092 was higher than the requirement at the .001 level of significance, Hypothesis III was accepted.

The groups were found by selecting thirty-two matched pairs on the following variables: (1) intelligence, (2) previous history grades, (3) achievement on factual history test, and (4) achievement on subjective problem solving as indicated in Table 1 on page 30.(14)

Table 2 shows the t scores between the experimental and control groups on the intelligence, history and objective and subjective pre-test scores.

Table II

Variable	+	d.f.	P-
Intelligence	.1740	31	N.S.
History grade Pre-test	.2767	31	N.S.
Objective Pre-test	1.7936	31	N.S.
Subjective	-.3579	31	N.S.

t = ratio between group means and standard error of difference between the means.

d.f. = degrees of freedom.

+P = significance of difference.

+ N.S. = no significant difference exists between group means at the five percent level of confidence with a t of 2.040 required at thirty-one degrees of freedom $n=32$.(15)

Hypothesis IV stated that pupils in the experimental group who are taught by a problem solving approach will make a significantly greater mean score gain on tests measuring for retention of ability to use the problem solving steps, than will pupils in the control group who are taught by a traditional approach.

The t test for differences between the experimental and control groups, as measured by problem three of the subjective instruments, indicated a t value of 11.419 between the experimental and control groups as calculated from the raw scores (Table 3) obtained from administering problem three of the subjective tests, after twelve weeks had elapsed after treatment by independent variable with thirty-one degrees of freedom a significant difference between the group means.

Since the obtained t value of 11.419 was higher than the requirement at the .001 level of significance, Hypothesis IV was accepted.

Table III shows on page 33 the distribution of scores between the experimental and control groups on the objective and subjective learning and retention test. The test scores indicate that group A, the experimental group, made significantly greater pupil achievement in knowledge of historical facts using the problem solving approach.(16)

Table III

	Learning Test				Retention Test			
	Objective		Subjective		Objective		Subjective	
	Group	Group	Group	Group	Group	Group	Group	Group
	A	B	A	B	A	B	A	B
1	46	43	18	11	32	36	16	8
2	50	44	19	11	39	34	14	6
3	56	46	27	18	40	29	29	5
4	49	47	19	15	41	27	18	10
5	59	43	10	10	48	34	18	4
6	50	45	25	9	43	21	25	11
7	52	53	33	12	51	46	35	12
8	60	44	20	9	47	29	23	7
9	64	58	28	8	43	33	17	8
10	61	62	27	12	46	45	23	10
11	52	54	27	7	44	45	20	7
12	51	56	15	14	46	48	14	13
13	61	54	26	14	51	44	23	12
14	53	58	30	18	40	39	26	17
15	54	53	7	13	40	33	14	11
16	60	61	25	12	48	47	26	13
17	58	61	30	8	50	45	23	7
18	68	65	30	15	53	50	20	17
19	61	66	27	14	52	53	27	14
20	63	61	29	14	54	54	26	14
21	65	63	33	18	57	46	26	15
22	66	58	21	11	48	48	24	11
23	67	65	25	20	60	56	30	16
24	68	70	21	15	55	56	24	5
25	61	63	24	9	54	56	13	11
26	75	68	29	14	64	60	25	13
27	68	65	31	12	51	52	24	13
28	67	72	29	11	58	67	23	11
29	70	65	33	14	69	60	32	15
30	70	66	32	19	67	62	36	19
31	68	71	20	20	60	62	24	20
32	73	73	35	35	66	64	36	10

The four related hypotheses were that the experimental group (1) will score higher on tests measuring historical facts; (2) will score higher on tests measuring retention of historical facts; (3) will score higher on tests measuring ability to use the problem solving steps, and (4) will score higher on tests measuring for retention of ability to use the problem solving steps - than a control group in each instance.

The acceptance of the major hypothesis was dependent upon the results obtained from testing the four specific hypotheses. Since the four hypotheses were accepted, the major hypothesis, that a problem-solving approach to teaching United States history produces significantly greater pupil achievement in knowledge of historical facts and problem-solving ability than does a traditional approach, was supported and therefore accepted.

