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Elementary social studies: The unit method and problem solving

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Abstract

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ELEMENTARY SOCIAL STUDIES: THE UNIT METHOD AND PROBLEM SOLVING

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Chapter I

THE PROBLEM

On many occasions, this writer has observed students sitting in desks arranged in near perfect rows, reading from the social studies text, and answering factual questions. Noting the lack of motivation for learning evidenced in these observations has sparked a desire to investigate the availability of materials and/or methods of teaching which provide better learning experiences in this curriculum area--social studies.

According to Hopkins and Arenstein (1971), to help children become thinking, problem solving adults, teachers must depart from textbooks and teacher's guides. Students need hands-on experiences in which they investigate and explore.

Since there has been, in recent years, an increased concern for the development of problem solving abilities this study will focus on methods and materials for teaching social studies which enhance these skills.

Statement of the Problem

The problem investigated in this study was: how can teachers of elementary school social studies best use the unit method to foster problem solving processes in their

program. The literature was reviewed to obtain a thorough understanding of the unit method. The information obtained included: (1) design, (2) organization, (3) teacher's role, (4) student's role, (5) problem solving activities, and (6) evaluation.

Results of this investigation have been used to determine if problem solving can be fostered through implementation of the unit method in the elementary social studies program.

Definition of Terms

Problem solving--a step-by-step process followed when searching for answers to questions.

Unit Method--a combination of varied hands-on activities including many curriculum areas. Some activities are done in a group, some as an individual. Students are allowed a certain amount of flexibility in choosing activities.

Child-centered Model--another name for the unit method which follows John Dewey's philosophy of considering the interest and desires of students when planning social studies lessons.

Alternative approaches--any materials or methods, other than the basic text, which are used in the teaching of social studies.

Procedures

In order to obtain necessary related literature, extensive use was made of the Education Index and the card catalog. Research studies were reviewed by various authors and provided additional references to original sources which were then obtained. Content gathered from these sources provided the basic information about the unit method and problem solving strategies and their relationship to the elementary social studies curriculum.

Chapter II

REVIEW OF LITERATURE

History of the Unit Method

In this review of the literature the background information on early instructional practices which influenced the inception of the unit method is reviewed first. Research on children as cognitive learners and thinkers, problem solvers, was one of the major factors leading to the development of the unit method.

Both teacher and learner have specific roles to play when the unit method is implemented. These are described in careful detail.

Problem solving and the skills which are necessary when the unit method is employed are discussed next, this is followed by a discussion of the methods of evaluating a unit of instruction.

In the late 1950's, educational leaders became concerned with the increasing quantity of facts which children were expected to learn strictly by rote memorization. As technology advanced and the bank of knowledge was not only expanding, but was altering rapidly, many felt reorganization of content was in order. (Crutchfield, 1978)

While reporting at the Woods Hole Conference held in 1959, Jerome Bruner made a statement which has had a major impact on the thinking of educators. Referring to readiness

in school-aged children, Bruner said: "We begin with the hypothesis that any subject can be taught effectively in some intellectually honest form to any child at any stage of development." (Crutchfield, 1978)

There were three ideas basic to Bruner's hypothesis. First, was consideration of a match between the child's level of intellectual development and the way in which the subject matter was structured. Second, was the problem of motivation during the act of learning. A third consideration, from Bruner's hypothesis, deals with the selection and ordering of subject matter. (Crutchfield, 1978)

Project Social Studies, initiated in 1962 in response to the Soviet challenge of Sputnik, encouraged experimentation in curriculum development and teaching practices. Lack of agreement among educators, administrators and curriculum committees, however, led to diversity in curriculum selection. Focus was placed on special needs of children in each school or district. (Martorella, 1976)

A major educational innovation of the early 1970's was the child-centered open classroom based on self-determinism. Students contributed materials to the learning environment and conducted independent research. Students were given freedom to select from learning centers, independent projects or group projects. (Crutchfield, 1978) Curriculum based on social functions was published and widely used

during the 1970's. The integrative unit of work based on home, community, inventions, and discoveries, commonly took form during this course of study. (Dunfee, 1970)

