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Ronald L. VanSickle & John D. Hoge
Jere Brophy, Richard Prawat & Susan McMahon
Judith Torney-Purta
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A Note From The Editor
The Abandonment of Social Studies?
Higher-Cognitive Thinking Skills in Social Studies: Concepts and Critiques
Social Education Professors and Elementary Teachers: Two Purviews on Elementary Social Studies
Schema Theory and Cognitive Psychology: Implications for Social Studies
An Analysis of the Social Science and History Concepts in Elementary Social Studies Textbooks Grades 1-4

Book Reviews

Discordant Harmonies: A New Ecology for the Twenty-first Century
Getting Beyond the Facts: Teaching Social Studies in the Late Twentieth Century

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Information for Authors
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Dr. Fraenkel will assume the position of editor beginning with TRSE's Summer 1991 edition.
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December, 1990

A Note From The Editor:

This is the last issue of TRSE for which I am responsible. I would like to thank all of the reviewers who promptly provided me with thoughtful assessments of manuscripts. I would like to thank members of the Editorial Board who diligently reviewed manuscripts and provided other services to the Journal.

I would especially like to thank Charles Chamberlin of The University of Alberta, Nancy King of Towson State University, and Jane White of the University of Maryland who served as Book Review Editor. It was a privilege to have them as members of the editorial board.

It was my hope and intention, as editor of this journal, to encourage many different kinds of scholarship. Social studies research and social studies education should contribute to the development of a saner, more just, less polluted, less violent world.

To achieve that end, social studies researchers and teachers must face and deal with the everyday realities of life on our planet: homelessness, torture, assassination, arms races, global warming, savings and loans scandals, poverty and hunger at home and in other regions of the world. As teachers and researchers, we must deal with the world as it is and not as we would like it to be.

Social studies research could clarify issues relating to teaching about the North/South conflict, global warming, rainforest destruction, the European Economic Community, and perhaps the idea of history. I have received few manuscripts reporting research that dealt with such issues.

Researchers of my generation were indoctrinated into an engineering style of scholarship that directs researchers to ignore the world around us and to focus our attention on "forces and impact" studies of a factory system of education. The number of studies that assess the "force and impact" of class size, or teaching method, or teaching material borders on the infinite. We were taught that statistical analysis and statistical significance is more important than the crisis of poverty, the struggle for social justice, or the prudent disposal of toxic wastes. We were taught methods of research that direct our attention away from the social and ethical challenges of the world in which we actually live.

We often engage in statistical exercises that can be judged according to the quality of their method rather than their substantive importance of the issues being investigated. Good research, we have been encouraged to believe, is statistically correct rather than humanly important.

The dilemmas of our research literature can be illustrated by the NCSS publication Charting A Course for the 21st Century. In each of the nations of the planet, there are triumphs and disasters; there are good times and bad times. What guidance does Charting A Course, and our professional
literature, offer to clarify the best and the worst of our own brief national existence?

If we think now is the worst of times, we would acknowledge that we have the highest infant mortality rate and functional illiteracy rate of any industrial nation. We are unsuccessful at graduating students who love science, are engaged in mathematical studies, revere history, and are lucid writers. Most of the graduate students studying mathematics in the United States today come from other countries. We are still suffering the social, political, and economic consequences of the slave system and its devastating effect on black family life, law, government, and whatever hope we have for a just society. We are a nation of addicts hooked on alcohol, cigarettes, the consumer way of life, and both licit and illicit drugs. We are depleting our natural resources at a fantastic rate, as we kill our lakes, pollute our rivers, seashores, and the very air we breathe. We have invested our national treasure in the production of weapons systems and we no longer competitively produce many necessities and amenities of life such as tv sets, typewriters, cars, shoes, or clothes. Arms and fast foods may be our most successful national products.

The infrastructure of our nation is in disrepair. We have a budget crisis, a savings and loan crisis, a criminal conspiracy in the financial industry, and presidential campaigns that focused on trivial tv ads that gave no attention to the actual challenges we face: "Read my lips" was the message of the last presidential campaign. Most of our citizens do not vote. We are dead beats at the United Nations. We have not paid our UN dues for many years. Homelessness, the feminization of poverty, the growing garbage crisis, the toxic waste scandal, crack babies, and corruption in government is our every-day reality. If we think of foreign affairs, we can recall the procession of military terrorist governments that we have imposed or supported in nations around the world: Brazil, Guatemala, Chile, Iraq, Panama. Our most recent program of providing arms to Iraq is only the most flagrant example.

Indeed it is the worst of times. And, what guidance does our social studies research have to offer about our social calamities?

Let us say now is The Best of Times.

If we think of our nation today as the best of times, we can celebrate the growing involvement of women in science, law, business, journalism, and the humanities. The conduct of scholarship has improved in quality because of the growing involvement of women. We have better journalism, better history, better law because women have brought new perspectives to the conduct of these traditional white male occupations. To the extent that women and ethnic minorities participate in the affairs of business, journalism, scholarship, government, and policy formation, we are moving towards a more just and secure society.

We have activist citizens who through local and national organizations devote attention to the preservation of rivers, lakes, wildlife, the ozone layer, rainforest issues, and global warming. There are citizen groups concerned
with women's issues, different ethnic communities, the handicapped, AIDS, homosexual rights, corruption in government, the homeless. We are a nation of local organizations devoted to public issues, and we benefit from those efforts.

Civil rights groups have challenged our government to guarantee equity for women, Black, Latin, Asian, and other minority communities. The movement for racial and social justice results from the efforts of active citizens to confront indifferent government bureaucracies.

Our constitution, our civil liberties, always under threat, are the foundation of citizen initiatives. We are blessed in the freedoms that citizens can exercise, we are blessed in the energy our citizens bring to the challenges we face.

We have heroes of many sorts who often are left out of school textbooks. Think of Rachel Carson, Martin Luther King, Jr., Eugene Debs, Charlie Parker, Lenny Bruce, Margaret Mead, Langston Hughes, W. E. Dubois, Duke Ellington. Think of Paul Simon, Bob Dylan, Alice Walker, Spike Lee, David Brower, June Jordan, May Sarton. Think of Jonas Salk, Carl Sagan, Barbara Jordan. We are a nation blessed with poets, painters, dancers, historians, novelists, playwrights, and writers who direct our attention to a wide variety of human concerns. They all help clarify the circumstances of our troubled everyday life.

Does social studies research clarify aspects of the immense accomplishments of our society? Does the research we normally do, or does Charting A Course, call attention to the best of times and the worst of times? Does our research clarify national and global issues that we as social studies teachers and researchers should help young people understand?

Are we active professional citizens in the real world of our times? In our professional research literature:

1. Are there reports on research, advice and counsel on how to cherish the best of times?
2. Is there counsel about the worst of our times?
3. Is there consideration of the crises of our nation today, on this planet, with all of its diverse people, rainforests, wetlands, rivers, sea shores, homeless children, corrupt government officials, and scandal in the financial community?

Based on my experience as Editor of TRSE, our normal research calls attention to few contemporary realities, and the goals of Charting A Course are timeless. They give no hint of the century in which we live, the challenges we face, or the accomplishments in which we may take pride.

The engineering research in which we typically engage ignores the political and moral struggles of everyday life. It is little wonder that social studies is the least respected aspect of the school curriculum. We may get the respect
we deserve because we have not developed research and provided leadership in the struggle to understand the living world of our moment in time. The NCSS publication, *Charting a Course*, affirms that students should:

1. See their own life . . . as part of a larger human adventure . . .
2. Develop a critical understanding of the history . . . of the . . . United States . . .
3. Understand other people . . .
4. Develop civic responsibility and active civic participation.
5. Develop critical attitudes and analytical perspectives appropriate to the analysis of the human condition.

One might infer from the document that it was written by United States citizens. But from the words, can you tell if it was written in 1933, or 1953, or 1963, or 1973, or 1983? These goals do not challenge us to think about the actual world in which we live today. They are timeless recommendations, unconnected with contemporary realities; they ignore the world that can be seen through school windows, and through tv windows on the world. This timeless feature of *Charting A Course* is also characteristic of our research literature. Statistical significance rather than human importance or dire necessity is the focus of our attention.

No doubt we should all see our own life as a part of a larger human adventure. Members of our species should come to see human activity as one life form among the many that share the land, the water, and the atmosphere of our planet. No doubt we should learn of the mutual dependencies of all life forms. But no hint of such an adventure is suggested in *Charting A Course*.

No doubt we should develop a “critical understanding of history” as the stories that are told about human actions in the past of this country and others. We should learn that the past is not history until someone writes it. We should learn that the history that gets written has authors who are of some race, some gender, some nationality, and some social class and those realities influence the events of the past about which stories are written. The exciting aspect of history today is that women, Blacks, Asians, Latins, among others, are writing histories that provide new perspectives on the many human actions of the past that occurred in our nation and in other places on the globe. Most important of all, we should learn that school history has little to do with the histories that are being written today about the past of this country and others. There is no appraisal of this sense of history nor of the idea of history in *Charting A Course*. But there is some appraisal of historical notions in *TRSE*.

No doubt we should seek to understand other people such as Palestinians, crack users, teen mothers, homeless families in urban communities, Iranian fundamentalists, Balinese Hindus, Vietnamese immigrants, the people of East Timur, and other communities of our planet. But the intellectual challenge of such educational efforts is not identified in *Charting A Course*.  

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No doubt we should be active citizens concerned about race and gender discrimination, involved in efforts to restore and preserve our polluted lakes, rivers, and toxic landfills, and engaged in appraising the effectiveness and wisdom of local government, national government, and international institutions such as the United Nations, the World Health Organization, and the United Nations Environment Programme. Neither *Charting A Course* nor our research literature provides analysis or perspective on this obligation of social studies education.

No doubt we should develop critical attitudes and analytical perspectives appropriate to the analysis of the human condition and the living systems in which it is deeply interconnected. But *Charting A Course* and our research literature provides little analysis and perspective on this challenge to social studies education. *Charting A Course* reveals no sense of the troubles we face, the challenges of the next century, the realities of today. It ignores both contemporary realities and substantive intellectual challenges of the scholarship on which social education might be based. It is a recommendation with neither intellectual power nor moral force. Much the same could be said for the last thirty years of research in social studies education.

What is missing from our research literature and *Charting A Course*?

Our nation and the global community face fundamental issues that nations, individuals, and local communities must come to understand and resolve. Social studies education should call to the attention of students the institutional crises of our time. Not to do so, as is our tradition and custom, is a failure of responsibility and perhaps of nerve.

Here are some topics and issues that social studies researchers and planners for the 21st century should clarify through scholarship and analysis. Our research gives scant attention to matters such as these:

1. The United Nations and its affiliated Agencies. No mention is made in *Charting A Course* of UNEP, UNDP, WHO and other UN agencies. The United Nations is a significant global institution that confronts a wide variety of social issues.

2. The greenhouse effect, the ozone layer, acid rain, solid waste disposal, and petroleum dependence are critical issues of global survival. Rainforest destruction and related natural resources depletion are matters that citizens of all nations must address. There are the related matters of clean water, sewage disposal, energy conservation, fossil fuels, and their connection with health risks and sustainable development.

3. The AIDS issue is the major world health challenge today and it will most likely be the major health issue of the 21st century. It affects men, women, and children in increasing numbers.

4. The crisis of underdevelopment or the North/South conflict is now and will be in the 21st century the major threat to world peace and economic stability.
5. Homelessness, the feminization of poverty, and the high infant mortality rate all illustrate profound dislocations in United States society.

6. Gender studies, the growing participation of women in scholarship, business and science, the continuing inequity in opportunity for women.

7. Computers for school to school, nation to nation telecommunications involving computers. The computer, a telephone, and a modem may be the most significant technological development in social studies education.

8. The European Economic Community will be a reality of the next century. This new economic and political entity has implications for trade, science, communications and economic competition.

9. It is a fact of our civic life that most people do not vote. The United States has minority governments because of the indifference of its citizens. Our schools have failed to connect social education to active participation in public life.

As this brief consideration of matters usually ignored both in our research literature and in *Charting A Course* for education in the next century reveals, there is little analysis or guidance relating to the actualities of the world in which we live. Neither this plan for the future nor our research literature provides leadership in the consideration of social education in the next century.

*Charting A Course* does affirm the importance of history over and over again. *Charting A Course*, it is fair to say, is simply a history curriculum. Schools today and this curriculum proposal give major attention to the study of what might best be called "school history." "School history" has little relation to the diverse efforts that have been made to write about human activities in the past.

*Charting A Course* and our professional literature rarely provides analyses of history as a human activity of men and women, Asians and Africans, European and Arabian, winners and losers of economic and military conflicts. Winners usually generate histories; losers seldom produce histories. What comes to be thought of as history are the stories that get written and published about past events. Teachers of history must confront the complex realities of the stories that are written and published, and the stories that are never told. School history, in most nation states, tends to be politicized accounts of national and world affairs. School history is frequently more political indoctrination than an introduction to the diverse perspectives on past events that women and men of different cultures and perspectives can provide. The challenge of teaching history in a democratic society is difficult, ethically demanding, and seldom analyzed by social studies researchers. Engineering studies of the factory school system, of course, give no attention to these ethical dilemmas.

Columbus, for example, and his voyage in 1492, is studied in most schools in the United States. Let me pose a few questions about Columbus, and let me invite you to consider them:
1. What was his first language?
2. What was his second language?
3. What was his third language?
4. What was his family background?
5. What is the political significance on August 3, 1492, the day Columbus sailed?
5. Who helped pay for the trip?

I suggest these questions as ways to think about the ethical challenge of teaching history in public schools, the dilemma of "school history."

I would expect few students to know the answers to these questions. I suggest many Americans, in spite of Columbus Day celebrations, do not know the answers to such questions. Do you know the answers to these questions?

1. His first language: His first language was Spanish. He wrote the logs of his voyages in Spanish. He is not known to have ever written in Italian. (Except, perhaps, a word on a legal document.)

2. His other languages: He wrote extensively in Latin and in Hebrew. He lived many years in Portugal, but there are no documents, that I know of, that he wrote in Portuguese.

3. His family background: You have to think of the time. The Spanish government of the 15th century implemented a policy of oppression, persecution, and terror against Jews and Muslims. The family of Columbus fled to Italy to escaped persecution. He grew up in the Spanish Jewish community in Italy. He was, you might say, a Spanish-Italian. Italy of that time was a refuge for Jews fleeing persecution in Spain. You might think of the Spanish government of that time as something like the government of Nazi Germany.

He studied in his later years in the leading Jewish University of his time located on the island of Majorca. He was a skillful navigator and a learned man.

4. The significance of August 3, 1492: It was the last day a Jew or a Muslim was allowed to remain in Spain. When Columbus sailed, the harbor was full of boats with the belongings of exiled Jews. He chose that day on which to sail. He sailed on his first voyage along with the remaining Jews in Spain who were driven into permanent exile.

5. Who paid for the trip: The Jewish community of Spain contributed substantially to the costs of the voyage as a part of their effort to seek a homeland for Jews forced to leave Spain.

Students in the United States study the school history of Columbus every year; few of them ever learn much about the time of Columbus, the expulsion of Jews and Muslims from Spain or the circumstances of his voyage. Charting A Course affirms History, History, History. But Charting A Course provides no guidance in developing a critical perspective on the ethical challenge of the teaching history intelligently, critically, thoughtfully in the public schools. In addition, our research literature has little in the way of a legacy of scholarship that addresses matters such as these. Our research
traditions call upon us to be purveyors of textbook history rather than critical scholars of "school history" and history teaching.

Sometimes in parades one can see Queen Isabella waving from a replica of a boat. This is something like having Hitler waving in a parade down Fifth Avenue in New York.

Neither Charting A Course nor our research literature has confronted fundamental ethical issues of historical studies in public schools. The engineering approach to social studies research does not direct attention to such matters.

School history is treated as an established body of factual knowledge. School history is not a human construction. School history is not stories about human actions in the past about which many accounts may be written. History, according to Charting A Course, is simply knowledge about past events that may be dispensed in schools skillfully, artfully, with songs and artifacts. Research may assess the "impact" of one method or another on the recall of the "school history" of Columbus or other events.

A social studies curriculum to serve the 21st century that ignores the difficult ethical and intellectual challenges we face today and that ignores the human constructedness of all social knowledge about human actions now and in the past is incompetent and irrelevant.

A social studies curriculum that neither addresses actualities of the life we face every day, nor the actualities of the constructedness of human knowledge is part of the problem and is not part of the solution of our educational challenge.

The social study of the world in which we live involves critical reading of textual materials, observation, analysis, interpretation, writing, and judgment that our research literature and Charting A Course rarely considers, identifies or explores.

Our challenge is far more difficult, the social issues are far more complex, the physical condition of the planet is far more dangerous than our antique research customs can address.

Charting A Course and social studies research should not only address significant issues of our time and critical issues of social scholarship, but it should also provide leadership in moving from our factory system of education to a more congenial, a more appropriate environment for engaging in social study, historical analysis, significant writing, and citizen action. The time schedules, the componentialized* curriculum, and the population control issues in large scale total institutions such as prisons and schools, limit the possibilities of thoughtful social engagements and significant writing. We should chart a course for the next century. Charting A Course is a nostalgic

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memoir that obscures both history and contemporary challenges.

In the next century, computer telecommunications will be an integral part of the complex of information sources available to both students and teachers. To ignore this reality, in an education plan for the 21st century, is simply to ignore the world in which we now find ourselves.

If we are *Charting A Course* for the next century, we should direct our energy to changing our children factories into caring communities in which a life of responsible earthwatching, critical thought, poetry, music, and dance are everyday realities.

If we are to evaluate what schools accomplish, we should avoid factory production assessments such as achievement tests. We must chart a course to discover what kind of life goes on in a school. About any school, we can ask such questions as these: Is it a house of art? Is it a house of science? Is it a house of history? Is it a house of ecological concern? Is it a house of peace? Are students in communication with children in other parts of the world? Are boys and girls living in equity with one another? Is it a house of laughter? Is the school a community of work, justice, art, dance, beauty?

Our tradition calls upon us to ask about social studies achievement measured by paper and pencil tests. Achievement, efficiency and effectiveness are factory metaphors. We should *Chart A Course* that leads to the formulation of more fundamental questions that address the substance of life on our damaged planet.

The spotted owl, the children of Soweto, the children of Rio, and children with AIDS are indicators of our common fate.

Do we as teachers, as researchers, as citizens dare to challenge this fate? Do we dare to address fundamental issues, to *Chart a Course for Social Education in the 21st Century*?

I have sought such a scholarship. I have occasionally received manuscripts that dealt with substantive issues. But, I would say, I have failed in my effort. Perhaps the next editor will focus on "forces and impact" studies. Perhaps he will go in another direction. My intention was to support pluralism, to confront substantive issues, to deal with the actual world in which we live.

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The Abandonment of Social Studies?

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Abstract

This paper addresses the question of whether the social studies should be abandoned. The work of Kieran Egan is examined in light of his claims about the nature of social studies and the importance of storytelling as well as of binary opposites. An alternative way of uncovering the epistemological basis of thinking is presented that the author suggests saves both the social studies and the intent of Egan's analysis of social studies. The implications for an alternative way of knowing are examined for educators at all levels of formal education.

Introduction

This paper is about the nature of Social Studies. At issue is the question of whether the subject, started by John Dewey and others to socialize the new immigrant waves in the early part of this century, has run its course. In order to examine this point, a selected examination of the work of Kieran Egan will be undertaken to point out substantive criticisms of social studies. An assessment will also be made of the implications of Egan's ideas to a general epistemological theory for education. Rather than abandon the subject, an alternative model to Egan's binary opposite model will be introduced in which knowing about the world will be presented as an ongoing historical process, linking the past to the present, and one present to another present by reenacting the thoughts of others. In this model, ideas are not diametrically opposed. Rather, ideas are linked in an ongoing dialectical process that allows for understanding in the present and of the past. In this form of knowing we come to know ourselves, and in the process, to understand the thoughts of others by knowing how our own minds work. This alternative process could also incorporate Egan's emphasis on storytelling as a vehicle for learning without the necessity of his concept of binary opposites.
This paper is not just about binary opposites; and it does not intend to address that issue directly. It is really about Egan’s philosophical assumptions and the implications of these for any future framework of social studies. The ideas presented here also imply a different way of assessing the importance of social studies and provide a new dynamic mandate as we move toward a new century.

The argument is advanced in the following way. First, Kieran Egan’s ideas about the nature and meaning of social studies are discussed. Second, the point is made that the inclusion of storytelling and binary opposites has broad implications for the way we learn about the world. Third, another way of knowing, a way that the author suggests is “more human” is presented, and its advantages are pointed out. Finally, the implications for the nature and teaching of social studies are presented; and a call is issued for a rejuvenation, not abandonment, of the conception of social studies.

**Egan and Social Studies**

Kieran Egan has written extensively on the epistemology of children’s knowledge. His books include *Teaching as Story Telling*, and *Primary Understanding*. In these books, and in the many articles he has written, Egan offers us a theory about the way children come to know the world. In “Children’s Path to Reality from Fantasy: Contrary Thoughts About Curriculum Foundations,” he argues that fantasy must be taken as an essential element in children’s thinking, and its implications for the curriculum studied. While accepting the progressivists “sensitivity to children’s ways of learning and development, and their seriousness about children’s genuine engagement in those things that are of most interest to them,” he would also include, “. . . the traditionalist sensitivity to the delight of advanced knowledge . . .” (Egan, 1983a, p. 370). However, when both these positions become hostile to the study of fantasy Egan rejects them. The progressivists, he argues, are consumed with a sense of social mission; while the traditionalists deny fantasy a major role in thinking because of their conception of learning as hard work. Egan’s solution is to study children’s fantasy to organize it into ways that are meaningful to children (Egan, 1983a, p. 371).

