

Living in History: A Cognitive Approach

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Learning Problem:

Many social studies units have been taught through the memorization of facts, names of people, and dates. This quantitative method of instruction results in students' confusion, lack of interest in social studies, and poor retention of main ideas.

Background of Problem:

The study of history and culture can expand a student's perspective while increasing their appreciation of the past and their analysis of the present and future. California grade five students study the development of the nation up to 1850. Students learn the framework on which our nation was built. Colonial government, Enlightenment ideals, and the English traditions of self-government are a few of the themes explored in grade five. The goal is that upon completion of grade five students will "...recognize that ours is a nation that has a constitution that derives its power from the people, that has gone through a revolution, that once sanctioned slavery, that experienced conflict over land with the original inhabitants, and that experienced a westward movement that took its people across the continent." (History-Social Science Content Standards for California Public Schools, 1998)

Not only does the History-Social Science Framework for California Public Schools require students to obtain the core knowledge of history, but also the standards expect grade five students to "...develop the critical thinking skills that historians and social scientists employ to study the past and its relationship to the present." A hope of the State Board is that "...students will learn to distinguish the important from the unimportant, to recognize vital connections between the present and the past, and to appreciate universal historical themes and dilemmas." A solid foundation and understanding of these very principles and strategic thinking is key for students to be lifelong historians.

Grade five history can be taught in many ways. Given the nature of the domain (many dates, names, sequential events), a common approach to teaching history involves dictating information, reading textbooks, and paper-based tests. The student is expected to memorize important dates, people, and events with the assumption being that through memorization the student will acquire the knowledge. In this way, the study of history is detached from students' experiences creating perhaps only a surface level understanding and perception of history. Information is fragmented and no broader framework emphasizing relevance to the present exists. The long-term consequences of this method of learning history are student confusion, lack of interest, and poor retention.

Spoehr explains the difficulty for students to define a conceptual structure to learn social sciences. "In these disciplines the knowledge representation is multiply linked, such that the meaning of an abstract concept derives, at least in

part, from the ways in which it relates to other abstractions, and specific pieces of information are associated with more than one abstraction.” (Spoehr, 1994)

In order to fully examine the implications of such quantitative methods of teaching history it is necessary to grasp an understanding of the developmental capabilities of grade five students. Piaget argues that the capacity to understand certain concepts is limited by the child’s level of general logicodeductive reasoning. (Greeno et al., 1996) The average age of students in grade five is 11 years old. Eleven year old students are motivated to explore new arenas of knowledge. They have an increased ability to de-center and see the world from various perspectives making the learning of history at this age promising. Eleven-year-old students are able to abstract, practice deductive reasoning, and develop hypothesis. It is still critical for 11 year olds to learn by a hands-on approach. (Wood, 1997)

Goal of Study:

We will explore current practices of teaching social studies, particularly the teaching of a fifth grade unit on colonial times in America. It is our hope that after exploring the current learning environment, we will be able to create an environment that nurtures the cognitive growth of the learner.

We want to know to what extent current learning activities and methods of instruction allow students to make clear connections between events of the past and present. Our inquiry process will help us design an appropriate learning environment that addresses the needs of the particular learners.

Inquiry Process:

The goal of our preliminary investigation is to gather information about current social studies instruction and its effects on grade five students understanding of the main concepts and their ability to problem solve in history. Spoehr defines problem solving in history; “...it does not call for accumulation of declarative facts, but discrimination and informed judgment about the relationships between parts of that knowledge base.” (Spoehr, 1994)

Observation: By observing and recording behaviors within the current learning environment, we will learn about the specific elements involved in a grade five classroom. We will pay close attention to the ways in which information is presented. Does the teacher lecture? Does the teacher rely on textbooks to inform students? We can obtain an initial perception about the effectiveness of this method of teaching on students. Based on students physical positioning and behaviors we can assess their level of engagement. Are students asking questions? Taking notes? Creating analogies? Actively participating by answering questions, explaining events or people? Is reciprocal teaching occurring? Are students moving and exploring the classroom? Are students manipulating materials and artifacts?

By observing the natural environment of a social studies lesson we will gain a general idea about a student's interest and motivation.

Interviews: Conducting interviews will provide a more concrete, detailed analysis of our learning problem. Our interviews will not only attempt to assess a students' understanding of the main themes and occurrences in the particular period of history, but also assess a students' conceptual knowledge and ability to think strategically.

An essential component of our investigation will involve interviews of both teachers and students. Interviews will provide information on the teachers' expectations and goals of students as well provide another way to assess students' conceptual knowledge. A review of the teacher's lesson materials and progress reports will be conducted as well. Students will be encouraged to think aloud and explain themselves in many forms. For instance, a student could draw a picture to answer a question or role-play.

Example questions/activities for the teacher:

1. Please describe your ideal method of presenting social study themes.=Assess whether instruction is based on a cognitive, situative or behaviorist model.
2. What learning goals do you hope to accomplish in social studies this year?=With a clear understanding of the learning goals, we will be able to assess the current method of instruction's effectiveness.
3. What sort of activities do you incorporate in a unit on colonization?=Assess whether students are actively involved, manipulating artifacts.
4. How do you assess a students' understanding of the concepts?=Insight into teacher's perception of effectiveness of instruction.
5. How do you link history with the present?=Assess whether students are encouraged to create mental models, patterns of thinking.