In recent years, critics of education have served as a catalyst to move the social studies away from the passive classroom climate of the past. As knowledge about the ways children learn increased, reaction against rigid, academic techniques developed. Educators fashioned new approaches to teaching, utilizing concrete experiences and active involvement in the learning process. The foundation for this thinking was laid at the beginning of the century by Froebel, Montessori, and Dewey. The structural framework was built during the past few years mainly through the efforts of Piaget and Bruner. (Maxim, 1977)

Today, students come to school with a broad background of knowledge in the area of social studies. Many families have traveled to other regions of the United States and some even overseas. Children are exposed to television, movies, and newspapers. These experiences prevent students from being motivated by memorization of facts. Emphasis upon facts must be replaced by stressing underlying concepts and generalizations presented in varying degrees of complexity. (Hopkins et al, 1971) Children need alternative sources and resources through which they can seek an answer. (Hopkins et al, 1971)

The concrete should be taught before the abstract. Young children have not advanced far enough to be able to carry abstract relations in their minds. Actual objects are essential for children in the concrete operational stage because of their limited experiential background. If the teacher does not have access to an actual artifact, a model should be available, or a picture or map of it. Children learn by experience, and as their experience broadens they may be introduced to more abstract concepts. (Adams, 1921) Experiences are those encounters with the human and physical environment that effect change and growth in the individual. In reality, experiences and experiencing imply that something happens to the individual within, as well as without. (Dunfee and Sagl, 1966)

Many recent articles and research studies address the current trends in social studies curricula and instructional methodology. In these articles and reports, the unit method, the variety of skills and disciplines, and the responsibilities of student and teacher are emphasized. (Crosett, 1983)

Description of the Unit Method

Long-range plans for social studies are termed units. In most cases teachers develop their own plans in agreement with the philosophy and expectations of the particular district or school in which they are employed. (Crutchfield, 1978) Units are plans for the organization of studies over

an extended period of time. They may be as long as the entire school year or as short as a week. Most typically, they are of several weeks duration. (Oliner, 1976)

At ages five and six, the curriculum time span is short, usually from two weeks to one month. Settings arranged by the teacher involve aspects of the immediate environment, such as the home, the school, and community. Students gain background information from stories read by the teacher, concrete objects, audio-visual materials, field trips, and interviews. The teacher stresses oral language and introduces inquiry and problem solving through observation and discussion. Activities, concrete in nature, are planned and may include block play, construction, art, rhythms, story dictation, and the like. The teacher evaluates progress through observation and judgment of products. (Crutchfield, 1978)

For ages seven and eight, units increase in length and may extend over ten to twelve weeks. A unit might focus on ways in which the human race meets its basic needs for food, clothing, and shelter in the local community as compared to another community in another culture. Additional opportunities for use of printed materials, as sources of information, are provided. Activities may include dramatizations, construction, art, music, simple map making, story writing, reporting, and collecting. Oral language

continues to be important and inquiry and problem solving are promoted through observation, discussion, and experimentation. (Crutchfield, 1978)

From ages nine to twelve, units extend from ten to twelve weeks or longer. Settings may involve various cultures in both contemporary and historical perspectives. They gain background information in the same ways as seven and eight year olds, with the addition of guided or independent reading of a variety of materials. Inquiry and problem solving are further promoted through observation, discussion, and investigation. Research can be added as a means of helping students learn to locate information. Typical, are individual and group projects which students prepare to summarize and report findings. Observation, judgment of products, students' self-evaluations, conferences, and testing all contribute to evaluation. (Crutchfield, 1978)