In order to study fantasy, Egan has analysed its constituent parts and come up with a dialectical model that centers around binary opposites. In *Primary Understanding* he suggests that binary opposites should be used, “to organize the content and to give access to it. The whole point is that we can be sure that young children already have in some form the concepts . . . even if they do not know the words” (Egan, 1988, p. 371). For Egan, binary concepts provide a way of making sense of the oral cultures of the past and 20th-century figures like Wittgenstein, (witness his claim that we should somehow rearrange what we already know by the use of storytelling). Egan calls this type of knowledge “mythic understanding” and claims for it a foundational role in any model of rational thinking (Egan, 1988). To accomplish this kind
of understanding, he argues that we need to become more aware of the processes that poets use when they create. He refers to terms like "evoking," "stimulating," and "developing poetic techniques" (Egan, 1988). These, he suggests, "vivify the imagination, stimulate metaphoric fluency, and expand sensitivity and sympathy" (Egan, 1988, p. 258).

Because Egan realizes schools are not separate from society, and often mirror its fascination with technocratic-rational language, the task of making the curriculum responsive to children's ways of thinking is difficult, particularly in social studies. Despite the fact that social studies has all the necessary ingredients to incorporate storytelling in its curriculum, its historical mandate has made this nearly impossible. It was, we must remember, Dewey who argued that the place of social studies in the curriculum was to "Americanize" the waves of new immigrants who arrived (Dewey, 1916).

What then is to become of social studies? As far as Egan is concerned social studies should be the easiest place to apply the storytelling model in primary grades; but in order to do this we would have to abandon the social studies curriculum and replace it with something more worthwhile (Egan, 1983b). In *Teaching as Story Telling*, he argues that the way out of this impasse would be to do away with social studies altogether. The social components of the subject could be dealt with in other areas according to story-form principles, and teachers could role model appropriate behaviour in their teaching activities (Egan, 1986). A new curriculum would, or could, be made up of the Great Stories of the World. These stories would comprise science, history, language and so on. The curriculum then would be, "what teachers, who are our professional storytellers, tell in class" (Egan, 1986, p. 109).

Egan rightly points out that this conception of social studies is at odds with what is taught in many schools. This discrepancy is another reason for his call to abolish social studies (Egan, 1986). The force of Egan's argument here is that despite having all the necessary elements for fantasy and storytelling, social studies is a disaster because it is based almost entirely on concrete thinking. His solution is to replace social studies with the study of rhetoric, which would teach students to master their voices to affect others. Rhetoric empowers children, he argues, social studies defeats them by dealing with abstract situations. These are powerful arguments.

Another criticism that Egan has of the traditional social studies curriculum is the expanded horizons concept. According to this idea, we educate our young with the intention of moving from the known to the unknown. Egan argues that this is the dominant model in the social studies education. "It assumes that what children know when they come to school are things about families, homes, neighborhoods, and so on. Thus the curriculum is filled with these things and, having learned yet more about them, children's concepts... may be expanded towards the unknown" (Egan, 1988, p. 27). Egan's point is that if we centre a curriculum around these concepts then we leave behind the wealth of imagination and fantasy to be found in story-
telling. This is certainly a valid criticism of any such programme, and this paper cannot agree too strongly with Egan that to structure any curriculum around the "expanded horizons" concept not only detracts from the possibility of a meaningful social studies programme, but is also at odds with the epistemological foundations characterized in this paper.

What are the implications for curriculum planners and for teachers of these claims? Further, is Egan right in his analysis of children's thinking and of the role and scope of social studies?

Learning About the World

Egan's epistemological analysis, and his rejection of social studies, revolves around binary opposites. He sees children's thinking as being based on this concept. He also believes that binary opposites should be the basis on which the content of the curriculum is organized. The implicit claim here is that this is how children think. Is this the case?

In Primary Understanding and elsewhere, Egan argues that students in the eight to ten year range perceive the world in extremes of reality. They understand the world as being composed of characters who transcend normal human qualities. Egan calls this delineation of human qualities binary opposites. The characters of these stories are our heroes, whether they be on T.V., movies or in comic books; and the qualities that children understand and associate with are, he claims, those primary binary opposites like good and evil. Given this conception of children's knowledge, the best way to utilize it is to construct stories for children that mirror their way of seeing the world.

Egan's notion is a romantic way of making sense of the world, which should not be surprising since its foundation is imagination and fantasy. Through applying storytelling and the underlying form of binary opposites, children will become a bit like the hero in the story with whom they associate. Both imagination and metaphor are used in the making and telling of stories to do this. These devices instill wonder and awe and humanize knowledge while helping us deal more effectively with people's hopes, fears, aspirations and so on. The content of children's stories are about emotional commitment. They are often based on the historical traditions of oral cultures and emphasize knowing what is remembered by stressing the techniques of memory such as rhyme, rhythm, meter, vivid images, and motion.

It is the form of the story that gives it power to communicate. This form is based on the conception of binary opposites; and because children from eight to ten perceive the world in this way, Egan argues, these stories are their way of perceiving reality. The stories that are told and created by the children in class become internalized and therefore, thinking and feeling occur together. In other words, learning based on experience has occurred.

Egan's definition of a story is a narrative that fixes our affective orientation to the elements that make it up (Egan, 1986). Stories are the places where
anything can occur; as such, they provide a safe haven for children and help them deal with the insecurities of life. Underlying these stories are binary opposites. It is through binary opposites that stories of the type Egan describes are told and formed. He argues that binary opposites are conception driven and are based on children’s experiences. As an example, he cites the story of Cinderella, which begins with a conflict between the binary opposites of good and evil. These qualities are drawn out in the story through illustrations of the personality of the characters, and this provides the framework for the story (Egan, 1986). Egan argues that these binary opposites are found in all children’s stories (1986). The importance for him is that this is not unique to children. We do the same thing in making sense of a current event. For example, when a terrorist attack occurs, we often characterize the terrorists in the extreme terminology of binary opposites. In other words, binary opposites serve to help us organize and make sense of new information. The argument, as applied to teaching, is that if binary opposites are common to all thinking then they should be incorporated into all phases of the curriculum (Egan, 1986).

Story form for Egan has three parts. First, the identification of the importance of the story; second, the identification of the binary opposites; third, the organization of the content around the binary opposites into story form; and a conclusion. Clearly, Egan’s binary opposites and storytelling conception have major implications for the curriculum. He is certainly correct when he claims that many social studies programmes of study would be hard pressed to accommodate his ideas. But is he right in his conception of what social studies mandate is and, more importantly, is he right in his characterization of binary opposites?

Another Way of Looking at the World

There are many epistemological models operating within our educational system today. One of these is the positivistic one. It is based on the factory model of education and on concrete thinking. According to this model, specific time slots were blocked out for the instruction of specific subject areas. To teach social studies in this way is to isolate it from what it was intended to do. Egan claims that one can’t teach democracy, but must build a democratic society and experience it. Therefore, schools based on this epistemological model are poor places to teach social studies. One of the solutions is to scrap the teaching of social studies and replace it with something else, perhaps rhetoric. However, this presupposes that Egan’s analysis is correct and that his conception of children’s thinking underlines the shape and scope of future education curriculums.

There seems little doubt that much of what Egan has to say about children’s thinking makes sense and could be applied to better the curriculum. Most of us can remember our identification with early childhood heroes and villains. There is also little doubt that many of us experienced the world
through these lenses for a number of years, and that these ideas still have an emotional pull on us as adults. The question is, did they provide an epistemological framework for us? To answer that question let us look at a modern resurgence of heroes and heroic myths. This has occurred in comic books, T.V. shows, and on the movie screen. The Star Wars trilogy is perhaps the most dynamic example of this. On the surface, the trilogy appears to have all the qualities that Egan demands of storytelling structure. The importance of the story is clear; it is to save the Federation. The binary opposites are apparent—good and evil as personified in the characters of Luke and Darth Vader, and the story has been organized into Egan’s recognized form. But at a closer study, there is a problem. The conception of binary opposites in the characters of Luke and Darth Vader is not as neatly drawn as Egan suggests it usually is. Luke Skywalker has all the attributes of the hero, and this is the point.

In his books on mythology, Joseph Campbell outlines the characteristics of the hero as one who has, “done something beyond the normal range of achievement and experience” (Campbell, 1988, p. 123). Part of this conception of hero is that the candidate experiences a journey or adventure. Campbell makes the point that this adventure is one in which we all must or can partake in. It is, he says, “...a fundamental psychological transformation that everyone has to undergo” (1988, p. 124). The basic motif, to use Campbell’s terminology, is that we leave one situation to go to a more mature one; and we do this through experience (Campbell, 1988). When this analysis of heroic qualities is applied to Egan’s description of binary conceptions of human character, there are some differences. Campbell’s heroes, based on his study of heroic characters from classical time to the present, do not necessarily possess the characteristics Egan sees in his stories. For example, classical heroes were usually flawed in some aspect of their character. The reason for this, one could argue, was so that ordinary humans could identify with their mistakes and learn from them. There certainly were gods and goddesses in many of these myths but their roles were to set standards for human behaviour, or to set the behaviour and powers of the gods apart from humans. Mortals seldom tried to act like gods, and when they did, they met with disastrous results. The characteristics of classical heroes then were by no means always drawn to be as polarized as Egan suggests. In our present time, the characters of Luke and Darth Vader, which were inspired by George Lucas’ conversations with Joseph Campbell, are further examples of this point. Luke is a hero with a mission. His adventures take him on a fantastic journey which is full of adventure and suspense in which many significant lessons about ethical behaviour are examined. However, we could not say, in any meaningful way, that Luke’s character is diametrically opposed to that of the villain Darth Vader. In fact, the moral of the tales is that the two characters are very much alike. The difference between good and evil is the difference between intentions, not character. Luke’s battle
is not just with the evil of the Federation; it is also the deeper battle within himself, fought around the knowledge that he is the son of Darth Vader. Like Luke, we are all Darth Vaders if we allow ourselves to be; however, with the right heroic ideas we can transform ourselves into Luke Skywalkers. We save ourselves in Star Wars, just as it was the Greeks whom Odysseus saved in the Homeric tale. Therefore, Egan’s description of binary opposites does not apply in all circumstances and cannot make the claim to be the underlying presupposition on which to base an epistemological theory about children’s thinking.

The theory of binary opposites also appears to contradict Egan’s intention to create a curriculum which provides more scope for fantasy and imagination (Egan, 1983a). This happens in a way that Egan has probably not envisaged. His prescription for a storytelling model based on binary opposites reads too much like a behaviourist model of expectations and results. One wonders whether the failure to pull apart a story in the appropriate way or to construct a story in a dramatically different way could result in a failure of expectations on the part of the teacher that would have the same kind of consequences for which he criticises traditional epistemological models. This isn’t so much a problem for Egan as it is for prospective administrators who might want to implement this format. Nevertheless, it is as a result of Egan’s strong epistemological claim about the nature of children’s thinking that this objection takes root.

The casting of human characteristics into direct opposites and using them as concepts to explain the development of human thinking is a dialectical model of a type not suited to Egan’s needs. Perhaps a way of saving Egan’s intentions to redefine the curriculum would be to mirror children’s thinking by reforming the epistemological basis of his dialectical model.

“Dialectic” is a slippery term. It has its origins in Greek philosophy and is defined as a method of seeking and sometimes arriving at truth by reasoning. However, there are examples of dialectic as historical process that are meaningful for this discussion. Kant used dialectical reasoning to expose the limits of human thought, that is, those thoughts that passed beyond the limits of experience. Hegel’s dialectic thesis, anti-thesis and synthesis set up a model to which most present analysis conforms. It can be said that this conception of dialectic as a process that arrives at higher truth through contradictions applies to Egan’s ideas. For Egan, like Hegel, the movement of ideas through this dialectical model appears to be a necessary and natural occurrence. For example, the story form encourages teachers to start from the binary opposites and arrive at a synthesis which is known as the story, complete with its conclusion. This type of dialectic bases its necessity on the contradictions being resolved and thus allowing for the progress of ideas. Therefore, there is an element of necessity here. It is not the element of necessity that prohibits this dialectical model from being applicable though. Rather, it is Egan’s insistence that the terms in the dialectical model contradict one another and
that this reflects the way children think that is the problem. If human thinking is not as confrontational as Egan has characterized it, then a model for describing how ideas progress that is founded on an opposition of ideas to achieve progress is not the appropriate one.

Another way of describing the way in which we think was developed by R. G. Collingwood. His theory was based on a lifetime commitment to the unification of different ways of thinking, for example history and philosophy. It should be noted that the use of the concept “history” in this paper does not necessarily denote the subject History. Rather, it denotes a way of looking at the world, and a way of uncovering meaning. The historical method that is referred to in these pages applies, and can be found, in all the various areas that encompass the social studies. For Collingwood the process of knowing was best exemplified by the way that historians like himself thought about the past. As such, it offers the possibility of a competing theory for Egan; and a different vision for social studies. It also has broad implications for the way that we teach.

Collingwood argued that we come to know about ourselves and others by understanding the importance of critical self-reflection. Once we know how our own minds work, then we can by analogy, start to understand how those around us think. Through schooling, the possibility of enlarging this type of thinking exists so that students can come to know the thoughts and ideas of people in the past. This activity is called re-enactment. “To know someone else’s activity of thinking is possible only on the assumption that this same activity can be re-enacted in one’s own mind. In that sense, to know ‘what someone is thinking’ (or ‘has thought’) involves thinking it for oneself” (Collingwood, 1968, p. 288). For Collingwood, the act of thinking is purposeful, and it represents the essential historical nature of human thought. It is possible on this account to rethink the thoughts of others first, because I know how my own mind works and second, because ideas can sustain themselves without a loss of identity (Collingwood, 1968). The point of this is Collingwood’s claim of a universality of thought, meaning “the way in which thought, transcending its own immediacy, survives and revives in other contexts” (Collingwood, 1968, p. 303). The ability to re-enact thoughts involves, “re-enacting it in himself, and in order that it may take its place in the immediacy of his own thought, his thought must be, as it were, pre-adapted to become its host” (Collingwood, 1968, p. 304). This process is possible only if one is capable of thinking the thought themselves. What one can do is ask questions about “why” something happened which will reveal something important about them and the idea, but in no way does this guarantee the uncovering of the “real” event.

When, as an historian, I relive in my own mind a certain experience of Julius Caesar, I am not simply being Julius Caesar; on the contrary, I am myself, and know that I am myself; the way in which I incorporate
Julius Caesar's experience in my own personality is not by confusing myself with him, but by distinguishing myself from him and at the same time making his experience my own. The living past of history lives in the present; but it lives not in the immediate experience of the present, but only in the self-knowledge of the present. (Collingwood, 1968, p. 174)

To return to Egan's claims that children's thinking should revolve around the study of stories that incorporate binary opposite concepts to mirror the child's knowledge of the world, Collingwood counters with the claim that it is possible for all of us to be able to think through the ideas of the present and past by applying the strictures of rational thinking that have been outlined above. The advantage of this approach is that it does not call for the abandonment of any subject matter, but rather a restructuring of the present system which would allow for students to learn about the past, but from a different perspective—that is, from the point of view of self-knowledge. It is here that Collingwood's thinking breaks from that of historians who see the possibility of discovering what really happened as a worthwhile enterprise. So too, one imagines, Collingwood would reject the mere recitation of "facts" for their own sake.

Collingwood's prescriptions can be seen most fruitfully as being inspired by what historians at their best can attain within his parameters of a unification of thought. This unification of thinking, as described by Collingwood, seems to be very much to the point as far as social studies is concerned. This would almost certainly include the Great Stories that Egan mentions and also the myths and legends from oral cultures. The only rule that need apply is that the thoughts to be studied can be understood or re-thought in our own words. This would place a heavy emphasis on the study of literature and language, most likely including rhetoric. It also stresses the importance of an appropriate pedagogical methodology. The break with the positivistic or technical language that Egan has criticised can best be made by asking questions that reflect this way of thinking. "Why" questions ask students to uncover the reasons for doing something. Traditional "how" and "what" questions ask students for technical expertise. The methodology here is extremely important, and curriculum which hopes to reflect this must incorporate different language sensitive to these changes.

What Collingwood's theory would reject is the imposition of concrete thinking, namely the seemingly structuralist conception of binary opposites suggested by Egan. A claim might also be made here that to impose the type of structure that Egan suggests is to fall back into the positivist camp that he has rejected. However, there is much good in what Egan calls for. The call to fantasy, to imagination and the shift away from a structured curriculum based on, and implied by, the factory model and technological language made by Egan are worthy of acceptance. The fault is that the language of analysis itself is not suited to the criticism and solution that he suggests.

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Collingwood's epistemology also has a different conception of the dialectical way in which ideas develop. The distinguished American philosopher Louis Mink stated that Collingwood is better understood if his theory is interpreted as a "dialectic of question and answer" (Mink, 1969, p. 132), and this has merit for the present discussion. Collingwood's dialectic, like all historical dialectics, allows us to retrace the process of thought. It is a backward series. It also possesses the possibility of becoming a process that allows one to trace the process of thought laterally. We may not want to make the same sort of claims about the certainty of thoughts in the present. We do not, after all, have as much evidence, nor as many intentions and motives laid out as we do when we look at the past. But then it may be that we should not feel that it is necessary to make these claims at all. Perhaps our certainty about our ability to make definite claims about human thinking is related to the positivistic language that we have for so long adopted. Nonetheless, we can say important things about the meaning of the actions of others in the present. In other words, we can say that on the basis of self-reflection, one can know why someone else did something. This type of analysis moves Collingwood into the hermeneutic camp, for the dialectic of question and answer is not about how to discuss, but rather how to reconstruct the ideas in the conversation.

The claim that the past should be interpreted within the context of a question and answer, together with the claim that the historian's (student's) mind must be actively involved sets up a different dialectical series than the one proposed by Egan. One of the major differences with this dialectic is that humans are directly involved in the series as active participants. The entire process of thinking is dynamic and ongoing. In the previous conception, Egan, Hegel, and Kant used the dialectic to reflect the development of ideas. These ideas were disembodied from the thinker and from the process of thinking. For example, when Egan proposes that a story be structured around the binary opposites of good and evil he assumes that these concepts are inherent in the minds of children. It is the teacher's role to dig them out and to ensure that the storytelling form conforms to that model. Egan is, in this way, describing and prescribing a theory to explain thinking without involving a child's active thinking mind.

In the alternative case, the dialectic is at one point a description of the development of ideas in the past, and at the same time a description of how we as humans think in the present. At both times the dialectic is a description of minds at work. The process of thinking, as described here, cannot take place without the active intervention of a mind. The answer to the particular "why" question asked by the student provides that student with the opportunity to learn more about him/herself and in the process to make an attempt to understand the links between the past and the present. This is not only possible, but an integral part of this dialectic, because it assumes that the process of rational thought is similar today to what it was in the
past. The answers are not to be judged as eternally right, nor right as conforming to a set of behaviourist expectations. Each answer is right, or wrong, on the basis of its specific question, and on its inherent logic. It is this insistence on the specific that stops this analysis from becoming relativistic. Each answer is constructed and stands on its own merits within the larger context of evidential claims that are recognized within the present curriculum. For example, if a student claims to interpret the thoughts of Caesar, one can legitimately ask for the reasons why and how this conclusion occurred. If the conclusion is based on faulty interpretation of evidence, e.g., Caesar did not say or do such a thing, then that conclusion is rejected. On the other hand, if the evidence supports the question, the student has every right to suggest that particular answer as a candidate for an explanation of the action. It may fail to meet that criteria, if another answer is more acceptable, but at least the student has undergone a rigorous logic lesson in how the human mind works. Most of these conclusions are similar to those used by practising social studies teachers. The difference is that this interpretation would join the usual curriculum requirements with Egan’s call for more direct use of fantasy, imagination, mythology, and rhetoric. Instead of a demise for social studies, a new revitalized conception arises which could easily fit into the curriculum as humanities or as an extended Great Readings course.

**Implications**

What are the implications for: first, a theory of children’s thinking; second, the shape and scope of social studies; and third, a pedagogy to teach any new epistemology? An epistemology of children’s thinking, based on the account given in this paper, must be one that centres on self-knowledge. It must also be centered around finding a synthesis of ideas in order to arrive at a conclusion. This paper argues that thinking is better understood if seen as a process rather than as an object to be studied. Any epistemology of children’s thinking must also be able to relate to the present through a dialectical series, a series which links the ideas of the past to the ideas of the present. Students are able to accomplish this because they initially ask “why” questions about the past. These questions, which are also asked by the teacher in designing lessons and curriculum, put the individual in the centre of the epistemological endeavour. The questions that are asked are those that are significant to the educator, to the community, and to the student. In order for this process to work well, it presupposes a caring or caritas on the part of the educational system. It is not enough that the questions come from the curriculum leaders and from those who are, so to speak, in the field. The questions must also be generated by the students both individually and as a group. The caring aspect of this theory is essential here so that all voices can be heard, because to understand implies that the individual is involved directly in the learning process. That is, it is the student who must “know”
about something. Knowing here implies the ability to relate ideas from the past to the present, and those ideas to other present ideas in a way that is acceptable educationally to the community and to educators at all levels.

Taking Egan's cue, one would want to include the telling of stories and the study of mythology. This element is crucial, because the telling of stories presents an excellent pedagogical tool or analogy of the way in which we learn and the way in which we think. Egan's insistence on story form has the right inspiration but the wrong philosophical foundation. It isn't that stories tell us the way that children see the world, in binary opposites as Egan suggest, because this turns the process of thinking into a product which can be measured and tested, very much like the factory model of thinking and education that Egan criticizes. The point is that the story form shows us that thinking is a process. It is an ongoing process in which we try to make sense of the present by asking questions that interest us in the here and now, based on the experiences of the past. It is true that sometimes these questions can be formulatedmeaningfully into the bipolar opposites that Egan suggests, but that does not mean that they can always be so formulated, and it certainly does not mean that this is the only way that children think.

Egan's well-made criticism of the expanded horizon concept of learning is a solid body blow at many social studies programmes. That many educators have created a false analogy between the known and the unknown is relevant to other subjects as well, but it bears particular emphasis in social studies, where the claim has been made that its mandate is the task of teaching children how to think as well as how to act. If social studies is to regroup itself along the lines suggested in this paper, then this analogy must clearly be discarded. However, the shift is, once again, more subtle than Egan suggests. If self-knowledge is seen as the centerpiece of the epistemological enterprise, then the move outward from what the student knows about his/her own mind to theorizing about the actions and ideas of others is a natural one which also takes into account fantasy and imagination. In fact, imagination would be a key component in any such exercise. Therefore, Egan's criticism is valid and can be incorporated within the structure suggested in this paper.