In conclusion it was found that: (1) a problem solving teaching method which requires pupils to think critically and to use a reasoned approach to controversial issues produces significantly greater achievement than a traditional approach which involves memorization, simple question and answer techniques, and strict adherence to a textbook with an emphasis on factual acquisition; (2) pupils taught by a problem-solving teaching method learn more facts of history than pupils taught by a traditional approach. Facts are better remembered when learned in purposeful, problem solving situations; (3) pupils taught by a problem solving approach retain more facts of

history than pupils taught by a traditional approach. Although pupils in both groups showed some loss of information twelve weeks after the end of the experimental period, retention by the experimental group was significantly greater than that by the control group. Retention of facts is facilitated when they are applied in meaningful problem situations; (4) pupils taught by a problem solving approach show greater skill in problem solving ability than pupils taught by a traditional approach. The achievement of the experimental group in problem solving was significantly superior to that of the control group; (5) pupils taught by a problem solving approach show greater retention of problem solving ability than pupils taught by a traditional approach. The difference between the groups in problem solving ability was greater twelve weeks after the experimental period than immediately after the experimental period.

Another study entitled "The Development of Reflective Thinking in an Eight Grade Social Studies Class" was designed by Jack E. Cousins in a 1964 edition of Social Education. The major hypothesis of the study was that pupils in an eight grade social studies class, taught by a reflective method for one semester, will make a significant mean score gain on two forms of the Cooperative Social Studies Test for grades seven, eight, and nine as determined by pre-study and post-study testings.

In conducting the study the following methods and procedures were taken:

(1) A model of reflective thinking was developed, based on related literature and research and researchers teaching experience; (2) a teaching method, designed to achieve the goals contained in the theoretical model of reflective, was designed; (3) a representative group of the eighth grade pupils at university school, Indiana test score, grades in seventh grade social studies, and sex. This class was taught according to a theoretical model of reflective thinking; (4) a test intended to evaluate the result of this instruction was designed. This instrument was administered to the study group in pre-study, post-study situations; (5) The Watson-Glaser Critical Thinking Approach and Cooperative Social Studies Test for grades seven, eight, and nine were administered to the study group in pre-study, post-study situation. The scores on all three evaluative instruments were statistically appraised by the utilization of a t test for the significance of correlated means.

The findings of the study revealed that the t test for the significance between two correlated means was applied to the accumulated data from the two administrations of the Cooperative Social Studies Test for grades seven, eight, and nine, forms x and y. It was found that within a mean of 52.9

on Form x and one of 61.5 on Form y, and with 22 degrees of freedom, the obtained t value was 5.18.

Since the obtained t value of 5.18 was greater than 282, the t value required at the .01 level of significance, it was concluded that the pupils in their study group made a significant gain in the accumulation of factual information pertinent to the social studies.

Literature on Teacher Approaches to Using the Inquiry Method

It should be stressed that the inquiry approach cannot be adequately carried out by the use of a single textbook, since it necessitates the use of a wide range of materials representing many points of view. Source documents maps, and visual materials are mandatory if this method is to be used successfully.

The great emphasis on inquiry learning relies heavily on the idea that the learner generates his own knowledge, and that, at this process of knowledge generation, occurs as a result of the learner's encounter with a baffling situation.

There is further wide use of the idea that a problem situation can be approached more readily by working first with a simplified mode of the situation.

There are a number of organizational techniques that precipitate a problem solving situation. They include: case studies, experience units, source materials, dramatic play,

gaming and simulation, role playing, and sociodramas.

The use of case studies gives that student an opportunity to deal with a real world episode which ends in a dilemma situation and leaves the student the necessity to decide which action might resolve the dilemma. The data presented in the case might conceivably support several alternative decisions. The case is left as open-ended as possible, with judgments and decisions suspended, the student has the task of identifying the alternatives, considering each in the light of the data, and presenting his decision with its supporting warrants. This has proven to be an excellent way of stimulating thought and decision.

The application of gaming and simulation to the social studies classroom is receiving increasing attention. Such an approach rest upon the assignment to individual students or groups of students the role of decision-maker in a situation of potential conflict. Prominent in the early development and testing classroom simulations was professor James S. Coleman of John Hopkins University.

The games have been tested in a variety of classroom situations representing lower to upper socioeconomic strata, and the lowers and least literate to the gifted ability groups. They have been used in groups numbering as many as 250. Among the instructional values claimed are, greater

ability in content learning, a high degree of motivation and involvement in evidenced by student participants. Other benefits are said to include the self-disciplining feature of games (classroom control becomes a function of the rules of the game), and the fact that the games are self-judging; the students measure of success is the outcome of the game.(17)

Simulation is a very useful tool in dealing with problems of a very complex nature, it attempts to reduce a complex phenomenon to one that is manageable.