Unit teaching is probably the most difficult and challenging task faced by elementary teachers. It requires imagination, resourcefulness, unusual organizational ability, and a kind of creative persuasiveness that must be translated into exciting plans, sustained student effort, and worthwhile learning outcomes. The social studies unit frequently provides the most interesting and stimulating activities of the school day. The unit is the most satisfactory method of organizing classroom studies because it most nearly reflects

what we know about the learning process. Students are offered an opportunity to discover and broaden special interests and talents, to make valuable contributions, and share in a common effort. (Barnes & Burgdorf, 1969)

Many teachers have found it helpful to work with a partner or a committee to prepare unit plans. Special talents of each member of the team are thus tapped, responsibilities for reviewing materials can be designated, best ideas drawn from past experience can be shared, and tasks distributed among team members. (Michaelis, 1980)

To combine elements of the subject-centered, society-centered, and child-centered curricula, curriculum planners have recommended objectives and frameworks of predetermined content which allow for student selection and decision making during instruction. Some of the planned unit content may be found wanting in terms of students' interests and needs. In the past, this has been avoided by revising planned activities, on the spot, to accommodate unexpected opportunities for enrichment. (Crutchfield, 1978)

In order to guide students through a unit, the teacher should have: (1) acquired a background of information by reading books, pamphlets, brochures, (2) studied films, slides, travelogues, (3) found out what books are suggested and available for children's reading, and have read as many as possible, (4) collected materials about the culture to

be studied which will extend understandings and appreciations, change attitudes; (5) collected for display and manipulation artifacts and relia, including models, utensils, pottery, tools, weapons, clothing, jewelry and musical instruments; (6) read the school textbooks supplied for study, giving special attention to suggestions in the teachers' guides; (7) organized information, instructional materials, charts, pamphlets, diagrams and other resource materials in terms of generalizations, social functions of people, or other patterns of content organization. (Hanna, Potter, & Reynolds, 1973)

Listing the unit's instructional objectives in behavioral terms gives direction to activities and content within a unit. Behavioral objectives are those designed to be observable and measurable. (Hanna et al, 1973)

In schools where unit instruction and multimedia approaches have been used, the textbooks became one component of instruction, along with audiovisual and community resources and supplementary reading materials. All instructional media, including textbooks, are sources of information and are geared to the capabilities of students and the nature of the topics under study. (Michaelis, 1980)

Role of the Teacher

Teachers have many responsibilities to carry out following the writing of the unit plan. One of the first

and most important tasks is that of motivating the students to want to find out about the chosen unit topic. Several days before a unit is to begin a teacher could do all or any of the following: (1) put up a related bulletin board, (2) put out an appropriate sculpture, (3) put up a slogan, (4) put related books in the browsing area. (Hopkins et al, 1971)

Throughout the course of the unit the teacher strives to stimulate curiosity. Children are referred to books, to pictures, encouraged to go and see, to experiment and and helped to find answers to the many questions they have posed. (Hanna, Potter & Hagaman, 1963)

Throughout the unit, the teacher adjusts materials to accommodate all ability levels. Books of all reading levels should be available. He/she often rewrites materials in easier terms. Pictures, an aid for poorer readers and visual learners, should be provided. (Hanna et al, 1963)

Teachers must act as guides in order to help students go beyond recall and factual questions. The teacher is the architect who provides guidelines for the students to build actual structures. (Van Cleaf, 1984)

Role of the Student

Even the very young child needs to abide by norms and rules. These serve as anchors to behavior. Once standards and procedures are set students are ready to accept

responsibility to work both independently and as part of a group. (Joyce, 1965) As members of a group children learn to share ideas and respect ideas of each other. This classroom sharing differs from family sharing because the problems are on a child's level and are established for children. (Hanna et al, 1963)

Advantages of Unit Teaching

The unit method of teaching social studies has many advantages. The unit is a comprehensive study of a life situation or area, using content not only from several or all of the social sciences but also from other subject fields. (Hanna et al, 1973)

In 1978, Galyean, (1983) wrote a language arts unit for kindergarten through third grade. It taught mathematics, science, and social studies in a holistic, integrative manner. Five major goals were included in the unit. The children would: (1) learn all material by personally experiencing it, (2) live out or become that which they were studying, (3) reflect upon their inner experiences and create meaning from the transactions that occurred, (4) talk about and compare their experiences with others, (5) appreciate the thoughts and feelings of others. This approach would definitely integrate both left-brain analysis and right-brain intuition in the unit method.