The last point to be raised on this issue has to do with the value of rhetoric in a theory of children's thinking. Egan suggests that rhetoric could serve a better purpose than much of what is now taught as social studies. The point might be better put that the ability to speak forcefully and meaningfully as the Greeks intended when they taught rhetoric could be incorporated into the description of social studies that is suggested in this paper. In fact the ability to think and speak effectively could be seen as key elements in the teacher's way of assessing whether any learning has taken place. It could be argued that the re-introduction of the school or class debate, in some modified form, would also enhance the success of this conception of social studies.
What is the scope of social studies then? Should it be abandoned in favour of a more structured curriculum of history and geography? It would seem unnecessary, given the above discussion, to abandon the enterprise of social studies. The history of the subject is noble and it has done what it was intended to do, namely to introduce to a generation of new Americans the essentials of the new world. What is necessary, though, is to restate the objectives of the subject. Instead of teaching that facts are eternal and that democracy is a quantity that can be learned through the memorization of a text, educators need to restate social studies’ objective as teaching that thinking is an historical process. If students know this, they will have a better chance of coping with the present by studying both the past and present, not as objects, but as an open set of “why” questions, each dialectically linked to the past and present through the social studies classroom. Social studies could then regain the focus it once had.

It would also seem unnecessary to split social studies into its constituent parts, whatever they might be. A strong argument could be made to teach social studies, as it is outlined in this paper, in the primary grades, or from K to grade 9. The high school years, grades 10 through 12, might be better served by a Great Books curriculum as Egan suggests or a course in the Humanities with options in the senior year for those students who might want to focus on a particular subject area in preparation for university studies. The idea behind this curriculum would be that the telling of stories and myths is well suited to the elementary classroom. The capacity for fantasy and imagination in children should, and could, be encouraged at this level, not to keep them busy, but to reinforce the patterns of thinking that most children seem to bring with them to school. The progression of the curriculum through the elementary system could be based on the present models of studying and comparing various societies. The difference would be the intent behind the curriculum. Or to put it another way, the curriculum would now be driven by a set of “why” questions in which students would endeavour to find out about themselves in reference to other contemporary societies and to societies of the past. One would hope that the cumulative effect of this knowledge on the students would be a meaningful discussion about the past in the classroom of the present. It would also be hoped that students would come to know themselves better, and so be able to make rational decisions about actions in their own lives. In other words, educators would be equipping their students with tools to make sense of the world about them; and through the study of rhetoric, to be able to voice their concerns and ideas in a meaningful way. In high school these same concerns could be addressed in the context of a Great Books course. What the context of this course would be, is another debate. Nevertheless, the high school years could build upon the foundations established in the elementary years. One would hope that the study of rhetoric and debate would be included here, whether or not the student intends to pursue a higher education. In a democratic society, this type
of equality should be essential to all. Specialization at the senior year, for those wishing to pursue it, would call for a reformulation, or at the very least a re-examination of questions like, "What is history," or geography, etc. It would be crucial here to carry on the study of the individual subject matters in the same context as it was begun in elementary years. Any possible objection to this based on the argument that the study of "history," say at the university, is not like this, could be answered by the reply that a new debate about what constitutes knowledge within a given subject matter would be most invigorating and interesting. One could guess that there are already many history classes in which the perception of knowledge is taught in the manner laid out above.

The last implication to be discussed is that of a new pedagogy to teach a new epistemology. If social studies is to teach children to think in the manner suggested in this paper then several points must be adopted.

First, as has been stated previously, the expanded horizons concept must be abandoned. In its place, students would come to know about how their minds work, and the criteria for logical thought. The next part in this exercise would be to reason about the way in which their classmates and neighbors think. An expansion of this type of reasoning will eventually lead to the study of past and present social groupings; thus the stated aim of most social studies curriculum would be fulfilled. In this case the pedagogical theory would revolve around the telling of stories, because these stories demonstrate how children use fantasy, imagination, and creative thinking to make sense of their worlds. Teachers could help in this process by reading these stories aloud, or reading classic myths to the class. The important point here is that the concepts of fantasy and imagination are central to the learning process, not a by-product of it. The role of the teacher, therefore, becomes one of helping students to realize that thinking is a process to be shared by all of humanity.

The second pedagogical tool that could be employed at all levels of education might be what Collingwood called the logic of question and answer. This technique centers on the realization that "why" questions are the crucial first step in the process of thinking. Educators could become familiar with the technique of asking these types of questions and steering away from the more traditional "how" and "what" questions that have dominated social studies curriculum in the past, and which are the old fortress walls of the model of thinking that this paper and Egan both criticize. Therefore, in teacher education and classroom instruction, much more care needs to be taken to listen to the creative voices of children and to build upon their fantasy and imaginative constructions, whether they are based on binary opposites or not. Much less emphasis should be laid on the accumulation of factual material for its own sake. Most historians choose their facts on the basis of the questions they ask about a particular problem in the past. So, too, students can learn that the technique of question and answer allows them
to be selective about the factual materials they "learn." In the process, they will come to understand that the so-called facts are really information about the way that people think. This, it would appear, makes much more sense than the random and relativistic memorization of masses of material.

A third implication for pedagogical theory has to do with source material. The textbook was established for many reasons, one of which was to establish a standard curriculum. The difficulty is that the text has come to be the ultimate statement of the content objectives of the curriculum. If this is so, then the hope of a renewed social studies is doomed to failure. No text, however good, can prescribe "the" way to allow students at any grade level to become self-knowledgeable. The best that a text can do is be an aid. Texts should be based on primary source materials because that allows students to come to their own conclusions about the questions they raise. Texts which purport to tell the whole truth, or which are based on secondary sources, hinder students' ability to use their imaginations to reconstruct the ideas on the past or present. More freedom must be given to individual teachers and to students to allow them to create new myths to live by and to use fantasy and imagination in their rational thinking.

Pedagogically, these points call for well-informed teachers. It becomes imperative for educators to be experts, in some sense, on the material they are about to teach. It becomes the teacher's responsibility to know what others have thought about the ideas presented to classes so that the students can make rational decisions "on their own" about the topic. It also becomes imperative that curriculum writers, textbook publishers, and university educators accept this challenge and equip prospective teachers for the task of teaching students how to think. This is no easy process but it is a challenging one that holds open for social studies a vibrant and creative future.

References


Kieran Egan's response, and Bryant Griffith's riposte, appear in this issue on page 227.
of schemata, that is, networks of ideas (Cornbleth, 1985; Glaser, 1984). For example, Figure 1 is a simple schema which organizes concepts related to productivity. Investment in productive resources (e.g., human capital) can lead to increases in productivity. Increases in productivity can lead to higher rates of return on resources invested and stimulate additional investment. Experts have more schemata than novices, and experts' schemata are developed more fully. As a result, experts' problem representations have more points of correspondence with the problematic phenomena than do novices' representations.

Domain-specific schemata provide useful ways of conceptualizing problems, and they enable expert problem solvers to perceive what knowledge is needed to solve a problem and to access information they already possess in their long-term memories. Simon (1980) described this function of schemata in terms of indexing and cross-referencing a knowledge base held in long-term memory. Consider again the productivity schema shown in Figure 1. An expert who has knowledge "indexed" in terms of "investment in capital resource" will remember definitions, examples, particular cases of capital investment, various constraints on capital investment, political controversies involving capital investment, and much more. Even more importantly, an economic expert's knowledge of investment in capital goods will be "cross-referenced" with other knowledge. For example, an expert will also think of investment in research and development and its relationship to capital investment. He or she might also note the interdependence between the quality of human resources and the effective use of particular kinds of capital. Further, the expert might address the impact of government economic intervention in the form of tax rates and credits on rates of return which could affect the amount and value of capital investment.

A novice's list of economic concepts related to productivity would not be nearly as helpful in thinking about productivity problems as an economic expert's schema. Voss et al. (1983) observed that novices often did not use all the relevant knowledge that they possessed. The lack of adequate schemata is part of the reason their knowledge was not accessed. Domain-specific schemata are critical for effective thinking in economics or any other domain.

**Metacognitive Knowledge**

Another cognitive difference between experts and novices is their metacognitive knowledge. Metacognition refers to several phenomena: (1) knowledge of what one knows about particular subjects and when and how to use that knowledge; (2) knowledge of general strategies for thinking, the so-called "weak" methods; and (3) knowledge of how to manage one's thinking, sometimes called cognitive self-management strategies (Nickerson, 1988). Metacognitive knowledge is less domain-specific than the types of knowledge previously discussed and is potentially applicable in a wider variety of contexts.
The first dimension of metacognitive knowledge focuses on the problem solver’s awareness of what he or she knows about a subject and the relevance and applicability of that knowledge for understanding the phenomena under consideration. This is sometimes called conditionalized knowledge (Bransford, Franks, Vye & Sherwood, 1986). For example, when one hears the quarterly sales and earnings reports of General Motors, Ford, and Chrysler, does the investment-productivity schema come to mind to help explain the relative performances of these corporations? If the local Little League fund-raising barbecue consistently does not generate enough income, is this problem articulated as a problem of insufficient productivity? If a problem solver knows that the investment-productivity schema, among others, is relevant to understanding such phenomena, then he or she possesses conditionalized knowledge about investment and productivity.

The second dimension of metacognitive knowledge is declarative and procedural knowledge of general ways to think about issues, decisions, and problems. Such general cognitive strategies are often called “weak methods” in contrast to “strong” domain-specific methods (e.g., cost-benefit analysis), because they do not depend on much domain-specific knowledge and do not lead to solutions with as much certainty as domain-specific procedures (Nickerson, 1988). However, general problem-solving strategies are applicable in a wide variety of problem-solving contexts across subject domains.

Newell (1980) identified a variety of general problem-solving strategies: generate and test, climb hill, search with heuristics, analyze means-ends, match, hypothesize and match, and satisfy constraints. In the Voss et al. study (1983), “decompose” was a frequently used strategy; most subjects divided the Soviet agricultural productivity problem into several subproblems and addressed them separately. Nickerson (1988) identified more: work backwards, test extreme cases, and set goal. Although experts and novices use general cognitive strategies, the choices of strategies vary and utilization of strategies with domain-specific procedures differs.

The third dimension of metacognitive knowledge is cognitive self-management. In the context of the Soviet agriculture problem (Voss et al., 1983), experts demonstrated the ability to manage their thinking in several ways. First, after stating the problem, they did not immediately begin to generate solutions. Instead, they considered the context of the problem, historically or politically, and assessed various dimensions of the problem. Second, they evaluated their tentative solutions in terms of feasibility and probable effectiveness; novices seldom did more than state solutions. Third, experts identified new subproblems or converted constraints to subproblems during the process of evaluating tentative solutions, which led to revision of their problem representations and to other solutions. Presumably, such metacognitive strategies could be taught to problem solvers. There is nothing domain-specific about these problem-solving strategies; they indicate the
general ability to manage one's own thinking (Bransford, Vye, Adams & Perfetto, 1989).

To summarize, domain-specific knowledge is composed of declarative and procedural knowledge. Aspects of this knowledge are organized as schemata (i.e., networks of ideas). The components of the schemata serve as an index which organizes additional information stored in long-term memory. The relationships of the schemata serve to cross-reference knowledge in memory. Conditionalized knowledge, one aspect of metacognitive knowledge, enables people to access and apply domain-specific knowledge and procedures (i.e., "strong methods") when needed. General thinking strategies, another aspect of metacognitive knowledge, enable people to structure problem-solving efforts and to identify tasks which domain-specific knowledge can help to accomplish. Cognitive self-management strategies, the third aspect of metacognitive knowledge, enable people to monitor and evaluate the effectiveness of their problem-solving efforts and to refocus those efforts when necessary. See Figure 2 for a schematic representation of this problem-solving process.

Figure 2
Knowledge for Problem Solving
Bounded Rationality, Collective Rationality, and Cooperation

The social context in which higher-cognitive thinking skills are learned and used must be considered. The concepts of bounded rationality, collective rationality, and cooperation are important in this regard. Simon (1957) first articulated the conception of "humans as boundedly rational." According to Simon, humans possess only modest potential for rational thinking, because they have insufficient information processing and short-term memory capacities to formulate and solve most real-world problems. Consequently, an individual constructs greatly simplified models of the world that necessarily omit much of the available data. Although a person attempts to think and act rationally with these models, the effectiveness of the actions is only moderate at best because of the reduced complexity of the models compared to the actual situations. These cognitive limitations, especially for novice problem solvers, make problem solving very difficult.

Shulman and Carey's (1984) conception of "humans as collectively rational" incorporated Simon's boundedly rational perspective and developed the social context of rational thinking. People are boundedly rational; however, their individually insufficient information-processing and short-term memory capacities can be coordinated. Coordination enables individuals to construct shared models of the world which are more valid than models the same people could construct individually. Rational human thought and action based on cooperatively produced models tend to be more effective because the complexity of real-world situations is represented more adequately. Considerable instructional research over the past 20 years has focused on cooperative learning groups. The findings of that research provide a basis for designing instructional groups to facilitate acquisition of higher-cognitive thinking skills.

According to Slavin (1983), two major dimensions of cooperative, instructional work groups are the incentive structure and the task structure. A group's incentive structure refers to the means by which students are motivated to perform their tasks. For example, rewards for performance can be distributed to individuals or to groups as a whole. Group members may or may not be held individually accountable for their contributions to the group's product. A group's task structure refers to the way in which the group's activities are organized to produce the group's product. For example, the task may be broken down into individual tasks for each group member to perform, or two or more group members may address the same task. Manipulation of the incentive and task structures of problem-solving groups can increase the likelihood that students will work together in ways that coordinate their intellectual abilities, thus creating a collective rationality to solve a problem.

Two major features characterize effective cooperative instructional groups. First, the incentive structure is characterized by the distribution of group rewards under the condition that each individual member of a group is in-
dividually accountable to the group for his or her own performance (Slavin, 1983). Since the group reward is a function of each group member's performance, group members tend to monitor each other's contributions to the group effort, encourage each other to perform well, and provide assistance to each other when needed (Slavin, 1983).

Second, individual accountability can be arranged in two ways through the task structure. One way is to require each member of the group to perform essentially the same task as all the other group members (i.e., an unspecialized task structure) and base the group reward on the sum of the group members' individual performances. For example, students in an instructional group state and represent a problem together. Then, they are individually evaluated to assess their understandings of the problem. Each individual receives an evaluation score and the group's reward is based on the sum of their evaluation scores.

A second way that individual accountability can be arranged through the task structure is to require each group member to perform a different task (i.e., a specialized task structure) and base the rewards, whether to the group or to individuals, on the coordination of the individual contributions into a whole. For example, in a cooperative learning group students can study different aspects of a topic which they teach to each other prior to a test they each take individually over all the topics. In a cooperative problem-solving group, students can study particular constraints or subproblems, teach each other about their special responsibilities, and keep those factors effectively available for group consideration as needed. The interdependence of the group members encourages cooperation, whether the reward is to the group or to the individuals. The possibility of collective rationality depends on creating both a sense of interdependence and individual accountability. Cooperative learning research provides some approaches which should be transferable to the teaching of higher-cognitive skills.

Criteria for Instruction on Higher-Cognitive Skills

Criteria for developing and evaluating instructional programs designed to teach higher-cognitive skills can be derived from the discussion of the types of knowledge needed for effective problem solving and findings of cooperative learning research. An effective instructional problem-solving program should teach domain-specific knowledge and procedures in the context of solving problems or answering questions. Evidence exists that knowledge acquired in the process of attempting to solve domain-specific problems is stored in long-term memory more effectively and is more accessible than knowledge acquired apart from problem-solving activities (Bransford, Franks, Vye & Sherwood, 1986). In addition to teaching basic historical and social scientific knowledge, students should be taught explicitly to develop schemata to organize their knowledge coherently to promote retention and to make that knowledge more accessible through the cross-referencing function of schemata
(Bransford, Sherwood, Vye & Rieser, 1986). Using knowledge to solve problems requires the articulation of connections between various aspects of one’s knowledge base and highlights the relevance of particular knowledge to important problems or issues in a field.

Metacognitive knowledge and skills should be taught in the context of domain-specific instruction. Students should be taught explicitly how historical and social scientific ideas are related and when and how they can be used to solve civic and personal problems (Bransford, Vye, Adams & Perfetto, 1989). A critical aspect of conditionalized knowledge is the ability to perceive and categorize a problematic situation as a particular type of problem, for example, a productivity problem (Bransford, Franks, Vye & Sherwood, 1986). Such conditionalized knowledge is acquired through experience solving problems; however, explicit instruction facilitates the process.

General thinking strategies can be fitted to domain-specific contexts. Students will benefit by considering alternative strategies when they think critically, analyze issues, or solve problems. For example, the general problem-solving strategy advocated by the Joint Council on Economic Education (Saunders et al., 1984), is the “satisfy constraints” model, which is particularly useful when making a choice among a set of alternative actions to achieve a given goal. However, it is less useful when attempting to answer a question about the nature of the empirical world; the “generate and test” strategy is likely to be more effective.

Students also need to be taught to incorporate domain-specific knowledge and procedures into the general strategies (Perkins & Salomon, 1989). For example, it is helpful to decompose the Soviet agriculture problem into political and productivity subproblems. However, if one does not perceive the relevance to the problem of one’s knowledge and skills regarding productivity, problem solving is impeded seriously. Cognitive self-management skills should be taught explicitly. For example, students should be taught the benefits of exploring a problem’s historical and contemporary social contexts and representing the problem in different ways (e.g., economic, political, sociological, technological) before formulating solutions.

Problem-solving performance responsibilities should be transferred systematically from the teacher to the student. One approach to this task is to provide students with practice using knowledge and procedures in a variety of contexts (Bransford, Vye, Adams & Perfetto, 1989). For example, productivity problems can be addressed in terms of personal problems, informal group decisions, business settings, and societal issues. A second approach is cognitive apprenticeship (Collins, Brown & Newman, in press; Nickerson, 1988). Cognitive apprenticeship is a process of modeling skillful problem solving, coaching students as they attempt to solve problems using domain-specific knowledge and procedures as well as metacognitive knowledge and strategies, and decreasing the level of teacher guidance so
students have increasing responsibility for their problem-solving performances.

To summarize, seven criteria to assess the quality of instructional programs designed to teach higher-cognitive skills in social studies education are derived from information-processing research on problem solving. (1) Teach historical and social scientific knowledge in the context of analyzing problematic situations. (2) Teach students to construct or acquire schemata that coherently link historical and social scientific knowledge internally and with personal, civic, and subject matter problems. (3) Teach students to recognize the relevance and use of historical and social scientific knowledge in analyzing and resolving particular kinds of personal, civic, and subject matter issues (i.e., conditionalize knowledge). (4) Explicitly teach general cognitive strategies to guide students' higher-cognitive thought and to facilitate their application of historical and social scientific knowledge. (5) Combine general cognitive strategies from the beginning of instruction with in-depth historical and social scientific subject matter knowledge. (6) Provide students with opportunities to use the general cognitive strategies and historical and social scientific knowledge in a variety of settings (e.g., personal, business, school, community). (7) Transfer responsibility from teachers to students for applying higher-cognitive skills systematically through a sequence of modeling, coaching, and fading.

Another criterion derived from research on cooperative learning is: (8) Organize students into cooperative groups to coordinate their intellectual resources and partially compensate for their limited individual information-processing capacities. Students who work in well-structured small groups are likely to represent problems more effectively, identify more potential solutions, and evaluate those solutions more thoroughly. Several students working on a problem together are less likely to lose track of important factors than individuals working alone. Not only are more information and perspectives available for evaluating solutions, opportunities for a productive division of labor occur. Certain group members can be assigned to play devil's advocates regarding particular solutions to prompt more thorough consideration of the consequences. A problem-solving group can debate the merits of proposed solutions. In these kinds of discussion, solutions are likely to be tested more thoroughly than they would be by individuals working alone, and problems in implementing the solutions are more likely to emerge.

Criteria Applied to Instructional Programs

The criteria articulated above may be used to assess the strengths of instructional programs designed to teach higher-cognitive skills. Three programs developed and used in social studies are the economic reasoning model of the Joint Council on Economic Education, Barry Beyer's Thinking Skills Program, and the jurisprudential model of the Harvard Social Studies Project. Comparing and contrasting the three programs clarifies the use of the instructional criteria and helps identify questions for further consideration.
The Joint Council on Economic Education articulated its model for economic reasoning along with suggestions for teaching in *A Framework for Teaching the Basic Concepts* (Saunders et al., 1984), first published in 1977 and then revised in 1984. The model is composed of five major components.

1. State the problem or issue. 2. Determine the personal or broad social goals to be attained and used as evaluative criteria. 3. Consider the principal means of achieving these goals. 4. Select the economic concepts needed to understand the problem and use them to appraise the merits of each alternative. 5. Decide which alternative best leads to the attainment of the most goals or the most important goals. (Saunders et al., 1984, pp. 6-7)

Several million dollars have been spent on implementing the model through sets of instructional materials, such as *Trade-Offs* (Agency for Instructional Television, 1978), *Give & Take* (Agency for Instructional Television, 1982), and *Income-Outcome* (Agency for Instructional Technology, 1986). The economic reasoning model as operationalized in these three programs is critiqued in the sections which follow.

Barry Beyer, long an advocate and developer of social studies instruction for higher-cognitive thinking skills, has conceptualized and operationalized a multi-grade, school-wide thinking skills program in two books, *Practical Strategies for the Teaching of Thinking* (1987) and *Developing a Thinking Skills Program* (1988). Beyer's program requires the articulation of various thinking skills (i.e., strategies, critical thinking skills, and micro-thinking skills) in terms of their cognitive and metacognitive operations, knowledge related to their use, and personal dispositions needed to apply the operations effectively. The instructional framework he recommends has six phases: (1) introduction; (2) guided practice; (3) independent application; (4) transfer and elaboration; (5) guided practice; and (6) autonomous use. The critique which follows is based on Beyer's explanation of his model in the two books; published curriculum materials are not the goal of his school-based program.