When the social studies curriculum is designed around experience units, children engage in question solving, and human relations problems. These problems become real for the children because they satisfy the children's need to explore and reconstruct life around them in active ways. These are not lessons in a book, but active, child explorations. This is a continuing process in which the teacher may set the stage then step aside as children take hold, take their own next step and face a problem. The teacher assumes a guiding role and problem solving occurs, sometimes with an individual, sometimes with a group.

The use of source material from history or other social studies may provide the raw data by which students may develop an understanding of a particular historical period or significant social issues. Although the source material has been long

advocated, the availability of much new material today makes this technique more possible than ever. There is great value in letting students work with primary materials as a means of explaining historical phenomena or in considering alternative solutions to current social problems.

Dramatic Play is another technique used to stimulate inquiry thinking. Dramatic play is used to encourage children to explore an area of human experience by re-living the activities and relationships involved. Its major purpose is to help children identify emotionally with the people, their life activities and the time and place involved, so that they may develop real interest in the activities being experienced and the felt needs that will impel them to vital learning. A major concern is to involve children in common enterprises in which they can learn to work and live together democratically and meet their own basic personality needs.

Thus, children play pioneers or firemen and have a chance to enjoy the feeling of being firemen or troopers, or Indian scouts and, at the same time, they develop a need for information and gain understanding of the data they gather as they play.

Children studying pioneer life may choose to portray many situations that arise as a wagon train moves west out of Independence. As the play progresses, the action of the individual players will precipitate events.

The teachers primary objective is to guide the evaluation of the play in such a manner that children will feel the need for more accurate and detailed information.

In the use of this technique both question solving and problem solving situations develop and permit experience with a wide range of problems. It is a process where the children's own activities precipitate problems, and the proposed solution can be tested in further play or in actual experience with processes.

A technique closely related to dramatic play is role playing or sociodrama. This is primarily a group problem solving tool focused on human relations content. Usually in a sociodrama session, a problem is presented by the teacher or it emerges from the group. Solutions are proposed by various members of the class in the form of spontaneous enactments of the situation. The class serves as active observers of the actors, evaluating and criticizing the playing of the roles, offering other enactments and continuing discussion until a variety of possible solutions and their consequences have been explored. The enactments are focused on exploring alternative solutions and their consequences.

Dramatic play is often relatively unstructured, with a main purpose of re-living the activities of a group in which the total class is involved. Role-playing is structured as a

definite solution involving a problem or inter-personal or intergroup relations with most of the class as audience.

A westward movement could be used to demonstrate the difference. The teacher may deliberately present the following situation to the class as a simulation or it may have arisen in the dramatic play.

A wagon breaks down because it is overloaded, while the train is moving through a narrow path, it is endangered by indians or by a snow storm. The wagon captain orders a halt to the train, knowing that it will be snowbound if the train is held up in order to repair a wagon that would not have stalled if the driver had just used ordinary common sense in loading.

The class discusses the problem briefly, defending the problem and the various roles are described. Some children volunteer to play the parts, and rest of the class acts as critical observer as the situation is enacted. Another youngster may suggest a different action. Each will be invited to enact his proposal. The enactments are after half a dozen different versions of the problem-solution are played. The sessions are deliberately structured for experience in specific problem solving in intergroup relations in a historical setting.

Increasingly, we are seeing social games introduced into the curriculum as a more structured form of dramatic play or

simulation, in which detailed data are provided. Children then take on roles of the people and culture under study, in order to participate actively in their life situations and confront the daily problems of culture. Such enterprises have in them problem situations that not only dramatically delineate key content but also provide continual opportunity for practice in the process of problem solving.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

The purpose of this study was to examine the inquiry method to teaching social studies as it related to student achievement and the building of positive attitudes toward social studies. It was also designed to examine a variety of different methods through which the inquiry approach could be applied. Finally, after synthesis of the findings of the examination, this study presents recommendations for the most effective utilization of the inquiry approach to teaching social studies.

The procedures used in collecting the data for this study included an investigation of the literature related to: (1) the theoretical bases for teaching social studies and the inquiry approach to learning; (2) the information on student achievement through use of the inquiry method of reasoning; (3) the data on developing positive attitudes through the use of the inquiry method of reasoning; and (4) the findings on teaching approaches to using the inquiry method.