The unit satisfies the natural drives of children.

Because the child is a total organism, one activity may satisfy several interrelated drives. During a unit of work children's need for activity can be satisfied as they move about in the classroom as plans previously made are carried out. Children collect needed materials, themselves, rather than having them provided. At the close of the period children must assume responsibility for restoring order to the room in order to provide for other types of work that will follow. (Hanna et al, 1973)

The unit approach encourages teachers to rewrite much of the material to fit the levels of reading ability of students. Other types of teacher-prepared materials are charts, vocabulary lists and card files, practice exercises, and activity cards. Booklets may be made of pictures and articles related to a topic, and folders may be organized to include materials on topics in a unit. (Michaelis, 1980)

Evaluating a Unit

As in all types of teaching, evaluation is an important part of the role of the teacher. The unit approach involves several types of evaluation which are discussed below.

The teacher constantly watches to be sure each child experiences personal satisfaction, in addition to teacher and peer approval regardless of task difficulty. (Hanna et al, 1963)

Even as students play in dramatic play, the watchful

teacher will observe evidence of wrong concepts and of the need for additional information, which can be supplied by reading, picture, trips, or discussion. (Hanna et al, 1963)

Most written or oral tests should be balanced among the following four types; the emphasis should depend on the objectives of the unit. Cognitive-memory: This requires no thinking ability but merely the ability to remember. Convergent thinking: This requires the student to give a specific explanation. Divergent thinking: This requires awareness of multiple possibilities. Evaluative thinking: This demands application of some value dimension to the problem and judgment regarding the item in question. (Joyce, 1965)

Evaluation of a unit of work is more comprehensive than the typical paper and pencil test given at the end of a chapter in the text. However, because it involves many different methods and is an on-going process, it provides a more thorough personal picture of the total achievement of the student. Teacher observation of the students as they approach and attempt to solve a problem provides another important part of the overall evaluation.

At the conclusion of a unit of study, in addition to looking at student progress, the teacher must note any content or procedural changes needing to be made. (Joyce, 1965)

Problem Solving Defined and Described

Problem solving, a step-by-step process followed when searching for answers to questions, involves several basic steps. These steps include: (1) recognizing and defining the problem, (2) analyzing the problem into its basic elements and forming a tentative hypothesis, (3) gathering pertinent data, (4) organizing, verifying, and interpreting data, (5) forming conclusions, (6) applying conclusions. (Hanna et al, 1963)

It is not expected that the steps will be taken in a one, two, three order. Many activities will be going on simultaneously. However, even the simplest problem is solved by this formula whether one formally recognizes it or not. (Hanna et al, 1963)

John Dewey's theory of problem solving is essential in our society not only because it follows the natural workings of the mind but because it has a unique place in a democratic society. Dewey assumed that learning proceeds best when based on a learner's need to solve a problem and that all problem solving thought must begin with the internalization of the problem. (Shermis & Barth, 1984)

Problem solving is a vital issue in the development of a unit of work because many problems about objects to be constructed, methods of work, and cooperation in groups must be decided by consensus. To be worthy of classroom

consideration, problems must be real and meaningful to children and must be those that create a sense of confusion, frustration, and need to be resolved. There must be alternatives so that choices can be made after several solutions have been considered and evaluated. (Hanna et al, 1963)

In order to practice creative problem solving, students can view the issue in two ways: (1) abstractly, verbally, and logically--yet also (2) holistically, wordlessly, and intuitively. Students must use these two approaches as they view a problem from different perspectives. (Crossett, 1983)