The jurisprudential approach to social studies education asserts that the multicultural nature of our society and our form of representative democratic government guarantee that public conflict and political controversy will dominate as a major feature of our collective lives as citizens (Newmann & Oliver, 1970; Oliver & Shaver, 1966). Since the central purpose of social studies is preparation for citizenship, the jurisprudential approach is promoted as a missing essential ingredient in traditional secondary social studies courses. The jurisprudential approach to the resolution of public issues is based on an analytical model composed of a conceptual framework and several intellectual and discussion processes. Students are taught to analyze moral-value conflicts, definitional issues, and questions of fact and explanation through study and discussion of historical and contemporary public issues. The development of the analytical model and its trial implementation resulted in a set of curriculum materials known as the Harvard Social
Studies Project. The jurisprudential approach, as articulated in the two books noted above and operationalized in the Harvard Social Studies Project materials, is critiqued below.

Criterion 1. Teach historical and social scientific knowledge in the context of analyzing problematic situations. The jurisprudential approach rates high on this criterion. Students encounter much subject matter knowledge to learn in the process of articulating and resolving controversial public issues. From the beginning of a jurisprudential program, efforts to promote thinking about public issues are grounded in contemporary and historical events (e.g., the Civil Rights struggles of the 1960s, the Boston Tea Party, the Trail of Tears) and the analytical use of social science concepts.

Beyer believes that problem-solving skillfulness and other higher-cognitive skills lead to more effective learning of subject matter knowledge. However, he discourages teachers from teaching substantial amounts of new subject matter when thinking skills are being introduced and learned, because he believes intellectual skill learning and knowledge acquisition will interfere with each other. However, after intellectual skills are learned to satisfactory levels of proficiency, Beyer recommends that subject matter be introduced as data for use in higher-cognitive thinking.

In contrast to the other two programs, the Joint Council on Economic Education articulates no position on whether economic knowledge should be taught in a problem-solving context, even though the Council strongly recommends that students learn to apply economic knowledge in making personal and civic decisions. In practice, economic ideas often are presented in the context of solving problems, as evidenced in approximately 70% of the episodes and computer programs in the \textit{Trade-Offs, Give & Take,} and \textit{Income-Outcome}\$ series (VanSickle, 1989).

Criterion 2. Teach students to construct or acquire schemata that coherently link historical and social scientific knowledge internally and with personal, civic, and subject matter problems. This criterion is not met satisfactorily by any of the programs. None of them takes a clear position on knowledge organization. Joint Council on Economic Education instructional materials occasionally present schemata, principally as models of the circular flow of economic activity and supply and demand graphs. Beyer does not mention schemata, although he occasionally uses them in his books.

Criterion 3. Teach students to recognize the relevance and use of historical and social scientific knowledge in analyzing and resolving particular kinds of personal, civic, and subject matter issues (i.e., conditionalize knowledge). The jurisprudential approach is consistent with this recommendation. The whole point of the jurisprudential approach is for students to internalize the analytical model and relevant historical and social scientific knowledge for future citizenship use. Students are supposed to perceive that basic value issues recur over time in the context of specific public issues, that knowledge of past occurrences can help citizens understand and resolve new manifesta-
tions of the basic issues, and that systematic thought and discussion can lead to constructive resolutions of specific public issues. Despite the intention to teach for transfer, research on the jurisprudential approach reported by Oliver and Shaver (1966) indicates that students experienced difficulty applying the analytical model to new issues.

Conditionalizing subject matter knowledge is not part of the Joint Council on Economic Education economic reasoning model or the recommended instructional procedures. Numerous examples and settings (e.g., business, school, family) are used to teach economic concepts and principles, particularly in the *Trade-Offs* series, which can help to conditionalize knowledge. However, students are not required to articulate conditionalized knowledge.

Beyer does not address systematically the utility of subject matter knowledge for problem solving. However, he recommends that students be taught to understand the utility of specific higher-cognitive skills and to recognize situations when higher-cognitive skills can be applied usefully. In Beyer's scheme, intellectual skills are conditionalized, but the conditionalization of subject matter knowledge is not addressed. Like the economic reasoning model, Beyer's program does not meet this criterion.

**Criterion 4. Explicitly teach general cognitive strategies to guide students' higher-cognitive thought and to facilitate their application of historical and social scientific knowledge.** All three programs clearly meet this criterion. Beyer recommends that three general cognitive "strategies" be taught explicitly: problem solving, decision making, and classifying. Beyer's terminology differs from that used in this paper to articulate the higher-cognitive instructional criteria. However, he clearly focuses on students' general application across subject fields of various intellectual procedures of varying scope (e.g., "strategies" versus "micro-thinking skills").

The economic reasoning model is an example of the "satisfy constraints" general problem-solving strategy (Newell, 1980). This general problem-solving strategy is featured in most JCEE instructional materials and is especially appropriate for analyzing policy issues. However, its operationalization in instructional materials is highly variable. The "satisfy constraints" strategy was heavily emphasized in *Trade-Offs*; introduced, but used little in *Give & Take*; and emphasized, but confused with the "generate and test" strategy in *Income-Outcome* (VanSickle, 1989).

The jurisprudential approach is concerned primarily with the clarification of evaluative and legal issues. Students are taught how to clarify value commitments, to justify value positions, to resolve definitional disagreements, and to judge the validity of factual claims. Taken together, these operations form a general strategy for analyzing historical and contemporary public issues using historical and social scientific knowledge.

**Criterion 5. Combine general cognitive strategies from the beginning of instruction with in-depth historical and social scientific subject matter
knowledge. An instructional program might introduce new subject matter knowledge in the context of higher-cognitive thinking tasks (see the first criterion), but not combine the new subject matter with a new general cognitive strategy. This criterion focuses on the combination of new general strategies with new, in-depth subject matter knowledge. It is based on the claim that students will learn general cognitive strategies and subject matter knowledge more effectively if taught together from the beginning.

As previously discussed, students in a jurisprudential instructional program learn substantial amounts of new subject matter knowledge at the same time they learn new intellectual strategies. The jurisprudential approach meets this criterion satisfactorily. Also, as previously noted, students in Beyer’s thinking skills program work with little subject matter when learning a new intellectual skill. Beyer’s program intentionally does not meet this criterion. Further, he does not describe how to integrate new subject matter and previously learned general skills; the unarticulated linkage between thinking skills and subject matter knowledge is a weak dimension of Beyer’s program.

The Joint Council on Economic Education presents examples in A Framework for Teaching the Basic Concepts (Saunders et al., 1984) in which several substantive concepts are used simultaneously in learning and applying the economic reasoning model. However, in practice the application of the economic reasoning model tends to be content thin, that is, only one economic idea must be applied with no increasing levels of sophistication. For example, in the Trade-Offs series, four episodes focus on productivity, with individual episodes devoted to problems involving particular ways to increase productivity (i.e., specialization, capital investment, educations, and training). Students are not required to solve a productivity problem in which alternative means of increasing productivity must be compared and evaluated (VanSickle, 1989). The clear goal is to integrate substantial amounts of economic knowledge with the economic reasoning model; however, the materials tend not to require that integration. Consequently, the economic reasoning model does not meet this criterion.

Criterion 6. Provide students with opportunities to use the general cognitive strategies and historical and social scientific knowledge in a variety of settings (e.g., personal, business, school, community). The jurisprudential approach meets this criterion within the domain of public issues. Students apply the jurisprudential framework and key historical and social scientific ideas to a wide variety of historical and contemporary political problems which manifest recurring basic public value issues. The Joint Council on Economic Education programs provide insufficient opportunities to use particular economic knowledge repeatedly to make decisions in various settings. Trade-Offs does a fair job in providing alternative settings (e.g., productivity applications), but Give & Take and Income-Outcome do not (VanSickle, 1989). Teachers are encouraged to require students to use the economic reasoning
model frequently to develop skillfulness; however, they are not encouraged similarly regarding the repeated use of economic ideas. Beyer’s program also does not meet this criterion. He does not discuss different settings systematically even though he recommends that students extensively practice general strategies.

 Criterion 7. Transfer responsibility from teachers to students for applying higher-cognitive skills systematically through a sequence of modeling, coaching, and fading. Beyer recommends a systematic process of transferring responsibility for the use of higher-cognitive skills from teachers to students. Beyer observes that people do not transfer their knowledge and skills easily or efficiently and that extensive instructional effort is needed to enable students to utilize their newly-acquired thinking skills in more than one subject area and in out-of-school contexts. Beyer designed the sequence of activities in his instructional framework with this difficult transfer task clearly in mind: (1) introduction; (2) guided practice; (3) independent application; (4) transfer and elaboration; (5) guided practice; and (6) autonomous use. Beyer’s program meets this criterion very well.

Modeling, coaching, and fading are not explicit parts of the instructional recommendations for teaching the Joint Council on Economic Education economic reasoning model. *Trade-Offs* does a fair job of modeling and coaching (six of 15 episodes), but *Give & Take* and *Income-Outcome*§ do not (VanSickle, 1989). The Joint Council on Economic Education does not present or apparently utilize any particular set of conditions that must be met for transfer of knowledge and skills to occur. Similarly, the jurisprudential approach contains no systematic process to transfer responsibility for the use of the analytical model through such techniques as modeling, coaching, and fading. Neither program satisfies this criterion.

 Criterion 8. Organize students into cooperative groups to coordinate their intellectual resources and partially compensate for their limited individual information-processing capacities. None of the programs systematically considers the use of well-structured, cooperative groups. In all three programs, whole class discussion is recommended and illustrated; small group work is acceptable or required. However, no recommendations are made for structuring these interactions to promote particular intellectual operations or cooperative interaction. The use of decision-making charts in the economic reasoning program and systematic discussion in the jurisprudential approach implicitly acknowledges students’ limited information-processing capacities; however, social interaction and group decision making are presumed to be sufficiently productive without special effort. Teachers could modify the nature of assignments and the reward system to incorporate cooperative learning techniques, but the programs’ authors have not recommended this. The three problem-solving instructional programs do not meet this criterion.
Conclusion

The analyses of the social studies thinking skills programs in light of information-processing research on problem solving and research on cooperative learning reveal several areas which need attention. To what extent can students learn general cognitive strategies at the same time they are learning substantial amounts of new subject matter knowledge? Beyer is emphatic that trying to do both simultaneously is a mistake. His position is very plausible given the easily observable severe limitations of human information-processing capacities (i.e., short-term memory). Proactive and retroactive interference effects when learning new information are well documented (Gage & Berliner, 1974). On the other hand, some evidence exists that intellectual skills, particularly problem-solving skills, are a function, at least in part, of domain-specific knowledge (Glaser, 1984). There is also evidence that problem-solving skills must be contextualized in relation to particular subject matter knowledge in order to be utilized in new, non-instructional settings (Salomon & Perkins, 1989). One’s response to this question has major instructional implications.

The question needs to be articulated more fully, because the answer may vary with other variables, such as subject matter. For example, as a body of knowledge, mathematics contains a high proportion of procedural knowledge which might allow the teaching of new general problem-solving skills and new subject matter to proceed together effectively. Social studies subjects are characterized by high proportions of declarative knowledge which might reduce the effectiveness of teaching new problem-solving skills with new subject matter. In addition, there might be important consequences of the different conceptual structures of social studies subjects, such as history and economics. Much more conceptual and empirical research is needed to answer this question.

The analyses of the three social studies thinking skills programs show virtually no attention to schematic knowledge. Recently, “knowledge maps” have begun to attract interest as more educators attempt to articulate and represent cognitive structures (Dansereau, 1989). In an analysis of critical thinking, Brandhorst (1989) made a persuasive case that a reflective understanding of subject matter concepts and relationships (e.g., political-economic schemata of presidential campaigns) are a necessary condition for the conscious consideration of logical problems in communications (e.g., campaign advertisements). Without appropriate schematic knowledge structures linked to relevant perceptions of the world, higher-cognitive thought processes (e.g., critical thinking) will not occur and cannot be learned. The role of schematic knowledge might be even more important than suggested in the previous discussion of criteria for assessing instructional programs to teach higher-cognitive skills.

Another unresolved issue highlighted by the instructional criteria and the program analyses is the perennial curricular conflict of breadth versus depth.
(Newmann, 1988). It appears necessary to use subject matter knowledge and general cognitive skills in a variety of contexts to conditionalize the subject matter knowledge and enable learners to transfer their intellectual skills to new situations where there is no teacher to prompt learners. This instructional condition tends to favor the “depth” position in the debate over how best to select and organize subject matter in the curriculum. In light of this implication and the stress toward broad content coverage in middle and high school social studies courses, it might not be feasible to teach higher-cognitive skills in most social studies courses. This issue is particularly difficult because it is both an instructional/curricular issue and a political issue in many local and state school systems.

More empirical research is needed on cooperative learning as it applies to teaching and learning higher-cognitive skills. Newmann and Thompson (1987) and Slavin (1989) reviewed research on the academic effects of cooperative learning. They concluded that instruction utilizing cooperative small groups characterized by group rewards with individual accountability is generally more effective than more conventional, whole-class instruction. However, most of the studies reviewed focused on lower-cognitive instructional outcomes (i.e., knowledge, comprehension, simple application). Cooperative instructional techniques, such as Group Investigation (Sharan & Sharan, 1976), have been studied with encouraging findings. However, the knowledge base for higher-cognitive outcomes is thin. More research and development efforts are needed to clarify the extent to which the conclusions based on the larger cooperative learning data base apply to higher-cognitive outcomes.

Teaching students to think systematically about personal and civic problems and issues is an important, persistent goal of social studies education. Recent research efforts in cognitive psychology and cooperative learning provide new ways to conceptualize the task and formulate instructional programs. Beyond the scope of this paper, research on affect and “dispositions” in higher-cognitive thought is opening another important dimension of the topic (Brandhorst, 1989; Newmann, 1989; Prawat, 1989; VanSickle, 1990). Also, other research efforts focused on the school settings in which teachers and students attempt to achieve higher-cognitive instructional goals are beginning to clarify why some schools are more effective than others in teaching students to analyze problems and issues in the social studies (McKee, 1988; Newmann, 1989, in press a, in press b; Onosko, 1989). Current research gives us reason to believe that increasingly effective means to teach higher-cognitive thinking skills to young citizens will be developed in the foreseeable future.

References


A recurrent theme in the literature on the purposes and goals of social education is that university-based theorists and classroom teachers hold different and somewhat contradictory views. Recently, for example, Leming (1989) described the views of these two groups of social educators as representing two different cultures. He depicted theorists as oriented toward social amelioration and change but teachers as oriented toward tradition and stability, theorists as favoring countersocialization but teachers as favoring socialization, and theorists as viewing citizen education as the unique function of social studies and favoring critical thinking as the method, but teachers as viewing the teaching of particular content as the unique function of social studies and favoring didactic instruction as the method. He concluded that the goals of social education would be better served if each group developed more sympathy for the concerns of the other. In particular, he called for social education theorists to become more knowledgeable about and responsive to the social and political pressures faced by teachers.

Earlier comparisons of the views of social education professors and teachers have also focused on differences rather than similarities (Mehlinger & Davis, 1981; Shaver, 1987; Stanley, 1985). Brophy (1990) summarized these findings as follows. Elementary teachers usually are oriented more toward students
than subject matter, and they typically favor a citizenship training emphasis, teaching of a broad range of facts, and inculcation of traditional and locally favored values. In contrast, professors tend to place more emphasis on concepts and generalizations drawn from the disciplines, addressing less content in greater depth and with more emphasis on application, and a critical stance toward values and traditions. Professors tend to criticize teachers for relying too much on textbooks, teaching isolated facts and skills without enough emphasis on coherent conceptual structures and application opportunities, being overly accepting of textbook content as valid, teaching in ways that inculcate uncritically positive attitudes toward national policies and the status quo, and being overly pessimistic about what their students are capable of learning. Teachers tend to criticize professors for being too academic and middle class in their orientation, overemphasizing generalizations from the social sciences that can be substantiated or proven while underemphasizing humanistic or value elements and content that is important in the students' lives or currently in the news. Teachers also see professors as underemphasizing the need for direct teaching and a strong base of concepts and factual information before undertaking problem solving, and overemphasizing experimentation, inquiry/discovery exercises, and other activities that are either impractical for classroom use or not worth the time and trouble that they require.

This article extends and focuses the existing literature on professor vs. teacher comparisons in three ways: (1) It focuses specifically on the elementary grades; (2) it compares the views of professors and teachers who are knowledgeable about both social education theory and the realities of teaching in the elementary grades; and (3) by adding contemporary data, it presents opportunities to identify which issues have endured and which have faded since the 1970s (when most of the existing data on the topic were collected).

**Procedures**

Two panels of experts were recruited for the study. One consisted of three internationally recognized scholarly leaders in social education who are also particularly knowledgeable about elementary-level curriculum and instruction. Within these criteria, panelists were selected to represent different social studies disciplines (history, geography, and the social sciences) and philosophical positions on the nature and purposes of social education (preparing students to function as citizens in a democracy, teaching basic information about the social world, teaching social science principles and applications).

The second panel consisted of three elementary teachers who impressed leading social education scholars as being outstanding at teaching social studies for understanding and higher order applications. To identify such teachers, we called scholarly leaders in social studies at universities all around the country (including those who were being recruited for participation in
the study) to describe the kinds of teachers we were seeking and to ask for nominations. We then contacted nominated teachers by phone and interviewed them concerning their educational backgrounds, teaching experience, and ideas about goals and methods for teaching social studies. Discussion of this information eventually yielded three prioritized short lists of nominees, one for teachers whose background experiences were concentrated in the primary grades, another for teachers representing grades three and four, and a third for teachers representing grades five and six. We then called the top-listed teachers to recruit their participation in the study, and were gratified to find that all of our first choices agreed to participate (this was true of the professors as well). Coincidentally, each of these three teachers had been nominated by one of the professors interviewed for the study.

The experts were asked to provide two sources of data, identified to them as Part I and Part II of the study. Part I called for written responses to several sets of questions. The first set concerned features of ideal curricula designed to teach elementary social studies for understanding and application. Our own prior literature review (Brophy, 1990; Prawat, 1989) had identified the following as key features of such programs: (a) balancing breadth with depth by addressing limited content but developing it sufficiently to ensure conceptual understanding; (b) organizing the content around a limited number of powerful ideas (basic understandings and principles rooted in the disciplines); (c) emphasizing the relationships between powerful ideas, by both contrasting along common dimensions and integrating across dimensions, so as to produce knowledge structures that are differentiated yet cohesive; (d) providing students not only with instruction but also with opportunities to actively process information and construct meaning; and (e) fostering problem solving and other higher order thinking skills in the context of knowledge application, thus focusing less on thinking processes per se and more on how to make use of previously acquired knowledge in new contexts. To get the panelists started, the instructions asked them to critique these five suggestions about key features of ideal curricula and to add additional suggestions of their own.

The remaining sets of questions for Part I were related to curriculum design exercises in which the panelists were asked to pretend that they were acting as consultants assisting the staff of a local school in developing curriculum and instruction relating to the following three goals: (a) citizenship education, defined as developing an understanding of and appreciation for our form of (federal) government; (b) developing an understanding of human-environment relationships, as shown for example in the relationships between a region's climate or natural resources and the customs or occupations of its people; and (c) developing respect for the values and lifestyles of others, which includes the goal of becoming more knowledgeable about and appreciative of the history and customs of people in other parts of the world. For each of these three goals, the panelists were asked to: (a) identify the
central understandings and generalizations that should be developed; (b) identify the relationships among these central understandings and generalizations; (c) organize these as they would present them to the students; (d) explain this organization; and (e) describe how one of these would be taught at the second- and at the fifth-grade levels.

Part II called for the panelists to critique the 1988 Silver Burdett & Ginn (SBG) elementary social studies series. SBG was selected for critique because it is representative of the elementary social studies series currently being supplied by the major publishers and because it was one of the more widely adopted series in the 1980s (Sewall, 1987). In developing their critiques of SBG, the panelists were asked not only to examine the student texts, but also to consider the broader enacted curriculum that would result if teachers not only used the texts but also used the provided worksheets and tests and the suggested questions and activities. Panelists were encouraged to discuss any aspect of SBG that they thought worthy of comment, although they were given three sets of framing questions to guide their analysis of the materials. They were not asked to write the final form responses to these framing questions, but instead to develop detailed notes about them that would be elaborated later during extensive (approximately six-hour) interviews conducted by the authors.

There were three sets of framing questions. The first followed up on the panelists’ responses to Part I by asking them to consider how SBG’s handling of the three broad curriculum goals addressed in Part I compared to and contrasted with the handling recommended by the panelists. Thus, for each of these three broad goals, each panelist critiqued the treatment in SBG with reference to his or her own previously made suggestions about how the goal should be handled. A second set of questions called for detailed critiques of two particular curriculum units, a second-grade unit on rules and laws and a fifth-grade unit on the English colonies, the Revolutionary War, and the Declaration of Independence and the Constitution. The third set of questions called for comments and examples relating to such general issues as the degree to which SBG is well organized and coherent, key concepts are treated in sufficient depth to promote understanding, and critical thinking and decision-making goals are addressed through appropriate activities, assignments, and evaluation methods.

The written responses and interview transcripts were analyzed to develop summaries of the views of each individual panelist and comparisons of the views expressed in common by the professors with the views expressed in common by the teachers. This article focuses on the latter comparisons. For details of the views of each individual panelist, see Prawat, Brophy, and McMahon (1990).

The Views of the Professors Compared to Those of the Teachers

In their responses to Part I, the panelists all basically agreed with our list of five features of ideal curricula, although two of the professors noted that
all key ideas would not necessarily have to be "rooted in the disciplines." All six panelists outlined ideal curricula that featured in-depth treatment of networks of content structured around key ideas rather than broader but shallower cultural literacy approaches. The professors had more to say about specific strategies for teaching concepts and principles, but the teachers had more to say about incorporating local content examples (often by arranging for classroom visitors or field trips) and about accommodating individual differences in students' learning styles by including a variety of activities. There was considerable individual variation but no consistent group difference in relative emphasis on global social education versus more specifically American citizen education, on whole-class discussion versus small-group or individualized activities, and on knowledge and skills versus attitudes, values, and dispositions.