Conclusion

Research has proven the inquiry method of teaching social studies to be an effective method. The method gives the students the opportunity to find information for themselves along with the guidance of the teacher.

Research shows the method to be especially good with average and below average students. These students are

usually the first to drop out of school because they find school boring and uninteresting. They feel the work is too difficult and irrelevant. The inquiry method offers these students an opportunity to succeed at achievement in education. When the student achieves in education this motivates the student to do more.

The inquiry method opens the classroom to the students. They are encouraged to state their opinions about whatever is being talked about. They are encouraged to exchange ideas and, in turn, learning is made more meaningful for them. Through the openness of the classroom, students become actively involved in the learning. This activity in the classroom reinforces what has been taught, and it helps the student to retain longer what has been learned.

In accordance with the findings of this study, the following conclusions were reached: (1) an inquiry teaching method which requires pupils to think critically and to use a reasoned approach to controversial issues produces significantly greater achievement rather than a traditional approach which involves memorization, simple question and answer techniques, and strict adherence to a textbook with emphasis on factual acquisition; (2) pupils taught by the inquiry approach learn more historical facts than pupils taught by a traditional approach because facts are better remembered when

learned in purposeful, inquiry situations; (3) pupils taught by the inquiry approach retain more historical facts longer than pupils taught by a traditional approach; (4) pupils taught by the inquiry approach show greater skill in problem-solving ability than pupils taught by a traditional approach; and, (5) the guidance of the teacher plays an important part in the success of students in the inquiry approach.

A democracy requires educated citizens capable of critical thinking and reasoned inquiry which enables them to resolve problems through mutual cooperation rather than through suppression of opposing views. The schools have a major responsibility in the education of these citizens and must help formulate and initiate policies which make such an education possible. The inquiry approach has been advocated as the logical teaching method for producing this type of education.

Recommendations

In accordance with the findings of this study, the following recommendations are offered for consideration by teachers and administrators who might be seeking ways of implementing the inquiry method of teaching.

1. Teachers should attempt to create a classroom atmosphere which is conducive to the development of critical thinking. In such an atmosphere pupils feel free to suggest ideas and to disagree with the teacher. Divergent views are not expressed for the sole purpose of disagreement, but are expressed when they contribute

positively to the discussion. This is not an atmosphere in which any type of deviant, distracting behavior is tolerated, but is one in which pupil and teacher, with attitudes of mutual respect, intelligently discuss problems which have faced and still face mankind.(18)

2. If reflective thinking is to be achieved, teachers should avoid questions which are primarily concerned with who, when or where and should more often use questions of the "why" variety.
3. Textbook material should be regarded as a beginning rather than an end as far as instructional material is concerned. If the teacher is to rely solely on textbooks, it would be more profitable to take a correspondence course from the publishers than it would be to attend college for four or more years studying social studies. Text materials should be reorganized by the teacher so that inquiry will naturally take place.
4. Whenever possible the teacher should relate historical problems to the present. By doing so the teacher can assist pupils to develop the attitudes to see relationships between two situations, draw analogies, develop generalizations and trace the logical implications to solutions of these problems.
5. Teachers who attempt to encourage discussion of an inquiry nature should guard against permitting pupils to assert points of view without any substantiating support. Although encouraging rather than spontaneous discussion sessions, the teacher should not permit the class to be dominated by a few of the brighter pupils. Further, the teacher must be certain that the relatively quiet pupils get a chance to speak when they wish to do so, as outstanding ideas are sometimes suggested by such pupils.
6. Pupils cannot be expected to exhibit the same amount of improvement in the skills of inquiry. Improvement will probably vary with intelligence and previous achievement in social studies. Even for those who achieve relatively little in such classes, inquiry is better than memorizing a few quickly forgotten facts, since thinking patterns will be carried out of the classroom into other areas of life.