Example questions/activities for the student:

1. Tell me a little about what you are learning in social studies.=Assess interest and motivation as well as depth of knowledge. Is the student taking away the main concepts?
2. Why do you think colonization is important to learn?=Assess student's understanding of larger framework, making a connection between past and present.
3. Take as much time as you would like and please draw me a mental map of colonization. You can start by writing down the major events. What connects those events? People? Places? Ideas? Religions? Try to make it as detailed as possible.=Assess the knowledge representation and associations made. Are the nodes richly linked?
4. Provide the student with two descriptions and explanations of colonization from two sources. The text will appear in the same

format. One description will be from a social studies textbook and contain true information. The other description will be written with a few major false facts. The student will be asked to choose the accurate passage and explain why. =Assess student's reasoning and discrimination skills.

From the data we collect we will be able to incorporate the appropriate design principles to form a more successful learning environment based on the cognitive perspective.

Design:

After a thorough analysis of the data gathered during our inquiry process, we will design activities that complement the student's present learning environment and needs. Using the cognitive approach, we have designed activities that integrate many subjects. It is our intent to teach thematically in order for students to acquire a broader, richer conceptual framework as it applies to this domain.

Students will be able to explore the unit of Colonial Times in America in a variety of ways. It is our belief that students will better understand the general concepts of this social studies unit if simulating life in that time period and participating in hands-on, multi-sensory activities. We want students to connect their own practices to those of past cultures in the hopes that they will better understand and appreciate the contributions of past cultures. "Many studies have shown that students' abilities to understand and learn new material depend strongly on what they already know (Glaser, 1984)."

Throughout the unit, students will construct a KWL chart with teacher guidance. The purpose of this chart is for the teacher to discuss and assess students' prior knowledge and actively involve them in the learning cycle. This will help the teacher gauge their students understanding of the unit and decide which activities to include or extend.

This KWL chart can be used by the teacher to determine:

- K -- what the students already know about the colonial times
- W-- what the students think they'll learn
- L-- what the students learned

K What do we know?	W What will we learn?	L What did we learn?

The activities we recommend allow students many opportunities to construct their knowledge base of the colonial times. "Nevertheless, it appears that educators cannot build expertise by having their students memorize experts' knowledge. That kind of learning appears to produce 'inert' knowledge (Whitehead, 1916), unlikely to be usable in complex performances. Instead, expert knowledge must be constructed through activity and experience. Knowledge construction, however, is time consuming." The activities we have included are time-consuming. However, it is our belief that these activities will benefit the students immensely. An example of a multi-disciplinary approach to teaching this grade five social studies unit is with our attached theme outline.

Assessment:

"When knowing is viewed as the ability to employ general reasoning schemata and strategies and understanding of general principles in domains, assessment emphasizes students' knowing and reasoning in accomplishing larger tasks." (Greeno et al, p38)

We have included a variety of assessment tools in order to recognize that students can approach and solve problems in more than one way. We also recognize that students have different strengths in accordance with Howard Gardner's theories on multiple intelligences. We offer students many ways to demonstrate their understanding (spatially, orally, written, etc.)

Throughout the unit students will be assessed with the following:

- running logs by teacher
- checklists by teacher and students
- reciprocal teaching
- performances (musical, artistic, written, oral, dramatic, etc.)
- projects
- portfolios
- KWL charts

We hope that these assessment tools will be used in a constructive manner -- not to penalize students but to help them learn. Continual assessments can be used to determine what still needs to be reinforced. For example, if after a discussion on one activity, the teacher finds that students lack an understanding of the concepts, he/she can restructure other activities. In this way, the assessment results will guide the teacher to select appropriate activities to reinforce concepts. As opposed to a chapter test, continual assessments allow the teacher to adapt his/her activities to address weak understandings. "Short-answer tests can assess whether students can answer questions about general principles, but many people argue that to assess whether students can reason with and communicate about general principles, it is necessary to observe them in appropriate activities of reasoning and communication. (Greeno, et al p38)

Conclusion:

We have explored and evaluated current methods of teaching fifth grade social studies. After a thorough investigation, we propose that approaching instruction through a cognitive perspective allows students to develop as lifelong historians. "When classroom activities are organized to promote students' active construction of understanding through participation in discourse, problems and examples are used that evoke students' intuitive understandings, which are then appropriated for productive discussion and analysis in the class. (Greeno, et al p36)"

References:

Greeno, James G., Collins, Allan M. and Lauren B. Resnick. 1996. "Cognition and Learning." pp. 26 in Berliner, David C. and Robert C. Calfee (ed.) *Handbook of Educational Psychology*. New York: Simon & Schuster Macmillan

History-Social Science Content Standards for California Public Schools, 1998.
<http://www.education-world.com/standards/national.html>

Spoehr, K.T. 1994. Enhancing the acquisition of conceptual structures through hypermedia. In K. McGilly (Ed.), *Classroom lessons: Integrating cognitive theory and classroom practice* (pp. 75-101). Cambridge, MA: MIT Press/Bradford.

Wood, Chip. 1997 *Yardsticks: Children in the Classroom Ages 4-14* (pp. 117-129). Massachusetts: Northeast Foundation for Children.