The panelists all differed from one another in their suggestions concerning curricular goals, content selection, and activities. What their ideal curriculum had in common (and what differentiated them from the SBG curriculum) was organization of the content around a limited set of key ideas that would be developed in sufficient depth to ensure understanding and used in the process of responding to questions or engaging in activities that called for critical thinking, decision making, or other applications. Their responses to Part I became more difficult to compare thereafter, however, because they diverged in unique directions in talking about what key ideas would be featured in teaching about American government, human-environment interaction, and multicultural understanding, and how these ideas would be taught. Still, careful examination of the concepts and generalizations that they identified for emphasis in teaching toward each of these three goals revealed several similarities—not in the specific language used, but at a deeper level in the basic arguments presented. For example, the same three-part argument underlies the specifics of what individuals in both groups highlighted as being basic to understanding and appreciating our (federal) form of government.

First, democracy is a political system that has played a unique role in our country's development. (To give some sense of the range of responses falling under this general rubric, one teacher emphasized the fact that "all countries do not have the freedom we enjoy" while a professor highlighted the related notion that "democracies are rare and very difficult to maintain.") Second, our form of government (i.e., democracy) is unique because of the primacy it assigns to basic human rights, both as a guiding principle and as a cornerstone of government (i.e., the Bill of Rights). Third, it takes special qualities on the part of the citizenry to make our form of government work. Here there was some divergence of view, at least at the level of the particular attributes desired in the citizenry. While all panelists stressed the importance of responsibility, they highlighted a diverse set of qualities beyond that. Two of the teachers stressed the importance of leadership in our form of government and suggested that students need to develop the qualities associated
with good leadership. A third teacher talked about the importance of being “informed and reasoned” in one’s participation in decision making (a note that was also sounded by the professors). The professors also tended to highlight two additional sets of attributes: informed decision making, which includes both knowledge and skill components, and a commitment to the democratic values of justice (fairness), equality, freedom, and caring for the common good.

Analysis of the other two broad goals identified in the framing questions (human-environment relationships and respect for the values/lifestyles of others) revealed similar agreement about several basic concepts and generalizations. Nevertheless, the professors and teachers came up with different plans for teaching the core content. To some extent, as is argued below, this may reflect the fact that these groups have different “constituencies.” The professors placed their highest priority on elaborating and applying key ideas, whereas the teachers tended to balance this priority against what they regarded as the more important needs of individual children.

Critique of the SBG Curriculum

It is easier to make comparisons among the panelists’ responses to Part II, in which the framing questions for critique of the SBG curriculum yielded comments on many common dimensions. On the whole, the professors and teachers showed more similarities than differences in their SBG critiques, and the differences mostly took the form of contrasts in relative emphasis rather than direct substantive contradictions.

Areas of Agreement

All of the panelists (or at least all who commented on each respective aspect) were in agreement concerning several aspects of SBG. First, they found SBG attractive in several respects. In particular, they praised its pictures, illustrations, and program of activities for developing map-reading and chart-interpretation skills. They also found the student texts to be easy for the students to read and the curriculum as a whole to be technically easy for teachers to teach from (in the sense that the spiral binding made it easy to open to particular pages, the standardized lesson format and teacher’s manual organization made it easy to follow the lesson plans, worksheets and tests were provided, and most of the props called for in suggested activities are already available in classrooms or easily obtainable by teachers).

On the whole, however, the panelists were more critical than appreciative. In one way or another, they typically voiced the following concerns about SBG.

Content. The panelists agreed that it took a primarily factual, cultural literacy approach to social studies that focused on the United States without much attempt to cover other cultures or to embed coverage of this country’s past or present within a global perspective. The latter features were seen as regressions from the global or multicultural approaches taken just a few years ago.
The panelists also believed that SBG contained too much content in the middle grades but not enough in the primary grades. The consensus seemed to be that the curriculum spiraling built into the expanding communities approach (at least as it was implemented in SBG) produced a great deal of redundancy in treatment of certain topics. This was especially noticeable in the primary grades where the content base was thin in the first place. Several panelists noted that the material taught in the first three grades could be compacted into just the first two grades, leaving third grade for something else, such as state history or cultural studies (panelists disagreed about how they would use this extra space in the curriculum). Concerning the middle grades, the consensus was to pull American regional geography out of fifth grade and integrate it into the geography covered in the fourth and sixth grades, thus leaving all of grade five for American history.

All panelists complained of too much breadth treated in insufficient depth. The student texts offer parades of facts that lack sufficient structuring around key ideas. The texts could be made more "learner friendly" through more or better use of advance organizers, directed study questions, and inserted questions designed to get students to think about the material as they read.

Even more importantly, the material should be structured around key ideas. Currently there is often poor correspondence between the ideas emphasized in the main themes, the chapter objectives, and the chapter reviews. Even when there is good correspondence, the ideas identified as main ideas are often trite, focusing on facts (especially in geography sections) or relatively minor or side issues rather than the major concepts and principles that are (or should be) covered in the chapter. For example, a lesson on shelter is built around the key idea that people in different places live in many different kinds of houses. This is a much less powerful key idea than the one that should have been developed—that the kinds of houses that people live in are determined in part by the climate and natural resources of the region.

There is a general failure to pull things together. Skills are taught essentially as a separate curriculum with only tangential relationships to the knowledge curriculum, so that skills tend to be practiced in isolation rather than being used naturally in the context of applying the knowledge taught in a unit. In a particularly ironic example, a lesson describing four different American Indian tribes, which virtually cries out for a charting exercise comparing and contrasting their cultures and customs, lacks this key component that would have promoted understanding. Yet, the skill emphasized in the exercise attached to the unit is charting—applied to content having nothing to do with American Indians or anything else covered in the unit.

Basic concepts and principles often are not treated in sufficient depth to develop understanding, and the cases intended to serve as examples typically are not tied back to the concepts or principles that they are supposed to exemplify. Nor are cases typically compared and contrasted when such comparison and contrast would help students come to understand the big picture. As a result, content comes through as parades of unrelated facts that
students can only try to memorize, rather than as networks of information structured around key concepts that they can learn in more meaningful and organized ways.

Common reactions to the history content included calls for: more use of original sources and of biographies or literary treatments of key events; a less exclusively American treatment that would embed American history within a global purview; more exposure to diverse views and to history as interpretation rather than as a chronicling of presumptive facts; and complaints that controversial or negative aspects of American history had been avoided or sanitized. Common reactions to the geography content included calls for: more coverage of a variety of cultures backed with more photos or artifacts; a more global and multicultural, less U.S.-centric and chauvinistic coverage of other nations and cultures; and better comparison and contrast of geographical regions and of the examples representing each of these regions. Common reactions to social science content focused on the fact that there was not much of it; thus came calls for more such coverage, especially coverage of anthropology and economics principles and applications.

**Discourse.** The panelists noted that the suggested questions embedded in the lesson plans are concentrated mostly at the factual level and tend to lack sequential flow or provision for critical thinking, decision making, or other higher order applications of the content. They called for questions that would go beyond regurgitation of facts by extending the lesson and relating the content to key ideas or applications to life outside of school (such as by asking students to relate historical events to current events or to argue the merits of different geographical regions as desirable places to live). Such questions would create teacher-student discourse patterns that more closely resembled critical discussion of the content than mere recitation of facts.

**Activities and assignments.** Panelists noted that most of the worksheets provided reinforcement but not extension or application of the content. They called for less emphasis and fill-in-the-blank activities and more emphasis on writing, small-group cooperative work, field trips or visits by resource people, simulation activities, citizen action projects, and various "culminating" projects that would encourage students to synthesize the content taught in a unit. In particular, there would be more activities that required students to think critically about and apply what they had been learning (activities calling for students to construct understandings via case comparisons, to answer prediction questions or formulate and test hypotheses, to engage in and then analyze the processes involved in democratic decision making, etc.). To the extent necessary, the skills needed to complete some of these activities (locating and organizing information, planning and outlining reports, etc.) would be formally taught (not as a separate skills curriculum, but within naturally occurring opportunities to use the skills to apply knowledge content being taught at the time).
Guidance to the teacher. Panelists called for more assistance to the teacher in the manual: general (at the beginning) and specific (by lesson) rationale statements and notes on key ideas; additional information that could be used in elaborating the content; suggested questions that would stimulate useful discourse; ideas about adapting to individual differences; and additional bibliography.

Contrasts Between Professors and Teachers

We have noted that both professors and teachers agreed with our five suggested features of ideal curricula and also agreed on a range of opinions concerning strengths and weaknesses of SBG. Within this context of agreement, however, several consistent differences between professors and teachers were noticeable in their SBG critiques. Usually these were relatively minor differences in emphasis or priorities rather than polarized points of view, and sometimes one of the professors would respond in ways that were more characteristic of the teachers or vice versa.

Goals and objectives. In thinking about ideal curricula and criticizing SBG, the professors tended to treat goals (intended student outcomes expressed as competencies or dispositions) as primary and to treat selection and presentation of content as means of achieving the goals. In contrast, the teachers did not talk as clearly about beginning with goals and then selecting content as a means to achieve the goals. Instead, they typically began with content and talked about means of effectively teaching that content to the students.

The teachers tended to place relatively more stress on citizen/social/global/cultural literacy education, whereas the professors tended to place relatively more stress on discipline-based key ideas and principles. Similarly, the teachers tended to stress appreciation and "development of background knowledge" goals, whereas the professors tended to stress "application of concepts or principles to new cases" goals. The teachers tended to be more accepting of primarily factual content, whereas the professors tended to call for emphasis on analytic principles and generalizations, with facts included only insofar as they served to exemplify or elaborate these principles or generalizations.

The teachers tended to stress affect and engagement in activities as keys to learning with understanding, whereas the professors tended to stress cognition (information processing) and applications focused around powerful ideas. Many of the professors' suggestions about activities were limited to teacher-student discourse (talk), without necessarily including doing (hands-on activities, writing, etc.).

Especially in the early grades, teachers placed relatively more emphasis than did professors on developing self-understanding within a context of studying universal human experiences (families, communities, food, clothing, shelter). In other words, teachers tended to include emphasis on the psychological and self-development aspects of social studies (although one
teacher noted that this can be overdone), whereas professors tended to concentrate attention on more general social and civic education aspects. Both groups appeared to stress citizen education as their primary consideration. Thus, both groups appeared to use ideas about the kinds of citizens that our society needs as their primary source for drawing curriculum. As their secondary source, however, teachers appeared to look to students' current knowledge and interests, whereas professors appeared to look more to the disciplines.

In general, teachers were relatively more accepting and professors were relatively more critical, both of our list of features of ideal curricula and of SBG. The professors added to or qualified our features of ideal criteria more than the teachers did, and they had more to say about weaknesses and needed improvements in SBG.

Content selection and organization. Professors continually stressed the need to identify a limited number of key ideas (selected with an eye toward the larger goals to be accomplished), to develop these key ideas in depth, and to structure the curriculum around them. In their designs for ideal curricula and their criticisms of SBG, the professors' assessments of the value of particular content or associated activities seemed to be determined primarily, if not solely, by the degree to which the content or activities supported the development of understanding of key ideas. They stressed the need to limit breadth as much as the need to cover key ideas in depth, so that they were concerned about clutter in the text and about questions or activities that might distract students from learning of main ideas. When asked about how they might improve SBG, the professors tended to talk about starting over from scratch to develop a series that was structured around a limited number of key ideas rather than to talk about how they might adapt SBG. They tended to dismiss SBG as perhaps useful as a review for adults who already had a great deal of background knowledge about the topics covered, but ineffective as a vehicle for helping children to develop initial understandings about these topics when they did not have a great deal of background knowledge to bring to bear.

The teachers tended to agree with professors that an emphasis on breadth over depth of coverage was a problem with SBG. However, they did not go into as much specificity and detail in explaining this problem and they did not assign as much primacy to it as the professors did. For the professors this was by far the most important problem with the series, whereas for teachers it was just one among several important problems. One reason that the teachers appeared to be relatively less bothered than professors were by SBG's emphasis on breadth over depth was that teachers tended to speak of curriculum series as mere outlines or resources rather than as complete treatments, and to assume that teachers would both select from what is included in a curriculum and elaborate on it by providing additional input to students. Another possible reason for this relative difference in focus on the breadth/depth problem was that professors tended to assess curriculum units.
in relative isolation from one another and thus to adopt a "teach it all now" view, whereas teachers tended to think more in terms of students progressing through the curriculum series as a whole and taking up various aspects of topics at various grade levels. Thus, teachers tended to be more positive about the spiraling notion and more content to accomplish a limited amount in a given unit (which they viewed as just one in a series of steps building toward ultimate outcomes).

Both groups addressed student-readiness and background-knowledge issues as they talked about how to begin units. However, teachers tended to talk more about preassessment, whereas professors tended to talk more about the need to teach relevant background knowledge that the activities required but students did not possess. All three of the teachers, but only one of the professors, stated that SBG tends to underestimate students' levels of background knowledge and skill (one teacher characterized the primary grades texts as being almost "baby books").

In addition to their other complaints about content coverage, the professors tended to note and complain about failures to represent the disciplines accurately (treating history as fact rather than interpretation, propounding geographic determinism instead of two-way human-environment interaction, etc.). The teachers tended not to voice such discipline-based complaints.

Questions and activities. The teachers tended to describe good or needed questions and activities in terms of their cognitive levels (fewer knowledge-level activities and more that called for analysis, synthesis, or evaluation) or the processes that they called for (fewer matching, and fill-in-the-blank activities, more activities calling for debate, research, writing of essays, etc.). They sometimes implied that certain kinds of activities were valuable in their own right, more or less independent of unit goals or content. In contrast, the professors' assessments of questions and activities focused heavily on the degree to which these questions or activities supported development of understanding or ability to apply key ideas. This was one reason that teachers liked many more of the SBG’s activities than professors did. For example, teachers tended to respond positively to most extended writing activities, whereas professors tended to respond positively only to those extended writing activities that developed or called for application of key ideas. In suggesting activities, teachers were much more likely than professors to talk about tying the content to local examples, bringing in local resource people, or visiting local sites on field trips.

In criticizing SBG, professors mostly concentrated on the content but teachers mostly concentrated on the questions and activities. They called for better questions in three areas: more and better directed study questions that would serve as advance organizers for student reading and study of text; better lesson development questions that would create teacher-student discourse focused on critical thinking about and extension of the lesson rather than just recitation of facts; and better test questions that would focus less on
factual recognition or retrieval and more on understanding and application of key ideas. The teachers were also more likely than the professors to call for more experiential and hands-on learning experiences.

Guidance to teacher. Although both groups commented on this issue, teachers called more often and in more detail for improvements in teacher's manual (additional bibliography for teacher and students, additional content or suggestions for extending the lesson, ideas for individualizing, etc.).

Discussion

Comparisons of the views of professors with those of teachers did not yield contrasts as striking as those reported by previous investigators. On the contrary, there were many areas of agreement between two groups and their disagreements typically amounted to minor differences in emphasis rather than flat substantive contradictions. The general similarity in purview between professors and teachers interviewed in this study is not surprising, given our selection criteria. We sought professors who were not only known for their scholarship but were also interested in and familiar with elementary-level social studies teaching. We sought teachers who were viewed by scholars as unusually skilled at teaching social studies for understanding and application. If we had interviewed social education scholars less familiar with elementary school children and classrooms, as well as elementary teachers less knowledgeable about purposes and nature of social education, our professor versus teacher comparisons might have yielded many more differences than similarities. As it is, the reverse was true.

Some of the differences reported by previous investigators were associated with negative teacher response to the "new" social studies (i.e., applied social science) curricula introduced in the 1960s and 1970s. These differences have faded with time. The professors that we interviewed were less concerned about teaching experimentation and other social science inquiry or data collection methods than about teaching important ideas for understanding and application. The teachers were at least as much concerned about expanding their students' purviews by exposing them to multicultural content and global education values as they were about inculcating traditional and locally favored values. Still, many of the differences we noted, although less extreme than typically reported, could be characterized using some of the same dimensions. The teachers did appear to be relatively more student oriented and professors to be relatively more subject-matter oriented, for example, and teachers were relatively more accepting, whereas professors were relatively more critical, of typical curriculum content (as represented by SBG).

Teachers are typically portrayed as happy with parade-of-facts curricula and oriented toward reading/recitation/seatwork teaching approaches that are long on memorizing and short on applications. This may be true of many or even most elementary teachers, given the current popularity of SBG and similar series that currently define our de facto national curriculum in elemen-
tary social studies. However, the three teachers interviewed for this study did not fit this characterization. It was true that they (with one partial exception) did not place as much emphasis as did the professors on structuring all or almost all of the curriculum around a limited number of key concepts and generalizations. More generally, they placed less emphasis on the selection and organization of content. However, it was also true that these teachers sought to make sure that students not only understood what they were learning but could apply it to their lives outside of school. Toward this end, these teachers called for a range of activities that would extend considerably beyond the narrow reading/recitation/seatwork format.

In fact, as part of their greater focus on the child rather than the subject matter, the teachers tended to place strong emphasis on activities—for affective as well as cognitive reasons. For the most part, the professors tended to value particular activities only insofar as they saw them as vehicles for promoting understanding or application of key ideas. In contrast, activities played a more complex role in the thinking of the teachers, who articulated at least five hypothesized purposes or functions of activities. First, good activities motivate students by arousing their interest and getting them actively involved in the learning process. Second, activities personalize learning by providing concrete experiences that students can relate to and understand. Activities are comparable to stories in this regard, because they provide vivid, memorable contexts for learning and thus enhance students' ability to retain networks of conceptual and factual information that elaborate or serve as examples of key ideas. Third, activities are vehicles for addressing students' individual needs and learning styles. By including different kinds of activities, teachers can accommodate children who learn especially well by listening, by reading, by writing, and so on.

A fourth rationale for an emphasis on activities is a variation of the third one that focuses on individual differences. This is the developmental notion that younger, elementary-aged students, if they are to learn meaningfully, need the kinds of concrete experiences that good activities provide. The fifth justification is that an activities approach provides teachers with a richer set of data for assessing student learning. Two of the teachers commented that a range of activities that call for students to discuss, write about, or apply what they are learning in other ways, provides better information about their levels of understanding and better bases for grading than the kinds of tests that came with SBG.

With their focus on students and activities, the teachers were less discipline-based than the professors in their comments about selection and organization of content. In fact, there appeared to be an ad hoc quality to the lists of concepts and understandings provided by the teachers. In the language of the taxonomy suggested by Donald (1983), the teachers seemed to base their selection and ordering of key ideas primarily on "similarity" relationships, whereas the professors tended to rely more on "dependency" or
"causal" relationships. For example, one teacher's list of key ideas for teaching about the U.S. government included the following elements:

1. The term government relates to the classroom and school as a whole.
2. The term government includes local, state, and federal structures.
3. Laws are necessary for governments to function in an orderly manner.
4. Laws are developed by groups of people chosen by the people of our country to be their leaders—a democratic government.
5. The leaders chosen must leave their home states and live in Washington, D.C. while serving their country.

These ideas are all relevant aspects of learning about the U.S. government, but the conceptual dependencies among them are less apparent than those listed by one of the professors:

1. In a democracy, lawmaking is the shared task of all.
2. The authority of laws rests on the genuine consent of the governed (popular sovereignty).
3. At the same time, the majority must not violate the civil liberties of individuals or minority factions.
4. Individuals in democracies must constantly negotiate the struggle between, on the one hand, individual happiness and freedom, and on the other, knowing and doing the common good.

It was clear that the teachers were well attuned to the interests and thought processes of elementary-aged students. This may have caused them to place more emphasis on student interest and involvement in selecting content and activities than the professors would prefer. The professors tend to feel a greater obligation to the disciplines and to be more familiar with current disciplinary knowledge structures and emphases. Consequently, they would not accept the tacit assumption that anything taught in a way that students find interesting and engaging has value. They might see student interest and involvement as a necessary condition for learning, but they would want to add the proviso that instruction should concentrate on powerful ideas. The potential dangers here, of course, are that the professors might undertake to teach too much at one time, might represent powerful ideas in overly abstract or otherwise ineffective ways, might fail to follow through with sufficiently concrete and engaging activities to enable students to learn and apply the ideas meaningfully, and so on. Thus, the key to effective design of elementary social studies programs appears to be management of the dilemma that Dewey (1966) recognized when he said that many educators view subject matter as something fixed and ready-made in itself, outside the child's experience, which they also tend to think of as "something hard and fast." In opposition to this perspective, he favored a position that views the child and the curriculum as "simply two limits which define a single process." According to this view, instruction "is continuous reconstruction, moving from the child's present experience out into that represented by the organized bodies
of truth that we call studies” (p. 11). This “interactive” approach would avoid either overemphasizing on the student without giving proper consideration to the centrality or power of the ideas to be taught (an imbalance typical of many teachers) or overemphasizing on curriculum content and organization without giving proper consideration to the needs and interests of the students (an imbalance typical of many professors).

Conclusions

Differences in purview between social education professors and teachers may not be as pervasive as Leming’s (1989) notion of two cultures suggests, at least not when scholars who are also knowledgeable about the realities of elementary teaching are compared with elementary teachers who are also knowledgeable about social education purposes and goals. Differences in purview do exist, however, and we concur with Leming in concluding that the goals of social education would be better served if each group developed more sympathy for the concerns of the other. In that regard, we find it encouraging that our findings yielded more agreement than disagreement between the two panels. If we are to progress from the current de facto national curriculum toward more ideal curricula, we will need to focus on the qualitative aspects represented by the areas of agreement among our panelists, and not just on such issues as how much history content is included or whether or not the expanding communities framework is used as the organizational structure. In particular, it appears that the effectiveness of a social studies curriculum for developing students’ understanding of and ability to apply its content depends less on what general topics are covered than on what content is selected, how that content is organized and presented to the students and developed through discourse and activities, and how learning is assessed through assignments and tests.

References


Schema Theory and Cognitive Psychology: Implications for Social Studies*

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Abstract

Schema theory and research from cognitive psychology have been applied fruitfully in science education over the last decade. Their implications for improving social studies education are drawn, in particular identifying key ideas, using graphic concept maps in instruction, and assessing students' prior knowledge and its connections. A conceptualization of differences between children of different ages according to the characteristics of their cognitive structures and processes is suggested. Anticipated difficulties with the approach as a whole are also outlined.