7. The teacher attempting to teach inquiry methods should guard against reverting to more traditional types of examinations. An objective of inquiry teaching should be the acquaintance with large numbers of tested ideas, concepts, and generalizations.(19)
8. It is important that teachers be brave enough not too worry about false controversy of facts versus inquiry thinking. When accurately viewed, there is no antagonism. Pupils will learn as many facts in inquiry classes as they will in classes taught primarily for the purpose of covering textual materials. Further, the pupils will know the importance of the facts they learn-actually, the facts learned in inquiry-taught classes are the important ones as pertinent problems of the past and present are discussed.
9. The use of tape recordings analysis as a means of evaluating classroom performance should be greatly expanded. Several tape recordings should be utilized at regular intervals over the course of the year.
10. The use of anecdotal records should be expanded as a means of behavioral evaluation.
11. If the inquiry method is to be successful, the teacher's image will need to be changed from that of a beleaguered teacher encapsulated in a nonlithic edifice which manipulates him like a puppet, an individual functioning in an institutional context which often greatly restricts his behavior.
12. If the inquiry method is to be effective, public school teachers will need to stop focusing upon the importance of authority, obedience to law and conformity to school regulations at the expense of processes more characteristic of an intellectually oriented environment.
13. If the learner is to become an inquirer he must have access to data, and opportunities to test his ideas against empirical events. Inquiry demands an environment that responds to probes, that yields data on demand. The response is the reward for probing. It is well established that, given a thoroughly responsive environment, children continue probing even in the absence of closure or discovery. There is certainly a case for motivation inherent in data gathering and information processing.(20)

14. The inquiring child should not be on his own. It would be foolish to deprive the child of guidance and support of teachers, scholars, and whatever other sources of knowledge can be made available in meaningful ways.
15. For the child to become an inquirer he has to be faced with some event or situation that challenges his idea of the universe. Such discrepant events create dissonance within the cognitive system of the perceiver. They also provide a focal point for the initiation of the inquiry process and an initial motivation to overcome the inertia of complacency - the complacency that grows out of the satisfaction of one's existing state of knowledge.
16. Inquiry can occur only in a climate that affords freedom for the student to gather data and build and test theorems in his own way. Optimal learning occurs under learning conditions that are optimal for the individual learner. Unless the learner can influence these conditions at least to the extent of shaping his own learning program he will be led through a program engineered by external agents, teachers. Such agents can rarely be as aware of the cognitive needs of the learners as the learner himself.
17. Detrimental to inquiry is the belief that knowledge is absolute, that it must be passed down to the student from authorities and that the student must accept it as truth. Inquiry cannot survive in such a setting where these beliefs are prevalent.
18. It is most important for the teacher to avoid pronouncing a judgement upon what the children say. If they sense that their contributions are being evaluated they respond only when they feel sure of the "correctness" of what they are saying. This keeps them from taking risks and trying out ideas that seem leapy and remote.
19. The teacher must allow each child to come to grips with the problem events in his own terms, if inquiry is to be free and genuine. If the teacher has an open-ended point of view about knowledge and allows the children to have this point of view too, there is no end to the creative thinking that a discrepant event will produce in the classroom.

20. Teacher planning is very important in the inquiry method. Providing opportunity for inquiry, besides involving time, requires the existence of a rich and stimulating environment - both physical and psychological.
21. An inquiry oriented teacher must be sensitive to various points of view, must supply additional information to the discussion, must ask questions which will clearly establish the meaning of pupils statements, and must suggest sources for investigations.

REFERENCES

1. Margaret Branson (ed.), Inquiry Experiences in American History, (Boston: Ginn and Company, 1970), p. 2.
2. Ibid., pp. 3-4.
3. Ibid., p. 10.
4. Wesly Wronski (ed.), Teaching Social Studies in the High School, (New York: D. C. Heath and Company, 1964), p. 175.
5. Richard Gross and Raymond H. Muessing (eds.), Problem-Centered Social Studies Instruction Approaches to Reflective Teaching, (Washington, D.C.: National Council for the Social Studies, 1971), pp. 15-16.
6. Robert C. Craig. "Directed Versus Independent Discovery of Established Relations". Journal of Educational Psychology, XLVII (April, 1956), p. 223.
7. Ibid., p. 229.
8. Ibid., p. 230.
9. Bert Kersh. "The Motivating Effect of Learning by Directed Learning". Journal of Educational Psychology, XLIX (October, 1958), p. 282.
10. Byron G. Massialas, "Developing A Method of Inquiry in Teaching World History". Indiana School of Education Bulletin, XXXIX (May, 1963), pp. 1-33.
11. Ibid., p. 19.
12. Robert T. Elsmere "An Experimental Study Utilizing the Problem Solving Approach in Teaching United States History". Indiana University School of Education Bulletin, XXXIX (May, 1963), p. 114.
13. Ibid., p. 114.
14. Elsmere, op. cit., p. 119.
15. Ibid., p. 123.
16. Ibid., p. 131.