Elementary students need to seek and question evidence in order to understand or support their generalizations about social studies content. (McFarland, 1985)

Chapter III

FINDINGS

In a classroom where the unit method is being implemented, students work more independently. Their approach to problem solving is not one of finding the one right answer but one of observing, hypothesizing, gathering data, analyzing recording and evaluating. (Hanna et al, 1963) Interaction with other group members often provides opportunity for experience with living in a Democratic society. (Michaelis, 1980)

A teacher who uses the unit method becomes a facilitator and guide rather than the authority with the one right answer. Implementation of the unit method allows more time for the teacher to give students individual attention. (Hanna et al, 1963)

Activities included in a unit are from any and all subject fields; this provides the opportunity for students to see the interrelatedness. When solving a unit problem, the necessity to combine reading, math, science, and the arts quickly becomes evident. (Hanna et al, 1973)

In social studies, experiences are the learning adventures that help children answer questions and solve problems. (Dunfee et al, 1966)

Research indicates the steps in problem solving are incorporated into the unit method in the following ways:

(1) Once a unit topic has been decided, students begin to ask questions about materials used by the teacher as an introduction to the topic being explored. These questions lead students toward recognizing and defining problems to explore as a means of answering their questions. (Hanna et al, 1963), (2) Construction and other student created items such as scripts are often needed as a part of solving a problem. Before these can be created the problem must be fully analyzed and a tentative hypothesis formed to establish a plan of attack and a goal. (Hanna et al, 1963), (3) As a means of gathering data to assist with solving the problem at hand, all sources and ways of obtaining desired information should be used. Research in the first and second grades is, of necessity, very simple. Children gather information from watching films, from listening to the teacher tell or read a story, from making a simple experiment, from going on study trips, by talking with adults, and from reading simple charts or books. More time will be spent in research as children develop independent work-study skills, as their interests broaden, and as they have a need for more information. (Hanna et al, 1963), (4) Once children have gathered data relating to their problem, they must organize, verify, and interpret this information and its relationship to the problem. Data can be organized into specific categories such as suggested in the Hilda Taba data retrieval

chart. (Banks & Clegg, 1977) From the data chart children can easily detect any facts that do not agree and verify these. Next, children begin to interpret facts by concentrating on "why" and "when" questions. (Hopkins et al, 1971), (5) Once students are satisfied with answers to the "why" and "when" questions, they are ready to form conclusions or generalizations. Questions about the data that help children establish relationships, explanations, inferences, and meanings lead to formation of conclusions with regard to their problem. (Banks et al, 1977), (6) Students are able to apply conclusions to their problems in a variety of ways: art projects, dramatic play, music activities, and creative writing. (Michaelis, 1980)

As each unit is introduced it is important to discuss what children already know and what they want to know about the topic. Questions raised, at this time, lead to the beginning of the problem solving cycle. (Lemlech, 1984)

Chapter IV

SUMMARY AND CONCLUSION

Research of the unit method approach to teaching social studies revealed numerous ways to implement problem solving skills as an integral part of social studies. Based on the ways previously stated, it is the recommendation of this researcher that the unit method be a major part of the elementary social studies curriculum.

For more in-depth information regarding the organization and implementation of the unit method, this writer suggests teachers refer to the book by Hanna et al, 1963, listed in the bibliography. A personal interview with teachers who are now incorporating the unit method into their social studies curriculum would be a beneficial way to gain practical insight.

One caution, however, even though the literature generally favors the use of the unit method, there is no evidence which indicates how much of the school day should be devoted to the unit method. Teaching the entire curriculum via the unit method would require a considerable amount of organization and planning on the teacher's part. A second caution to be aware of is the importance of making available materials suitable to all ability levels.

Additional research is needed which would help determine the extent to which the unit method can productively be used

in a classroom. No tests to measure problem solving ability were located by this researcher. Therefore, it was not possible to determine to what extent the problem solving processes would be enhanced through the implementation of the unit method of teaching elementary social studies.

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