Introduction

Within the last decade a substantial change has taken place in views of the learning process and the learner. Theories and research in cognitive psychology are at the center of this change, which some even call a revolution. Although this body of knowledge has highly technical aspects, the assumptions on which it is based are straightforward and powerful. Arguments exist about specifics, but there is relatively wide agreement and solid research on the general points. Study of the acquisition of knowledge in logical or mathematical problem solving and in the sciences have been central to this formulation. The implications for education have largely been drawn in these areas (Carey, 1986) and in the field of reading comprehension (Dreher & Singer, 1989). Social studies education could benefit in many ways from this new way of viewing the learner.
In fact three types of recent research have documented the need for new approaches to social studies and history. First, classroom observational studies have noted the non-meaningful nature of learning during a large proportion of classroom time in social studies (McNeil, 1986; Stodolsky, 1988). Second, recent national surveys have shown low levels of both subject matter knowledge and interest in social studies and history (Anderson, et al., 1990; People for the American Way, 1989). Third, the poor quality of some social studies textbooks has been documented, particularly the way in which they present disconnected facts (Brophy, 1990). Beck, McKeown, and Gromoll (1989) analyzed four widely used social studies texts for grades 4 and 5. They found too many concepts explained in too few words with too much reliance on background knowledge and presentation of pointless facts and asides that could easily be misperceived as things important to remember.

There are also problems with many social studies methods textbooks. Brophy (1990) points out that they “discuss the teaching of different kinds of intended outcomes (facts, concepts, skills, values) separately without saying much about integrated teaching of content or . . . networks of content built around key generalizations or principles” (Brophy, 1990, p. 350).

Most curriculum development in social studies, if it has any basis in psychology of the learner, has been referenced to Piaget’s theory. This is a domain-general theory, thought to apply generally across subject matters. A student who is at the concrete operational stage is pictured as carrying the same set of learning capacities with him or her into every domain of study. Further, knowing that the average third grader or seventh grader is at a specific cognitive stage does not give a teacher much practical guidance for instruction. The strong developmental emphasis in these theories suggests to many teachers that they can do little to enhance learning beyond waiting for the child to mature cognitively.

The purpose of this paper is to describe the conceptual and theoretical frameworks which are guiding the application of cognitive psychology to instruction in specific domains, and to suggest ways of improving social studies in line with these frameworks. This paper was foreshadowed by general discussion in review articles on social studies prepared in the early to mid-1980s (Armento, 1986; Cornbleth, 1985). But cognitive psychology has not yet been applied comprehensively to social studies practice, and there is a great deal of new research which makes a review timely.

The Basic Assumptions of Cognitive Psychology

Learning is defined in this paper as “giving personal meaning to public knowledge,” a formulation which West, Fensham, and Garrard applied originally to chemistry learning (1985, p. 31). In the social studies, what is presented by the teacher or in the textbook as public and agreed-upon knowledge or beliefs, is received by the student and given meaning in terms of his or her past experience and cognitive capabilities or structures. Several
assumptions are associated with this approach. First, it is assumed that every individual constructs a somewhat idiosyncratic meaning for knowledge or information; it is not a matter of passive inculcation and direct reproduction by the student of the teacher's or the textbook's information or view. Second, it is assumed that the knowledge and conceptions (and misconceptions) the students bring into the classroom, both from past lessons and from general experience, have a substantial influence on student learning. Prior knowledge, particularly that specific to the domain or subject being studied, is important. Third, the process of acquiring meaning from text or from oral discourse and of remembering information is related to mental structures. This is especially important for social studies because knowledge of the political and social world is presented to students primarily through discourse directed to them by adults without their being able to explore independently (as is the case for the physical world). Learning and remembering will be enhanced to the degree that students use effective strategies in encoding information. Meaningful learning entails encoding oral or written discourse by relating it to existing knowledge and structures of knowledge.

What are these cognitive structures? They are commonly referred to as schemata. Rumelhart (1980) is widely credited with the first systematic use of this term, although four decades earlier Bartlett described schemata in their effect on remembering stories. Schemata are hypothesized or inferred mental structures. No one has ever observed a schema, though postulating their existence inside the student's head allows us to account for a variety of research findings—for example, differences in the efficiency of various learning methods and what individuals say when they are asked to “think aloud” as they solve a problem. Schemata can be modified, although they exist in what is called long-term memory. They function to organize information which the student already possesses relating to a topic.

A number of definitions of schemata have been given, each of which has a slightly different emphasis:

Schemata are mental representations of a set of related categories which are used in perception, comprehension, memory, and learning . . . Schemata are analogous to sorting devices for stimuli and to filters for information. (Howard, 1987, pp. 30, 34)

Cognitive structures (such as schemata) are like mosaics—built up idiosyncratically by each individual from discrete parts. The “tiles” are limited both by language and personal experience and are expressed as patterns. (Head and Sutton, 1985, pp. 92–4)

A schema is an abstract structure of information . . . which summarizes information about many particular cases and represents the relationships among components. (Anderson, 1984, p. 5)

Rumelhart (1980) has noted several related functions of schemata. First, schemata serve a function in understanding oral or written discourse. When
the individual is confronted with a piece of reading material or a class discussion, the way that communication will be understood is related to the schemata which are activated in responding to it. The individual may fail to understand the author’s or speaker’s meaning for three reasons: first, because he or she does not possess appropriate schemata to which to relate the communication; second because he or she possesses appropriate schemata but the clues provided by the author or speaker were not sufficient for the individual to see the link with existing schemata; or third because the listener or reader called upon an inadequate schema and distorted the author’s or speaker’s point of view to fit.

Second, Rumelhart noted that schemata serve a function in learning and remembering new information. What is presented in the classroom may relate to these structures in at least three different ways. A piece of new information may be added to a “slot” in an existing mental structure (accretion); it may be added but may change the structure slightly (tuning); or it may be in conflict with the existing structure and cause an actual change (restructuring). If material is presented to students which cannot be added by accretion or tuning to an existing schema, but which is insufficient to promote the reorganization of a schema, it may either be ignored or learned by rote (and stored piecemeal without reference to a mental structure). Schemata influence the way new information is encoded in memory by being related to already acquired knowledge. The process of accessing or recalling that information when it is required on a test or in a discussion involves activating the schema in which it has been stored. If the process of instruction provides ways to help the student develop adequate and elaborated schemata, the retrieval or remembering of information will be facilitated.

Third, according to Rumelhart, schemata serve a function in problem solving, storing knowledge about a certain type of problem, a set of procedures which might be used to solve a particular type of problem, and an understanding or representation of what the problem is. These schemata are sometimes called the “problem space.” (For a fuller discussion see Glover, Ronning & Bruning, 1990.)

The term schema has not been used only to describe classroom learning. Individuals interested in personality development discuss the schema of the self or schema relating to gender identity. Those interested in children’s understanding of social interactions describe scripts which are schemata for events—what individuals might expect to happen in a given situation (e.g., going to a restaurant or voting in an election). It has been proposed that attitudes be viewed as bipolar or unipolar schemata which influence the storage and recall of information (Pratkanis, 1989).

The schemata central to this paper are those relevant to elementary and secondary school students’ understanding of social and economic institutions and processes in their historical as well as contemporary manifestations. We are interested in all three functions of schemata mentioned— Influencing the
comprehension of text or discourse, influencing the storage and retrieval of information, and influencing problem solving.

**Research-based Teaching Derived from Cognitive Psychology**

The next sections will deal with the specifics of research in cognitive psychology and its instructional implications. One can look at these implications at either a macro- or a micro-level—either as a way to organize the entire instructional process or as a way to improve segments of it.

**Outline of steps in the instructional process**

Recent research on schemata and cognitive psychology has been applied to suggest appropriate sequences for social studies lessons. If students are to understand oral communication or textbooks, are to learn new information effectively, and are to be able to mobilize their knowledge to solve problems, the appropriate schemata must be engaged, reflected upon, elaborated, and changed.

In taking this approach, Hyde and Bizar (1989) suggest seven phases of instruction in the elementary social studies classroom:

1. Become aware of the prior knowledge which students bring into the classroom, their existing schemata, and especially their misconceptions or "naive social theories."

2. Call attention to conflicting points of view.

3. Help students to generate opinions, recognize key ideas, formulate questions, explore and reflect on opinions.

4. Design systematic inquiry relating to gaps between student schemata and schemata implied in a curriculum guide or well-structured text.

5. Debrief students on the dimension of content by asking about explanations and concepts, encouraging students who have been successful in arriving at new understanding or restructured schemata to share those ideas.

6. Debrief the cognitive and metacognitive processes by asking students to reflect on the processes they used, the key decision points, or how they recognized that they understood a particular topic.

7. Broaden schemata by helping students see connections between what they have considered and other social studies problems or areas of inquiry (paraphrased from Hyde & Bizar, 1989, p. 176-185).

These are approaches to the process as a whole. Brophy (1990) strikes a note of caution, pointing out in his review of social studies and higher order thinking, that learning is not a serial or linear process as this might imply. He describes classroom discourse as follows:

(It is) typically initiated by asking the students . . . to consider the implications of what they have been learning for problem solving or decision making. In the process of developing and debating alternative responses, students will need to synthesize . . . significant networks of related ideas and information, which in turn will require them to not
only clarify their understanding of individual elements in these networks but also to recognize and consider the implications of the relationships between these elements. This vision of classroom discourse rejects the notion that items of knowledge must be first developed separately, then integrated and applied. Instead, it postulates a mutually dependent, bootstrapping relationship between comprehension and application of knowledge. (Brophy, 1990, p. 374)

With this in mind the next sections consider more specific or micro aspects of instruction relating to schemata.

Assessing and teaching to correct misconceptions and naive social theories

A substantial part of the research in cognitive psychology as applied to science teaching has attempted to diagnose students' misconceptions about scientific phenomena and to provide instruction to correct them. Certain of these misconceptions or naive scientific theories have turned out to be highly resistant to instruction. For example, even after a course in high school physics, many students express the same misunderstandings that they had before the course.

There is every reason to believe that students also carry misconceptions or inadequate schemata into (and out of) their social studies classrooms. Berti and Bombi (1988) have identified "instruction-resistant" misconceptions in economics; for example, the belief held by many children that it is not fair for banks to make a profit from lending money. McKeown and Beck (1991) noted that many elementary students misunderstand the phrase "taxation without representation," even after study of the American Revolution. They believe that representation means standing with a group in favor of something, as during the Boston Tea Party.

Hallden (1986) argues that in history there are not only commonsense misunderstandings about events themselves but also beliefs about what counts as a meaningful historical explanation. Pupils' schemata are focused on individual historical actors and their personal motivations as the cause of events. They confuse an institution with the individuals who serve in it or see a nation as equivalent to its leaders or its citizens. Hess and Torney (1967) referred to the illusion of the individual citizen's personal "clout," because so many children in their survey believed that anyone could call up the President of the United States and give his or her opinion which would be taken into account in policy making.

The presentation of "correct facts" in social sciences or history is no more likely to dislodge misconceptions than it is in science. Posner et al. (1982) described the process of correcting scientific misconceptions. First, the teacher must get pupils to express those existing beliefs or schemata and experience dissatisfaction with their current views or conflict between information and those views. Second, students must achieve at least minimal understanding of an alternate way of organizing the information, a new or restructured
schema. Third, the alternative view must be experienced as meaningful and plausible. Finally, students must see the power of the reorganized schemata for understanding other problems or incorporating further information.

What is known about this restructuring of schemata in the social studies? Torney-Purta (1989, 1990) has presented evidence that adolescents' schemata of the international political and economic system are restructured following their participation in a computer-assisted international simulation in which they role-play diplomats from different countries. The rapid-fire dialogue and conflict of ideas about foreign policy issues which are part of this exercise promote more complex schemata. The research methodology compares post-simulation responses to pre-simulation responses to a think-aloud-problem such as the following: "Imagine you are the Finance Minister of a developing country; the interest payment on your debt to banks in the industrialized countries is due but there is not enough money in your treasury to pay it. Think-aloud and tell me what you would do to solve this problem."

Graphic maps of the schemata implied in these answers in terms of the actors in the international system, actions, and constraints upon actions show restructuring in the direction of considerably greater complexity after the simulation.

In correcting historical misconceptions Hallden (1986) argues that teachers must structure a "classroom conversation" in which "accessible bits of information are put together in a way that makes sense" and not simply a "good story about why this guy did so and so... or an incomprehensible fragmented list of facts" (Hallden, 1986, p. 64).

In social studies there is not only a problem with misconceptions but also with conceptual areas where there are no meaningful schemata to build upon, that is areas where a student's prior relevant knowledge is extremely limited.

**Promoting access to knowledge through the organization of knowledge**

Prawat (1989) reminds us of the central importance of access to knowledge, defined as "the ability to draw on or utilize one's intellectual resources in situations where they are relevant," especially those situations which are not identical to the initial learning situation (p. 1). In terms of the current framework, access is enhanced when knowledge input is linked with prior knowledge, in particular when it is organized in schemata.

Studies comparing novices with experts in areas as diverse as chess and physics have been a mainstay of research on the organization of knowledge. Voss and his colleagues pioneered the study of experts and novices using think-aloud-problem-solving in the social sciences with adults (Voss, et al., 1983). Chi and her colleagues studied 7-year-olds, comparing children who were expert in their knowledge of dinosaurs with those who were novices. The major differences were in the coherence and integration of knowledge, not in the number of discrete bits of knowledge. Expert children asked to comment on dinosaurs used more connecting words (e.g., because, and, if). In contrast, novice children listed explicit features of the pictured animals
without connections. The researchers concluded, "when experts activate a dinosaur concept node (part of a schema) several other . . . concepts also get activated with high strength and they feel compelled to state them." (Chi, Hutchinson & Robbins, 1989, p. 38). Schemata for dinosaurs appear to be organized around salient attributes such as diet, locomotion, aggressiveness, and type of defense; experts also structured knowledge around families or groupings of dinosaurs. As a result expert children when given a picture of either a familiar or an unfamiliar dinosaur were more likely than novices to comment on implicit attributes not pictured (e.g., where it might live), because knowledge in the dinosaur schemata was accessed in response to the pictorial image. Organized knowledge about the characteristics and habits of known dinosaurs is also called upon to facilitate the understanding of new specimens (Gobbo & Chi, 1986).

What are the implications of this research on the importance of access to knowledge through the organization of knowledge? First, within any domain there appear to be key ideas which serve as anchors for schemata. Teaching which focuses on key ideas and which encourages the connection of new knowledge to the existing schemata or knowledge base promotes later access.

Second, "advance organizers," that is, general and concrete overviews or structures of information provided prior to exposure to new information, have great potential (Ausubel, 1968). They activate relevant schemata and help the student see where information fits in order to broaden and enrich the structures. These organizers can take many forms—presentations by the teacher, brief segments of introductory text with important concepts underlined, concept maps or schematic diagrams (see next section). It is often appropriate to begin a presentation of new material by giving learners an organizational framework or schema to which it can be linked. It is important to pick an organizing framework that is familiar to or easily understood by learners and that makes the links between the known and the unknown explicit. LeSourd (1988) gives an example of the use of an advance organizer to set the schema for a lesson about another culture.

Sometimes the explicit features or subtitles of a text itself activate schemata to organize knowledge. In a study by Ohlhausen and Roller (1988), 5th, 7th, and 9th graders were asked to read one of three versions of a social studies passage about an unknown country. The Content and Text Structure Passage included an explicit hierarchical structure in which factual material about geography (location, landforms, and climate) was presented. The Content Only Passage listed the same factual material, but the sentences were in random order. No structuring sentences, such as "we will first describe the physical geography of Melanesia," were included. The Structure Only Passage included the expository text structure and signal sentences for structure but substituted nonsense words for content information. As expected, the best performance was by the group given both Content and Text Structure. However, for the two youngest groups the Structure Only Passage (with nonsense words) was less difficult than the Content Only Passage (with mean-
ingful words but no guides as to how to incorporate material into structures or schemata). The authors refer to the importance of the use of schemata in interpreting information about other countries. In another study, however, it was found that among ninth graders only the more proficient readers used the organizational structure of a text spontaneously in aiding recall (Meyer, Brandt & Bluth, 1980).

Armbruster and Anderson (1984) identified schemata or frames which they found in social studies text. History texts, for example, had frames with four slots—goal or desired state, plan or strategy for reaching the goal, action required, and outcome or consequence. Texts which provided information for each slot (and in this order) should be comprehended better by students than those that have missing frames.

Finally, there is no substitute for dialogue or discourse in the classroom if the goal is to for teachers to understand how students organize knowledge and to encourage them to relate what they already know to what they are expected to learn by engaging in meaningful or “deep” processing of information. In finding words to express ideas to others, either orally or in writing, those ideas are reshaped, connected, and consolidated.

**Graphic techniques as a facilitator of knowledge organization**

Concept maps are diagrams or graphic representations of meaningful relations between concepts or schemata. As an instructional technique, used either individually or in classroom groups, concept mapping allows people to make explicit links between knowledge, helps to identify concepts that are missing or poorly linked in the student’s knowledge structure, and promotes connection between the prior knowledge which students bring into the classroom and the new knowledge presented there.

Semantic networks are a type of graphic map which has a relatively well defined set of conventions for representing concepts and links between them. Often developing such a network map begins with reading a text passage which is broken down into parts. The nature of the relationship between the parts is then portrayed graphically and in hierarchical form with meaningful clusters of concepts. Nodes or central concepts are identified and represented in elliptical shapes. There is a standard set of links between nodes. These usually include the following: is part of, is an example or kind of, leads to, is like or analogous to, is characteristic of, and is evidence of. Arrows are sometimes used to show connections. These networks can be used to represent definitions (as in Figure 1).

There is some research on the effectiveness of training in the use of similar networking procedures as schemata for organizing passages from textbooks with college students. Holley, Dansereau, McDonald, Garland, and Collins (1979) gave students about five hours of training in constructing semantic networks to represent text passages. These students and a control group then studied a 3000 word passage. On subsequent tests the network trained sub-
jects performed much better than controls in memory for main ideas but not in memory for details of text. The training was especially valuable for less able students, perhaps because more able students had developed such techniques independently (see Holley & Dansereau, 1984).

McKeown and Beck (1991) have drawn semantic networks to represent an elementary student's knowledge of the American Revolution (for example, Figure 2); these are compared with the prototype mapping made by researchers based on an analysis of curriculum and text. In addition to the links illustrated in the previous figures, these networks include time and location links which are essential to represent the content of social studies.

Concept maps can take a variety of forms. Their use in instruction is usually traced to Hauf (1971), who placed a central idea in the center of a note pad and placed subsidiary concepts in concentric circles around it. Some hierarchy of concepts is usually implied, though there is no hard and fast way to classify concepts as superordinate. Various types of links may be made (see Figure 3, for a concept map used by a teacher to plan instruction). Maps may be used before classroom instruction to surface students' existing knowledge and concepts; they may be drawn by individual class members as a way to classify knowledge or as a pre-writing exercise; a post-instruction
Figure 2
Semantic Network Drawn from Student Interview

map may be drawn for a class or an individual and compared to preinstruc-
tion (see Figure 4, a map drawn by a student after studying the Vikings).
Specific detail about how to work with a class to use concept mapping and
many illustrations are provided in Novak and Gowin (1984), in Heimlich and
Pittelman (1986), and in Holley and Dansereau (1984).

Berkowitz (1987) trained students in the process of using the material in
texts to generate graphic maps of concepts such as nation (Figure 5). Students
trained in this way were compared to those who studied maps produced by
others for the concept of nation, and to those who practiced question answer-
ing from the text or rereading procedures. On the average a student who
generated his or her own concept map, even if it was not complete or totally
accurate, showed a clear and significant advantage in recall over a student
who studied the concept maps produced by others or who studied the passage
without graphic representation. This illustrates the power of an individual’s
self-generated schemata and the importance of helping students to actively
relate what is in a text to their existing schemata and to their knowledge base.

Guri-Rozenblit (1989) had college students study a text about the court
system either with or without a concept map. Those who studied the text
with the diagram showed better recall of both ideas and relationships be-
tween ideas.

Mayer (1989) summarized research on the diagrams or illustrations which
are contained in textbooks. He concluded that good illustrations are coherent,
concrete, conceptual (potentially meaningful), correct (corresponding to ac-
tual events or objects), and considerate (appropriate to learner’s vocabulary
or background knowledge). They are most useful when provided at the begin-
ning (as an advance organizer) or in the middle of the lesson, not afterwards.
He also noted that high aptitude students are likely to approach a lesson with
pre-existing models, or the ability to construct them rapidly. The same is
not true for low ability students.

There are a variety of other techniques for graphic guidance of instruc-
tion (see Holley and Dansereau, 1984). Although these models have been
used primarily in reading instruction and in science (with the few exceptions
cited above), they have tremendous potential for linking our developing
knowledge about schemata and meaningful learning with social studies
instruction.

Building spontaneous use of cognitive strategies by students

Many educational psychologists are presenting evidence that improved
teaching requires a complex linking of domain-specific knowledge with
knowledge of and the propensity to use specific cognitive strategies. The im-
portance of the individual’s ability to monitor and regulate learning—his or
her information processing strategies or metacognitive strategies—is increas-
ingly recognized.