17. Richard Gross and Raymond H. Muessing (eds.) Problem-Centered Social Studies Instruction Approaches to Reflective Thinking, (Washington, D.C.: National Council for the Social Studies, 1971), p. 79.
18. Ibid., p. 79.
19. Jack E. Cousins "The Development of Reflective Thinking in an Eight Grade Social Studies Class". Indiana University School of Education Bulletin, XXXIX (May, 1963), p. 71.
20. Cousins, op. cit., p. 72.

BIBLIOGRAPHY

A. BOOKS

- Branson, Margaret (ed.) Inquiry Experiences in American History. Boston: Ginn and Company, 1970.
- Brubaker, Dale E. Innovation in the Social Studies. New York: Thomas Y. Crowell Company, 1968.
- Cox, Benjamin and Bryon G. Massialas. Inquiry in Social Studies. New York: McGraw-Hill Book Company, 1966.
- Feldman, Martin and Eli Seifman. The Social Studies Structures, Models, and Strategies. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1967.
- Gross, Richard and Raymond H. Muessing. Problem-Centered Social Studies Instruction Approaches to Reflective Thinking. Washington, D.C.: National Council for the Social Studies, 1971.
- Loard, Clifford (ed.) Teaching History with Community Resources. New York: Teachers College, Columbia University Bureau of Publications, 1964.
- Morresett, Irving and William Stevens, Jr. Social Studies in the Schools: A Search for Rational. New York: Holt, Rinehart and Winston, Inc., 1971.
- Newman, Fred and Donald W. Oliver. Clarifying Public Controversy. Boston: Little, Brown and Company, 1970.
- Poster, John B., Krug, Mark M. and William B. Gillies, III. The New Social Studies Analysis of Theory and Materials. Itasca, Illinois: E. F. Peacock Publishers, Inc., 1970.
- Selakovick, Daniel. Problems in Secondary Social Studies. Englewood Cliffs, New York: Prentice-Hall, Inc., 1965.
- Smith, Frederick and C. Benjamin Cox. New Strategies and Curriculum in Social Studies. Chicago: Rand McNally and Company, 1969.
- Smith, James. A Creative Teaching of the Social Studies in the Elementary School. Boston: Allyn and Bacon, Inc., 1967.
- Wronski, Wesly. Teaching Social Studies in High School. New York: D. C. Heath and Company, 1964.

B. PERIODICALS

- Anderson, Randall C. "An Inquiry Oriented Instructional Strategy". Social Education, XXXIV (January, 1970) 29-35.
- Banks, J. A. "Inquiry a History Teaching Tool", Illinois School Journal, XLVIII (Fall, 1968), 176-178.
- Beyer, B. K. "Mastery of Inquiry Teaching", Ohio Schools, XLVI (March, 1968), 18-20.
- Bruce, Joyce R. "The Mode of Inquiry Problems", Social Education, XXX (March, 1966), 181.
- Cousins, Jack E. "Development of Reflective Thinking in Eight Grade Social Studies Classes", Indiana University School of Education Bulletin, XXXIX (May, 1963), 36-73.
- Cox, Benjamin C. "Description and Appraisal of Reflective Method of Teaching United States History", Indiana University School of Education Bulletin, XXXIX (October, 1966), 407-411.
- Crabtree, Charlotte A. "Inquiry Approaches to Learning Concepts and Generalizations in Social Studies", Social Education, XXX (October, 1966), 407-411.
- Demitroff, Lellian. "Quantitative-Qualitative Analysis of Selected Social Studies Generalizations in Social Studies Textbook in Intermediate Grades", Education Research, LV (November, 1961), 135-137.
- Elsmere, Robert T. "Teaching United States History Using Problem Solving Approach", Indiana University School Bulletin, XXXIX (May, 1963), 114-138.
- Esler, William K. "Structuring Inquiry for Classroom Use", School Science and Mathematics, LXX (May, 1963), 454-458.
- Fenlon, E. "Inquiry in the New Social Studies", High School Journal, L (October, 1970), 284.
- Fish, H. S. and Goldmark. "Inquiry Method: Three Interpretations", Science Teacher, XXXLLL (February, 1966) 13-15.
- Fox, Raymond B. "Difficulties in Developing Skill in Critical Thinking", Journal of Educational Research, LV (April, 1962), 55-57.