Several recent studies by cognitive psychologists of reading in the social
studies content area or of memory for factual material suggest the impor-
Figure 3

A concept map used to prepare an instructional unit, for fifth- and sixth-grade students, on a rotting log observed on a field trip.
Source: Heinrich & Pittelman (1989)

**ORIGINS**
- Norway - Norse
- Denmark - Danes
- Jutland
- Sweden - Swedes
- Vikings - means adventurous and raiders
- Danelaw
- Scandinavia

**TRADER**
- Ships built with planks of timber
- Long and narrow
- Each side had 16 oars with many designs
- Bows were dragon head carvings
- Sails were square with yellow and red stripes 65.95 ft. long x 17 wide

**TRADING**
- Viking traders traded:
  - Furs, hides, fish, slaves
  - Sold to Europeans and Mediterranean people
- They got silk, wine, wheat, and silver in return
- Many trading points
- Major trading cities: Family life was very important
- Fishing, farming, and trading occupation
- Children were taught young
- They were good craftsmen, metalsmiths, and woodcarvers

**LIFESTYLES**
- Women taught to light
- They changed to Christianity later
- Many gods make days of the week
- Many raids, war, and stole a lot
- Robbed and stole a lot
- Varangian Route, water route
- Volhalla - heaven
- Odin - king of gods
- Thor - God of lightening
- Sagas - epic stories
- Runes - viking alphabet
- We die in battle to an honor
- Dragons on ships to scare enemies and spirits on the ocean

**RAIDS & ADVENTURES**
- Conquered parts of Europe and England
- Jarls - military chieftains
- Berserkers - men warriors
- Conquered parts of Russia
- Vinland - Newfoundland
- Iceland - an island
- Varangian Route

**RELIGION**
- Odin - King of Gods
- Thor - God of lightening
- Sagas - Epic stories
- Runes - Viking alphabet
- Died in battle to an honor
- Dragons on ships to scare enemies and spirits on the ocean
- They changed to Christianity later
- Many gods make days of the week

**FIGURE 4** Student Map for Vikings
Adapted from Berkowitz, 1986

Pressley (1988) conducted an experimental study on children's memory for sentences such as the following: Apples were first cultivated in Nova Scotia; The worst tornado was in Alberta. Four groups were given different instructions. The base group was simply told to remember the sentences; a second group was given the sentences together with elaborations provided by the experimenter; the third group, the elaborated-image group, was instructed to construct a visual image of the sentence (e.g., apples being grown in Nova Scotia); the fourth group was told to construct a verbal elaboration of the sentence, to “think why it would make sense that apples would be cultivated in Nova Scotia.” All three groups using elaborations performed better than the base group. However, the most successful, especially after the age of about ten, were the students who constructed their own elaborated imagery. This illustrates the value of elaborated schemata and of students' being encouraged to related new information to existing knowledge and schemata in a domain. There is also some evidence that making elaborations based on imagery (and perhaps verbal elaborations as well) may be easier for some students than others (Glover, Ronning & Brunning, 1990).
Researchers at Vanderbilt also studied elaboration strategies of academically successful and unsuccessful fifth graders who read a passage about robots. The academically less-successful students remembered the characteristics of the robots less accurately. More importantly, they did not spontaneously elaborate on what they were reading by linking either verbal or visual images from existing schemata to the information in the passage. However, when they were prompted to do so they were able to generate such elaborations (Bransford & Vye, 1990).

Although many social studies texts claim that they teach higher order thinking and cognitive strategies, a recent review of these program (Armbruster & Gundbrandsen, 1986) found little such instruction. Although lists of skills were given, they were often vaguely described or overlapping; poor examples were used (e.g., saying that students would learn to draw inferences when the correct answer to the question was obvious in the text); there was little direct instruction in skills (e.g., a passage was highlighted for note taking skills without suggesting how to teach those skills).

Instruction in cognitive strategies cannot be accomplished by any text alone. It appears that new roles for the teacher may be needed. For example, the concept of the teacher as a "coach" for student strategy practice has been suggested. Coaches in problem solving observe groups of students attempting to solve problems or learn material. They point out inefficient strategies. They ask questions which force students to reflect on the processes they are using and compare them with other strategies they might use. Coaches model strategies for students, thinking aloud about the disadvantages of different approaches as well as their advantages. They encourage students to generate meaningful questions about what they are learning. They attempt to create "teachable moments" when misconceptions can be confronted and the process of schema restructuring initiated. This is followed by helping students reflect on how their new comprehension or knowledge relates to other knowledge. In addition to encouraging teachers to serve in the role of coach, peers in the classroom can serve this function (Bransford & Vye, 1989). There are also a number of recent books on cognitive strategy instruction (Pressley, et al., 1990).

In summary, either from the point of view of overall organization of instruction, or from that of specific elements such as the use of graphic techniques and the teaching of cognitive strategies, there are many ways to relate schema theory and its derivatives to teaching social studies at any grade level.

**Individual Differences Between Students of Different Ages**

Any observer of a second grade class and a sixth grade class would immediately conclude that there were enormous differences in what students were learning and how they were learning it. One reason Piaget's theory has been so attractive to educators is that it deals with this obvious dimension of individual differences. Cognitive psychology provides a way to concep-
tualize age differences without recourse to the notion of rigid domain-general stages.

A cognitive psychologist might phrase the differences in this way. Younger children have less elaborate or complex schemata for political, social, or economic events, and for geographic structures than older children. They bring less prior knowledge into the classroom. Some of the knowledge which they have is lacking in quality or veridicality. For example, their schema for the system of law may include the policeman as an actor who makes as well as enforces laws. It may also be that their schemata lack differentiation. For example, McKeown and Beck (1991) refer to 5th-graders' view of a "document stew." They don't distinguish between the Constitution and Bill of Rights, but see them both as important pieces of paper that have something to do with history or government. The schemata of younger children may be organized around somewhat irrelevant aspects of the subject matter when other ideas are necessary or more central. For example, Bombi and Berti (1988) and Furth (1980) point to the young child's view of transactions between shopkeeper and customer as representing the totality of the economic process. Young children do not experience any need for information about where the goods come from. If they know about factories or manufacturing at all, this schema is not linked to their schema of buying and selling.

Finally, young children are more limited in their cognitive resources. Their short-term memory spans may be shorter. They do not spontaneously employ efficient cognitive strategies, e.g., elaboration or organization of material to be remembered. All of these characteristics of young children, phrased in the language of schema theory, contribute to what the teacher experiences as lack of maturity in understanding social, political, and historical processes. Cognitive development viewed in this way is a process to which instructional experiences can make substantial contributions.

There may also be cultural groups within the schools whose prior knowledge and schemata may be differently organized (because of language differences) or rudimentary (because of limited experiences). The prescriptions given here for diagnosing schemata, providing advance organizers, using graphic techniques, and coaching for cognitive strategy use would apply especially well to these groups.

Discussion

The application of schema theory and cognitive psychology in social studies is part of a growing focus on making learning meaningful and ensuring that students are active participants, in contrast to the passive and rote learning which characterizes many classrooms. Schema theory provides a framework for recognizing differences in the knowledge with which students enter the classroom. It also provides a framework within which students can negotiate meaning with teachers in a classroom discussion, rather than simply accepting or rejecting information. Instructional methods based on schema theory seem to have particular potential for students with low learning aptitude.
Application of schema theory and cognitive psychology to social studies would suggest that instruction be structured around a small number of key concepts or schemata; that students be encouraged to make connections between bits of knowledge and between new information and existing knowledge; and that students be given explicit training in cognitive strategies for making elaborations and monitoring understanding of oral and written discourse.

There are a number of concrete steps relating to graphic or spatial learning strategies which might be explored as part of curriculum development or as strategies for an individual teacher or group of teachers. These might be any of several types, e.g., maps of a concept network showing key superordinate ideas and their links to subordinate ideas along major distinctions or dimensions of categorization, either in a large domain such as economics or in a specific text passage.

First, these models might aid teachers in extracting from either a district’s curriculum guides or from textbooks (even poorly structured ones) the key concepts or major ideas which could serve as advance organizers for student instruction. For example, what are the basic ideas in a historical episode which relate to the desire to make students proud of their heritage as Americans? (See Brophy, 1990 for an outline of such key ideas relating to Native Americans and to the establishment of the United States as a nation.) Not every aspect of an episode will be equally important. In some cases the setting along a time dimension would be important; in other cases the location of the episode in a particular region of the country or of the world would be essential while time would be less important.

Second, these graphic strategies have considerable potential as a way to elicit elementary and secondary students’ background knowledge. For example, what are the major schemata or cognitive representations which the student has brought into the discussion of events during the Revolutionary War or the characteristics of deserts or the meaning of the term “human rights”? How are concepts linked? These models might serve as the impetus for assessing the steps students commonly use in decision making.

Third, these models might serve as the basis for specific lessons in which elementary and secondary students would be asked to develop such models either individually or in groups as ways to elaborate and structure their own learning in a meaningful way. In the study of controversial issues, separate concepts maps might be developed for the issue seen from contrasting points of view. Concept maps can also be used to give structure to discussions of attitudes and values.

Fourth, these models might serve as the basis of evaluation or assessment techniques, as prompts for interviews or the basis for defining complex performance on either paper and pencil or computer assisted measures (Torney-Purta, in press).

The vital principle in using spatial learning techniques and cognitive strategy training in any or all of these ways is that they be seen as a component of
the application of schema theory to improve the meaningfulness of learning and not as tricks for improving rote memorization of facts.

The conceptualization of learning in social studies in relation to schema theory has pitfalls as well as promise. Students' background knowledge is often very fragmentary, and even with many assurances that teachers want to know what they think, young people believe that the teacher really has a right answer in mind. Concept mapping and explicit construction of models require additional effort on the part of teachers and students. Why not just write the essay or take the test and get it over with, rather than completing a concept-map first, many students will ask. Some individuals are more comfortable with graphic approaches than others. There are some areas where schemata or concept maps may lead to less (rather than more) elaborated or meaningful understanding and remembering. There may be a higher order thinking skills which are slighted when the focus is on understanding explicit meaning in text and linking new information to structures in order to remember it better. More research on schema theory in social studies could identify and illuminate these problems and possible solutions to them.

These approaches and techniques may have unintended negative consequences in a district where performance is assessed solely in multiple choice tests. Note the research that learning of details or verbatim learning is lower after study of concept maps. Learning about all the alternatives and all the possible links may actually make the student less able to choose a "single best answer."

Cognitive psychology and schema theory are not panaceas for improvement in social studies education. Their potential contributions are ripe for exploration, however.

References


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An Analysis of the Social Science and History Concepts in Elementary Social Studies Textbooks Grades 1-4

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West Virginia University

Abstract

Social studies in the primary and elementary schools is often rationalized as providing a foundation in content for junior and senior high students. In this study the history and social science concepts in five selected primary series are identified and analyzed by discipline, for presence, and for sequencing across series. The implications of the omissions and lack of systematic presentation of the disciplines are discussed and related to the needs of cognitive psychology, the spiral curriculum, and standardized testing.

Introduction

The elementary social studies curriculum is receiving much criticism and many suggestions for changes. The present social studies curriculum has been described as having an outdated philosophy and lacking a sound psychological basis. (Akenson, 1987; Engle & Ochoa, 1986; Hartoonian & Laughlin, 1986; LeRiche, 1987; Morrisett et al., 1980; Superka & Hawke, 1980). Other critics have approached the curriculum by examining the content of the textbooks and concluded that the books are superficial and bland in their treatment of topics. (Larkins et al., 1987; Woodward et al., 1986). This research examines the content of elementary textbooks by looking at the concepts from the social science disciplines that have traditionally provided the knowledge base for social studies. It seeks to find what concepts are presented at each grade and draws implications concerning the instruction and curriculum presented by the elementary texts examined. The study is based upon two assumptions: 1) interest in and motivation to study a subject is related to the ability to understand what is presented; and 2) the use of curriculum and psychological theories contributes to better understanding.

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Questions Being Examined
There are four specific questions being asked about the concepts in the primary textbooks.

1. Are concepts from all of the academic disciplines represented in the primary textbooks?
2. Are the concepts fundamental to the academic disciplines that form the knowledge foundation of the social studies?
3. What are the most frequently appearing concepts from history and the social sciences presented in the primary textbooks?
4. Is there an agreement on which concepts to include and the sequence of the concepts in the selected texts?

The Sample
The sample for the study is the first through fourth grade books in five elementary social studies series published between 1983 and 1985. Four of the series (Laidlaw, Heath, Silver Burdett, and Scott, Foresman) are widely used in the U.S. The fifth series produced by Follett was completed shortly before the sale of the company and has not been as widely adopted as the other four. However, the major author was developing a new series for another publisher and so was included for that reason. All of these books were readily available to the researcher and were being used by teachers in nearby school systems.

Procedures
The definition of concept applied in the study is that of Gagne (1970), a class of objects or stated another way, a noun classification based upon common characteristics. The definition is used in the many research studies on teaching concepts and is also the same definition that Stanley (1984) reports is used by the authors of many social studies methods textbooks. Therefore, it is assumed that the definition is understood by social studies educators, teachers, and publishers when applied to instructional and curriculum issues. The use of this definition allows for the creation of a list of fundamental concepts derived from listings in social studies methods books. This procedure is used since only the professional organizations of geographers and economists have published guidelines identifying the fundamental concepts of their respective disciplines to teach to children. A list of fundamental concepts of the academic disciplines was created by combining the concepts identified by Banks (1977), Ellis (1981), and Michaelis (1988). All of these authors provide a large list of sample concepts for each discipline.

The researcher reads the text of each book and records all of the social science and history concepts that are named. The presence of the concept in the text is what is recorded, not the number of times a concept appears in a single book.
Rules governing the recording of the concepts include:

1. Concepts are not combined or grouped together based upon a common root definition. The single exception is the plural and singular of a concept, which are counted as identical. Therefore, if either the word "immigrant" or "immigrants" appears in a book, the concept immigrant is recorded for the book while the word "immigration" is counted as an additional concept.

2. The concepts are grouped into the academic disciplines of anthropology, economics, geography, history, political science, and sociology. If a concept is identified with two or more of the disciplines it is recorded in all of its possible discipline classifications.

3. The concepts are classified into those that are fundamental to the discipline and those that are not fundamental or on the list derived for the study.

The researcher and a doctoral student with an emphasis in social studies each examined the same two textbooks applying the procedures for identifying and classifying the concepts. A comparison of the results found a 95% agreement in identification of the concepts and classification by discipline.

Data Analysis

A total of 998 concepts from all of the academic disciplines are present in the primary textbooks of the series. Table 1 clearly illustrates that there are considerable differences in the representation of the disciplines. Geography concepts account for a total of 49% of the concepts in the primary books. Economic concepts make up the second largest group or 22% of the total concepts. Political science ranks third with 15%, while History and Sociology represent 9% and 6% of the total.

Economics clearly dominates the content of both the first and second grade books. In seven of the 10 books more than 40% of the concepts are economic. With the single exception of the Scott, Foresman series the third and fourth

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Follett</th>
<th>Heath</th>
<th>Laidlaw</th>
<th>Scott</th>
<th>Silver</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>No. %</td>
<td>No.</td>
<td>No. %</td>
<td>No. %</td>
<td>No. %</td>
</tr>
<tr>
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<td>65</td>
<td>81</td>
<td>43</td>
<td>79</td>
<td>53</td>
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<tr>
<td>Political Sci.</td>
<td>17</td>
<td>9</td>
<td>26</td>
<td>14</td>
<td>18</td>
<td>12</td>
</tr>
<tr>
<td>Economics</td>
<td>31</td>
<td>16</td>
<td>49</td>
<td>26</td>
<td>36</td>
<td>24</td>
</tr>
<tr>
<td>Sociology</td>
<td>11</td>
<td>6</td>
<td>9</td>
<td>5</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>History</td>
<td>6</td>
<td>3</td>
<td>22</td>
<td>18</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Totals</td>
<td>189</td>
<td>187</td>
<td>148</td>
<td>221</td>
<td>253</td>
<td>998</td>
</tr>
</tbody>
</table>

Table 1
Total Number and Percent of Concepts in Textbooks by Publisher and Discipline
grade books are clearly the domain of geography. Geographic concepts in the third grade books ranges from 44%–73% of the total number of concepts. In grade 4, geography concepts range from 46%–73% of the total concepts per book.

There are large differences in the number of concepts presented by the different publishers. Silver Burdett is the series with the greatest total number of concepts presented to students. The Scott, Foresman series has the most balanced presentation of the disciplines. Laidlaw, with a total of 148 concepts, presents the fewest number of concepts. However, Laidlaw does not have the lowest number of concepts in each of the disciplines.

The reader is cautioned not to equate quantity of concepts with a measure of quality. All concepts are not of equal importance in learning the content of an academic discipline. Some concepts are considered fundamental to a discipline because they provide the basis for true and logical relationships with other concepts. Gagne (1970) calls these true relationships rules while social studies educators refer to them as generalizations. Gagne (1970) explains that these generalizations are a higher level of learning in his hierarchy and must be applied to solve problems. Additionally, concepts may be correctly or incorrectly presented in books. It is the presence not the presentation that this study addresses.

Table 2 shows the number and percent of fundamental concepts in the disciplines present in each of the elementary series. The majority of the concepts are not those identified by the authorities as fundamental to the disciplines. Four of the series have from 20%–25% of their total concepts as fundamental while the Heath series has only 13%.

In reporting the most frequently appearing concepts the criterion level of five appearances is used because five series are in the study. One sociology, two history, eight political science, 13 economic, and 24 geography concepts totaling 45 different concepts meet the criterion level.
Table 3  
Most Frequently Included Geography Concepts

<table>
<thead>
<tr>
<th>No.</th>
<th>Concept</th>
<th>Grade range</th>
<th>No. publishers</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>mountain</td>
<td>1–4</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>plain</td>
<td>1–4</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>river</td>
<td>3–4</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>continent*</td>
<td>2–4</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>equator*</td>
<td>2–4</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>suburb</td>
<td>3–4</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>transportation*</td>
<td>2–4</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>community*</td>
<td>2–4</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>North pole</td>
<td>2–4</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>South pole</td>
<td>2–4</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>lake</td>
<td>1–4</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>atlas</td>
<td>1–4</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>cardinal directions</td>
<td>2–4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>cities</td>
<td>3–4</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>climate*</td>
<td>3–4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>compass rose</td>
<td>3–4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>desert</td>
<td>3–4</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>hemisphere</td>
<td>3–4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>in-between directions</td>
<td>3–4</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>ocean</td>
<td>2–4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>peninsula</td>
<td>3–4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>plateau</td>
<td>3–4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>population*</td>
<td>3–4</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>scale</td>
<td>3–4</td>
<td>4</td>
</tr>
</tbody>
</table>

*indicates fundamental to the discipline

Table 4  
Most Frequently Included Economic Concepts

<table>
<thead>
<tr>
<th>No.</th>
<th>Concept</th>
<th>Grade range</th>
<th>No. publishers</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>needs*</td>
<td>1–4</td>
<td>5</td>
</tr>
<tr>
<td>12</td>
<td>service*</td>
<td>1–4</td>
<td>5</td>
</tr>
<tr>
<td>11</td>
<td>goods*</td>
<td>1–4</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>wants*</td>
<td>1–4</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>trade*</td>
<td>2–4</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>natural resources</td>
<td>3–4</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>factory</td>
<td>1–4</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>farm</td>
<td>1–4</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>money*</td>
<td>1–4</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>transportation</td>
<td>3–4</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>tax*</td>
<td>2–4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>import</td>
<td>3–4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>industry</td>
<td>3–4</td>
<td>4</td>
</tr>
</tbody>
</table>

*indicates fundamental to the discipline
Table 5

Most Frequently Included Political Science Concepts

<table>
<thead>
<tr>
<th>No.</th>
<th>Concept</th>
<th>Grade range</th>
<th>No. publishers</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>law*</td>
<td>1-4</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>president</td>
<td>1-4</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>government*</td>
<td>3-4</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>citizen</td>
<td>2-4</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>nation*</td>
<td>2-4</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>rules*</td>
<td>1-3</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>taxes</td>
<td>2-4</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Congress</td>
<td>2-4</td>
<td>4</td>
</tr>
</tbody>
</table>

*indicates fundamental to the discipline

Tables 3, 4, and 5 name the concepts that appear in at least five books within the sample. The “No.” column gives the number of books that present the concept. The “No. publishers” column indicates how many of the five publishers provide the opportunity for a child to learn the concept at some time within their series. The column “grade range” tells at what grade levels the concept appears in the books. The asterisk indicates a concept is on the list of fundamental concepts.

The specific concepts of mountain, plain, and river appear more frequently than other geographic concepts. Five additional landforms or bodies of water are included less frequently. They are lake, desert, ocean, peninsula, and plateau. The eight concepts of North pole, South pole, atlas, compass rose, hemisphere, cardinal directions, in-between directions, and scale are associated with maps. Suburbs, communities, and cities are all concepts from settlement geography. Other most frequently included geographic concepts are continent, equator, transportation, and population.

The two economic concepts of needs and services appearing in 12 books are the most frequently included concepts. Wants, trade, natural resource, factory, farm, money, transportation, tax, import, and industry appear less frequently.

The political science concepts in order of frequency of appearance include law, president, government, citizen, nation, rules, taxes, and Congress. Population, a concept also included with geography, is the only sociology concept that attains the criterion level. The discipline of history has the two concepts of change and immigrant that meet the criterion.

The publishers fail to agree on which concepts to include in grades 1-4. Of the 48 most frequently appearing concepts, only 15 appear at least once in all of the five series. The economic and political science concepts are more likely to appear in all of the series than are the geography concepts. The publishers also do not agree on the grade placement of any individual concept. All of the concepts appear in books at several different grade levels.
Discussion

Those who claim that textbooks are all the same and that there is a common curriculum in social studies at the primary level find little in this study to support their position. Although there may be a commonly offered theme called the expanding environment, as suggested by the text titles, the presentation of knowledge as indicated by the concepts of the academic disciplines reveals a great variety and little agreement. The assumption that the social studies books combine the academic disciplines is not supported by the study. The large number of concepts from geography and economics clearly indicates a curriculum dominated by these two disciplines. Most surprising is the lack of sociology concepts in the elementary books. Since the titles of two grade levels often deal with families and neighborhoods, it was expected that sociology concepts would be better represented in these books. Only the Scott, Foresman series appears to attempt to balance the exposure of students to the various disciplines. Yet again, the discipline of sociology has the fewest number of concepts. The argument that the primary grade social studies learning is necessary for the vocabulary and concept formation of students in the middle grades and secondary schools is difficult to make when many of the disciplines are not presented in the primary books and when there is so little agreement on what concepts to include.

Large numbers of concepts are presented by all of the publishers. While the actual number or percent of the fundamental concepts is low, a low total number of concepts cannot be interpreted as a poor presentation of concepts. Using specific concepts as examples of the fundamental concepts is a sound procedure. Data from this study does not address the quality of the presentation of concepts. However, the study does suggest that more consideration should be given to the choice of the fundamental concepts included within the series. It seems strange that so many of the geographic concepts are landforms and bodies of water and associated with the map, while the fundamental concepts of map and landform do not appear frequently in the textbooks. Another important concept missing from the economics list is scarcity. One of the basic assumptions of economics is the scarcity of resources. The books include wants, needs, and resources yet the important fundamental concept of scarcity is not named for the children. Citizenship in the textbooks has been criticized as overemphasizing conformity to authority (Engle & Ochoa, 1986; Larkins, et al., 1987). The listing of most frequently appearing political science concepts is largely devoted to laws and authority, while the concepts of rights and individual decision making so important in a democracy are not examined in all of the series. This study illustrates that important content necessary to attain the knowledge, thinking skills, and values needed in social studies is missing from the primary textbooks.

The large number of concepts and the low frequency of multiple presentation within a series indicate that few concepts are presented at multiple grade levels. Therefore, the series provide little opportunity to review con-
tent and expand the content at subsequent grade levels. The lack of reinforcement of learning between grades is a serious problem. Presenting a concept at various grade levels using ever more abstract examples is commonly referred to as the spiral curriculum and discussed in many social studies methods books. The continued use of the spiral curriculum in methods textbooks and subsequent editions of the same text implies that the authors believe that the idea has merit and is present in the social studies series. This study's finding of only a small number of occurrences of the same concept at different grade levels indicates that the publishers do not view the spiral curriculum as of as much importance as do the writers of the methods textbooks.

The fact that there are few concepts which textbook publishers agree are important to teach to primary students, and the fact that many of the concepts are not fundamental to the academic disciplines, mean that children are receiving little help in organizing their knowledge. This lack of systematic presentation of the concepts and their relationships provides for a disjointed presentation. This disjointed presentation violates basic principles of information processing. It severely handicaps students in recalling what they have learned and in applying their knowledge to the world outside the specific lesson. Thus the textbooks do not encourage transfer of learning.

Academic disciplines have specific vocabularies that are necessary for citizens to learn so that they will be able to question and understand the specialist they hire or otherwise encounter through the media. Clearly, there is a need to pay greater attention to the content of the disciplines presented in the elementary textbooks. Along with reexamining the content of the disciplines, the presentation of the concepts should be such that it will assist the student to organize and relate the knowledge within the framework of learning theories. Only in this way will students be able to remember what they are taught and have the possibility of relating the lessons to previously learned knowledge and to the real world.

Those who write and interpret the standardized tests for social studies should also find this study of interest. If they seek to ask content questions from any of the academic disciplines that have traditionally provided a foundation of knowledge for the social studies, they must write questions that examine the content presented to all of the students. Since there is little agreement among the books on the content and vocabulary they present, the range of fair questions on social studies content is quite limited.

This study, with its examination of the specific knowledge concepts presented in the primary textbooks, reveals two important findings. There is an absence of a unified curriculum theory or philosophy among the publishers of the texts. There is also an absence of the use of psychological theories of learning in the primary textbooks. The small number of fundamental concepts indicates that the level of learning with which students are presented in the texts tends to concentrate on isolated learning rather than on the more challenging and interesting concluding and problem solving.
These findings support the conclusions of other researchers and critics who claim that elementary social studies books lack a sound psychological basis and lack depth in the presentation of knowledge.

References


Appendix A
Textbooks Examined

  Homes and Neighborhoods
  Neighborhoods and Communities
  Communities Large and Small
  Regions Near and Far

  Home and School
  People in Neighborhoods
  Our Communities
  World Regions

  Living in Families
  Living in Neighborhoods
  Living in Communities
  Living in World Regions

  Families and Friends
  Neighborhoods Near and Far
  City, Town, and Country
  Regions

  Families and Neighborhoods
  Neighborhoods and Communities
  Communities and Resources
  States and Regions
Book Reviews


Reviewed by Susan Britton, 737 East Building, New York University, NY, NY 10003.

The chambered nautilus is a mollusk native to the depths of the South Pacific. For hundreds of millions of years the ancestors of this creature have produced a shell of pearly chambers spiralling outward in mathematical perfection. A humble form of life, the nautilus is curiously diligent: each day a growth line of calcium carbonate is created; with the passing of each lunar cycle a new chamber is formed. Geophysicists, studying the fossils of the chambered nautilus, noted only nine growth lines per month in the earliest specimens and 30 in the modern versions. Corroborated by evidence from other sophisticated, contemporary scientific disciplines, the historical records revealed in the nautilus shell are shown to be accurate. The moon, indeed, did once revolve more rapidly around the earth than it does today. The story of the nautilus shell is both intrinsically poetic and narratively engrossing. For Daniel Botkin it’s much more. In his book, *Discordant Harmonies: A New Ecology for the Twenty-First Century*, Mr. Botkin finds in the nautilus tale the precise blend of lyric serendipity, patient observation, and high-tech snap-crackles-and-pop to imaginatively reinforce his thoughtful argument.

According to Daniel Botkin, society’s contemporary environmental predicament is largely a matter of metaphoric approach. While not discounting the grave concerns threatening global ecology, his central message is one of plucky optimism and his exhortation is to shed our faulty and damaging inherited notions about the natural world and replace them with new and improved ideas. From his perspective, this irrational clinging to antiquated myths and metaphors is society’s collective queasiness; a weak-kneed, backward glance before embarking to the strange territory of the future.

The future is a coupling of science and art. Armed with computers, genetic engineering, and satellite sensors, and rich in creative insight, Botkin sees the new wave environmental movement as necessarily merging the cults of Dionysus and Apollo. Rock solid scientific extrapolations do not dispel the wondrous charm of the moon in a nautilus shell. His is a generous, varied, and open-ended prescription. And he wants it to work.

The quagmire of outmoded assumptions from which we are urged to escape is not only holding back the uninitiated, Botkin notes, but on the contrary, it’s frequently the scientists, conservationists, and wildlife managers themselves who are most obviously stuck. Consider the lexicon of such professionals in describing wildlife and wilderness areas: steady-state ecology, optimum sustainable yield, classic static stability, natural ecological climax,
maximum carrying capacity. Such concepts are disturbingly inappropriate for the continually and unpredictably changing natural world depicted by Botkin. As vestiges of ancient ideas, curiously interacting and reinforcing one another, affecting individuals and society through countless tendencies and prejudices, pre-scientific and yet embedded in the science of the 20th century, they are clearly difficult to shake. Nature as the divine handiwork of God and nature as the cosmic machine are the two most powerful versions of a similar notion that has dominated humanity for many centuries: nature is orderly.

But nature is not orderly, declares Mr. Botkin. Climax forests existing in perpetuity as sublime backdrops, or predator and prey endlessly engaged in the monotonous chase echoing symmetric oscillations of the Lotka-Volterra equation are completely unnatural incidents. They are human impositions of orderliness on a world in which randomness is a factor. To adopt the book’s musical metaphor, we must listen for nature’s spontaneous jazz riff and stop straining to hear a nonexistent stately fugue.

Mr. Botkin is on firm ground in describing and criticizing the long-standing assumptions to be jettisoned. However, the theoretical foundation he offers by way of replacement is more than a little shaky. Basically, he advocates prudent and wise management by a creative scientific elite. What social machinations might have to occur for this scenario to be realized are not discussed, but he does come up with some novel metaphors. One moment we are “taking the earth’s pulse” and nature is passive and ailing, a patient requiring intensive care; next we are flying in the cockpit of the biosphere, letting up a window shade to “observe nature as it is.” His unifying metaphor of music is not clearly articulated but might be the earth as orchestra lacking a conductor. Some wise and prudent manager is always at the helm, monitoring frequencies, or waving a baton. At this point Botkin’s breezy optimism begins to grate.

A big problem is his unwavering faith in technology. He’s utterly enamoured of computers and other sophisticated devices and he can’t seem to bring himself to speak a harsh word against them. Indeed, as Botkin says, the jet aircraft is a magnificent invention of the 20th century, but to rhapsodize repeatedly, as he does, on the majestic power of the airplane is to blithely ignore the symbolic content of such an artifact. He’s unwilling to entertain the idea that more, new, bigger, better technology might not be a blanket solution. For all his creative insight and imaginative sensitivity Mr. Botkin has some definite blind spots; eventually his initial optimism grows hollow and even smack of boosterism. Social, political, and economic issues are perfunctorily mentioned but they seem to hold little interest for the author. It would be unfair to demand that he address such vast issues in any depth. They’re not his territory. But on the other hand, he’s implying that science acts in a vacuum, unaffected by such vagaries. Is that not a hopelessly narrowminded idea to be abandoned with the rest? Until, finally, he seems to
be falling into the very trap he wants to avoid; imposing an order on the natural world. In the case of Daniel Botkin it would be the order of the enlightened technocrat.

Botkin's thesis can be a refreshing antidote to the lugubrious indictments routinely supplied by various factions in the environmental movement. He's hopeful and inspired by his patient observation and deep understanding of the natural world. The delightful range of topics he discusses (from the moose herds on Isle Royale to Yosemite's Mariposa Grove to Kenya's Tsavo Park wildlife refuge to the moon in the nautilus shell) all demonstrate his skill as both a scientist and a storyteller. And his buoyancy is appealing, almost irresistible. Here's a man who obviously knows his stuff and yet he's optimistic. Creating an even more attractive argument is Mr. Botkin's tendency to absolve modern society of any collective guilt it may or may not possess regarding environmental destruction. "The comforting result is that we learn that we are not always to blame..." he states in discussing soil erosion rates. His thinking about the one-way, random, and continually transforming biosphere contains a similar moral absolution, i.e., if life changes the planet in unpredictable ways and we are life, then who's to say the way we're changing the planet is wrong.

He seems to be lacking cultural input, an understanding of the great social forces that shape civilization and alter the biosphere. For how does his model of "wise and prudent" management materialize? What is the link between his new metaphors and global resource management? What mechanisms and agencies will implement these notions? No doubt he's a tireless world traveller, but, in spite of that, he needs to get out more.

Botkin is such an American, in the good old-fashioned Yankee know-how sense of the word. He doesn't know the meaning of doubt, like so many Americans in the past; reading his book brings to mind the peculiarly American sense of illusion and spectacle. Apparently, the 1964 World's Fair in Queens contained a pavilion constructed by the Ford Motor company. Visitors viewed the history of the world; erupting volcanoes, dinosaurs, Paleolithic man, and pyramids—right on up to modern times. They were fortunate enough to drive through this marvelous panaroma in brand-new Ford Galaxy convertible, with the radio on. The new model for nature proposed by Daniel Botkin is akin to this infectiously optimistic creation from the 60s, i.e., the chaos of nature is under control with an expert at the wheel.

Reviewed by Robert P. Green, Jr., 401-A Tillman Hall, Clemson University, Clemson, SC 29634.

A recent visit to an eighth-grade U.S. History class found me settled at the back of the room listening to the lesson when, at 8:21 a.m., the loudspeaker crackled. At the sound, the teacher paused, the students rose, they all faced the flag, and—led by the principal's voice over the speaker—recited (in that detached tone of voice that can only be found in like situations) the pledge of allegiance. The whole routine took place without introduction or comment. Before "with liberty and justice for all" had faded away (?), the students had reseated themselves and the teacher had resumed her lesson. As my jaw lost its slack and I regained my composure, I briefly wondered if I had been transformed in time to 1930s Germany!

No, it was, indeed, the 1990s U.S.A., and I had been exposed to yet another example of those thoughtless expressions of national loyalty so frequently imposed on students by the schools. Why is this? A less-than-generous explanation (although certainly true in part), is that here is yet another means to foster control. Yet the very nature of social studies instruction (and "citizenship education") practiced in the schools is also culpable. As many critics, within and without the profession, have pointed out, social studies instruction is too often characterized by bits of information taught in isolation, without themes, without relationships. It is literal-minded. It is mindless. If social studies education is nothing more than memorization of disconnected facts, discouraging deliberation and critical analysis, it is dysfunctional as citizenship education in a democracy. This is the message that animates Joe Kincheloe's *Getting Beyond the Facts*.

Consider, Kincheloe argues, the typical teaching of American history. History as perceived by students with "a few social studies in their pasts," consists of "politics and wars with an occasional financial panic tossed in." It is a body of "essential facts" about which students are asked convergent questions. They are almost never challenged to connect events, examine continuity between events, or participate in history as process. The tendency of teachers to teach disconnected facts is, of course, promoted by the broad use of standardized, multiple-choice tests. Yet "the restrictions on the imagination, the literal-mindedness, the over-simplified perspective on cause and effect, and the distortion of the historical process are only a few of the liabilities resulting from the fact-oriented teaching of history."

More serious is the promotion of a simple-minded view of America, an "ethnocentric morality tale," which fails to engender a reasoned respect and appreciation of America. "The expectation that students will emerge from
the series of elementary and secondary history classes appreciating America is not based upon their insight—gained from critical inquiry and reflection—into the noble principles on which the nation was founded; rather, it is based upon a series of 'moral' (i.e., military) victories and a host of homilies which have been dunned into the students. The result is neither a deep understanding of nor a respect for basic American principles but merely a superficial expression of national loyalty.” Thus our zombie-like, mindless recitation of the pledge of allegiance.

In short, Kincheloe suggests that many social studies practices today undermine the health of a democracy. Through a literal-minded orientation toward “essential facts,” teachers condition students to the uncritical acceptance of certain beliefs and values. Yet the role of the social studies teacher in a democracy should be “to help provide students some distance between themselves and their society—to let them stand back and examine the world from new perspectives.” Reflecting his commitment to critical pedagogy, Kincheloe proposes that teachers “operate from a liberationist perspective.” This means helping students “gain the capacity for objectivity by examining the beliefs which are naturally imposed upon them by their environment.” Such an examination better allows them to control their own lives as they understand the forces that limit that control and, in the process, “think about what makes for a good and just society.” Students thus see themselves as participants in the world, not merely forced consumers of information about it.

*Getting Beyond the Facts* is not another “how to” book. Rather, it is designed to help teachers conceptualize and personalize the important relationship between content and method. Decrying “the quest for the immediately applicable” that has promoted the “deskilling” and “trivialization” of social studies instruction, Kincheloe attempts to reaffirm the teacher's role as creator of “an environment in which scholarship can thrive and analytical thinking can develop.” Sound idealistic? Perhaps. But Kincheloe provides plenty of ideas to foster just such a classroom environment. They do not, however, come in recipe fashion.

The book is a collection of essays examining the field of social studies from teacher training to the elementary and high school classroom. The essays are loosely organized around themes ranging from “Educating the Social Studies Teacher” and “Perspectives on the Social Studies Disciplines” to “TV and the Social Studies” and “Current Events.” There is some repetition. An irritating absence of scholarly notations detracts from a number of the essays. Particulars found in some essays (written in the early 1980s) are dated. Yet the themes explored are timeless. For example, the chapter on “Values in the Social Studies” is actually a series of essays dealing with “value” issues: diversity, the New Right, ethnicity, patriotism, and so on. Some of the essays focus on events of the early 1980s. Throughout, however, Kincheloe suggests the pitfalls of simplistic views of knowledge, the absence of introspection, and unexamined assumptions. The essays are models of critical think-
ing, and in many cases do indeed suggest strategies that foster the analytical classroom.

One needn't be a "critical theorist" to recognize the value of both the arguments Kincheloe makes and examples of thought-provoking teaching strategies he provides. His chapter on "TV and the Social Studies: Friend and Nemesis?" is a case in point. We live in the "Information Age," yet much of the information to which people are exposed is designed to obfuscate rather than clarify. It is misinformation or disinformation. Television—arguably the most important aspect of the modern information environment—subverts many of the fundamental characteristics of logical thought. "The information environment which television helps to create fosters a nonanalytical, discontinuous set of mental experiences designed primarily for immediate gratification," argues Kincheloe. "All of us often overlook the packaging of TV, the shortness, the slickness, the commercial half-truths, the attention grabbing, the accent on the visual, the passive view of the watcher, and the manipulative intent. The in-depth analysis granted by the printed word is forsaken by TV for the spectacular and the concise." Television discourages conscious deliberation on the part of the citizen as well as the consumer.

Yet social studies teachers can use television both as a subject of critical analysis and an aid in understanding our society. Two simple yet effective ideas (among several) suggested by Kincheloe reflect this potential. On one hand, students can be required to analyze television advertisements. "Students are asked to view TV commercials from the perspective of a marketing agent, and are thus challenged to figure out the values to which he or she is appealing and what groups in society he or she is trying to reach." On the other, television programs themselves can be studied as reflections of societal values and assumptions. Consider, for example, the historical, anthropological, and sociological themes that can be drawn from analytical studies of popular television shows. As part of a study of women in American society, programs such as "Bewitched" and "I Dream of Jeannie" from the 1960s, "Charlie's Angels" and "Three's Company" from the 1970s, and "Designing Women" from the 1980s can be used to explore changing patterns of sexism or the impact of the women's movement on attitudes. Contrasting "Leave it to Beaver" from the early 1960s and "One Day at a Time" from the 1980s can provide insights into American self-images. In this fashion, the content of television can be used to mitigate the deleterious effects of the medium.

The central message of Getting Beyond the Facts is, as the title suggests, the need for social studies teachers to push beyond "the facts." The central method is through the promotion of analytical and critical thinking. The book provides lively and thought-provoking reading while it suggests lively and thought-provoking teaching. It speaks to both the social studies teacher and the social studies teacher trainer. It is an important contribution to social studies literature.
Kieran Egan’s Response to *The Abandonment of Social Studies?* by Bryant Griffith.

Oh dear. Perhaps it would be better to settle for the Hollywood adage that there is no such thing as bad publicity. Perhaps being noticed at all is better than being ignored. But it is hard not to complain when what one has written is so strangely interpreted as in Bryant Griffith’s “The Abandonment of Social Studies?” It seems to me to represent my views and arguments inaccurately at every turn, even to the point of seriously inaccurate quotation. (I couldn’t believe I could have written that the curriculum would be what teachers, who are not professional storytellers, tell in class. I didn’t.) One might accept even that without complaint if the representation of my views did not make me look like a raving idiot. (It may, of course, be the case that I am a raving idiot, but I think I can demonstrate that I am not the kind represented in Griffith’s article, and that I do not hold the views ascribed to me—where I can manage to make out what those views are.)

It is quite impossible to deal with each inaccuracy, as this would take up space far beyond what the editor’s hospitality could permit. But perhaps I can begin by acknowledging that I have advocated abandoning social studies as a distinct subject in the curriculum. But I have done so on the condition that it is replaced with social studying the whole curriculum. That is, I have argued (1988, 1989) that the ideal we find expressed in John Dewey’s writings for social studies—that it serve as a humanizing core for the curriculum which would ensure that all studies would be tied to the living social experience of the child—is not being adequately achieved. What we have today is a largely separate curriculum area with its own content, and it is not serving that general humanizing, integrating role that Dewey argued for. How I see that social studying of the curriculum being achieved without a distinct social studies curriculum cannot be developed here (see Egan, 1988, 1990), but this crucial part of my argument for abandoning social studies is nowhere evident in Griffith’s article, and seems to me to undermine his use of my work as a stalking-horse for his own proposal.

I didn’t realize before reading Griffith’s article that I had anything so grand as an epistemology of children’s knowledge. So in his article my supposed epistemology seems to consist entirely of a belief in the ubiquity of binary opposites in children’s thinking (and Wittgenstein?!) I do indeed discuss binary opposites—drawing on Levi-Strauss—as one of a number of common features evident in children’s sense-making. But I observe only that children commonly use them, and that teachers might make topics more accessible and meaningful if they built the content on such opposition. I do also and everywhere note that the point of using such binary opposites is to mediate between them, that the mediation is the point. From Griffith’s account I seem to have some wild-eyed proof of binaryism, representing the world and all experience in binary terms.

I discuss binary opposites almost entirely in terms of providing access to
topics for children up to about seven or eight years. Thereafter I argue that such concepts become increasingly less significant (1990). The two books Griffith draws on, *Teaching as Story Telling* and *Primary Understanding*, both deal only with ages below even or eight. He applies what I say in those books to high school age students, and refers a number of times erroneously to my claims about children from eight to ten. Clearly he has seen some other pieces I have written about older children (concerning the Rhetoric), but simply collapses them all together as though age were irrelevant.

There are many claims made in the article that I find simply bizarre. I have $100 for the first person who can show me where I recommend replacing social studies with rhetoric. Rhetoric?! And another hundred for the person who finds where I recommend a Great Books curriculum for grades 10 through 12. (The volume in the set I am writing that will refer to senior high school students, to be called *Philosophic Understanding*, has just been started. Perhaps Griffith is being prophetic, but I shall be very surprised if I recommend a Great Books curriculum.) The views he ascribes to me about stories, I find largely incomprehensible.

I know I should be more appreciative, especially as Griffith is apparently complimentary about some of the ideas I am supposed to hold. But after having written at length about the educational folly that follows from accepting the common distinctions between the process and product and from imagining that one can sensibly develop generic skills apart from particular knowledge, it is disturbing to find myself claimed as an ally against the old fortress walls of how and what questions, in favor of why questions. (There’s another $100 for this one.)

Perhaps I might conclude by emphasizing, as is emphasized on book covers and everywhere I discuss teaching as storytelling, that my concern is not at all with telling fictional stories, but with how to use the power of the story-form in order to teach the content of mathematics, science, language arts, and social studies in ways that can be more engaging and meaningful to young children. From Griffith’s article I get no hint of a sense of this, to me, crucial distinction. Griffith’s own proposals, drawing on Collingwood, I must leave for others to evaluate. I find what he claims about my work a mixture of the inaccurate, the incomprehensible, and the confused.

References


Dr. Egan’s response to my article indicates just how difficult it is to open communication between two paradigms. It seems that both discussers are passing one another in a dark tunnel. Nevertheless, there are a couple of points I would like to raise to take the discussion back to the issues I raised.

There is an important philosophical issue in the distinction between implicit ideas and explicit ideas. Often, articles are written about thinking that use the epistemological conceptions of another paradigm implicitly. This seems to me to necessarily lead to confusion and to the necessity of making explicit what is implicit. For example, if one adopts an epistemological model that defines knowing in positivist terms yet calls for a humanistic approach to understanding then confusion results. This is an important point if one is interested in conceptual change and epistemology. Egan’s reply indicates that the need to clarify this point and to understand paradigm shifts is crucial if serious discussion is to take place about thinking and understanding. The argument in the community should be ‘What is this new paradigm, and how do we understand it?’

Lastly, I certainly do not want to claim any one hundred dollar prizes, but the points raised by Egan on rhetoric come directly from a paper he gave at the University of Calgary last summer at the Summer Institute in Early Childhood Education.

Bryant Griffith, March 19, 1991
NCSS/CUFA 1990 Annual Meeting
Anaheim, California

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