- Goldmark, Bernice. "Critical Thinking Deliberate Method", Social Education, XXX (May, 1966), 329-334.
- Good, T. M. "Developing Inquiry Skills with an Experimental Social Studies Curriculum", Journal of Educational Research, LXIII (September, 1969), 31-35.
- Ingahan, L. W. "Discovery and Inquiry in History and Social Science", High Points, XLIVII (January, 1965), 5-8.
- Kaltsounis, T. "Problem Solving in Social Studies", Journal of Education, LXXXVI (February, 1966), 340-342.
- Kaltsounis, T. "What is Inquiry", Instructor, LXXX (April, 1971), 49-51.
- Kemp, Gratton C. "Improvement of Critical Thinking in Relation to Open Closed Belief System", Experimental Psychology, XIIX (Fall, 1958), p. 57.
- Kersh, Bert Y. and Merl C. Wittrock. "Learning by Discovery and Interpretation of Recent Research", Teacher Education, XIII (December, 1962), 461-468.
- Kersh, Bert Y. "The Motivating Effect of Learning By Directed Discovery", Educational Psychology, LIII (May, 1962), p. 220.
- Knaus, A. "What Happens When They Think for Themselves", Grade Teacher, LXXXIII (October, 1965), p. 96.
- Laforse, M. "Why Inquiry Fails in the Classroom", Social Education, XXXIV (January, 1970), 66-67.
- Leinwand, Gerlad. "Queries on Inquiry in the Social Studies", Social Education, LXVI (October, 1966), 412-414.
- Massialas, Brian G. "Evaluating Inquiry in the Classroom", High School Journal, LIII (November, 1969), 70-86.
- Massialas, Brian G. and others. "Teaching Through Inquiry", Today's Education, LVIII (May, 1969), 40-44.
- Minx, M. "Evaluating Teaching Strategies in Social Science", Experimental Education, XL (Fall, 1971), 74-80.
- Moreland, W. D. "New Methods in Teaching Social Science", Education, LXXXVIII (November, 1967), 116-118.

- Newton, D. E. "Dishonesty of Inquiry Teaching", School Science and Mathematics, LXVII (December, 1968), 801-810.
- Rogers, Vincent. "How to Use Inquiry", Instructor, LXXVIII (March, 1969), 93-94.
- Rogers, Vincent. "A Microcosmic Approach to Inquiry", Social Education, XXXIV (January, 1970), 74.
- Sage, Helen "Problem Solving Inquiry, Discovery?", Childhood Education, XLII (November, 1966), 137-141.
- Shulman, L. S. "Seeking Styles and Individual Differences in Patterns of Inquiry", School Review, LXXIII (Autumn, 1965), 258-266.
- Smith, Frederick and James A. Mackey. "Creating an Appropriate Setting for Inquiry", Phi Delta Kappa, L (April, 1969), 462-466.
- Turner, N. Thomas. "Individualization Through Inquiry", Social Education, XXXIV (January, 1970), 72-73.
- Watman, T. "Successful Techniques in Social Science", Catholic School, LXVI (January, 1966), 74.
- Zinin, J. "Mystery Island: A Lesson in Inquiry", Today's Education, LVII (May, 1969), 42-43.

INQUIRY: AN EFFECTIVE METHOD OF TEACHING SOCIAL STUDIES

by

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AN ABSTRACT OF
INQUIRY: AN EFFECTIVE METHOD OF TEACHING SOCIAL STUDIES

The purpose of this study was to (1) examine the inquiry method of teaching social studies related to student achievement and building positive attitudes; (2) examine a variety of different methods through which the inquiry approach could be utilized; (3) provide recommendations for the most effective utilization of the inquiry approach to teaching social studies.

The procedures used in collecting the data for this study included (1) an investigation of the literature related to theoretical bases for teaching social studies and the inquiry approach of learning; (2) the research on student achievement through use of the inquiry method of reasoning; (3) data on developing positive attitudes through the use of the inquiry method of reasoning; and (4) literature on teacher approaches to using the inquiry method.

The findings from the study indicated that the inquiry approach to teaching produces significantly greater pupil achievement than does the traditional approach in teaching social studies.

It was also found that the inquiry teaching method requires pupils to think more critically and to use a reasoning approach to learning. Pupils taught by the inquiry method learn more facts in social studies, retain them better and, most importantly, see its value as a means of solving their own problems.