

Recent Developments in Geographic Education

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A number of significant changes have occurred in K-12 geography in U. S. schools in the last decade. This paper reviews these key changes beginning with the realization that significant numbers of Americans were geographically illiterate, responses by the national geographical organizations, and the development of the National Geographic Society "Geographic Education Program".

Recent initiatives stress the autonomy of geography as a discipline and suggest that the subject be taught outside the context of the social studies. It is argued in this paper that separation of geography from the social studies would be counter-productive.

Finally, social studies teacher preparation in U. S. schools must be more effective in enhancing geography-specific teaching methods and learning theories, an activity not usually developed in social studies methods course.

I. Introduction

Geography as a subject in K-12 schools in the United States finds itself in the spotlight of educational reform. Following a decade of widely expressed concern about the demise of the subject in schools and equally alarming revelations about the lack of geographical knowledge in the general public, a genuine renaissance is underway in geography.

Geography in 1990 was identified as one of five core subjects specified in the National Goals for Education enacted by the 50 state governors and the Department of Education. It is a subject that is receiving renewed attention in the schools, not only as a separate offering but, more importantly, as a significant body of skills and concepts that are invaluable in the enhancement of virtually every other social studies subject, including the newly

emerging interdisciplinary subjects of global education and environmental studies.

Geography at the college and university level, as well, has made advances in recent years. Despite the discontinuance or down-grading of a number of departments of geography in many prestigious centers of higher education in the United States in the last two decades, more and more prominent geographers are proclaiming the pressing need to have geography as a discipline in academia. Doreen Massey, a leading British geographer, has emphasized that "geography matters", and that the discipline provides a "central insight of the contemporary human sciences".¹ Massey's remarks are found in a 1989 collection of articles, edited by Derek Gregory and Rex Walford, aimed at the enhancement of geographic education. They validly contend that the study of geography in schools and in higher education is a common enterprise. Further, they see a "linking thread which ties together the different curiosities about the world of the primary-school child and the post-graduate researcher".² Education in geography, then, is a continuum stretching from a child's first awareness of things spatial to the researcher on the frontier of some advanced aspect of geographical knowledge. The challenge to the discipline that follows is to insure the appropriateness, significance, and relevance of geographic education at all points along this continuum. Efforts must continue in the United States to insure the strength and continued growth of geography at all levels of education.

II. Background to the Geographic Education Movement in the United States

A Gallup Poll taken in 1988 pointed out that most adults in the United States consider knowledge of geography important and that the location of a country does make a difference. The poll went on to report that these same adults lacked many of the basic geographic skills necessary to make informed judgments about national and world affairs.³ They are, to use a now well-worn phrase, "geographically illiterate". Geographic literacy, or the lack of it, became the rallying cry for change in geographic education in the 1980's. It continues to guide the efforts of, for instance, the National Geographic Society's "Geography Education Program", a vast undertaking intended to improve geographic instruction in

the schools.

A report in 1979 on President Jimmy Carter's Commission on Foreign Languages and International Studies concluded that American efforts in international education had fallen short, and that foreign policy, foreign trade, and our relations with other nations could be jeopardized unless these deficiencies were rectified. At the same time, a survey of 3000 undergraduate students at 185 colleges and universities was conducted by the Educational Testing Service. The students scored a disappointingly low 43 percent on global understanding tests. It was revealing that most of the questions on the test were geographical in nature, but 60 percent of those tested had never taken a geography course.⁴ It became abundantly clear by this time that change was needed in geographic education.

Evidence was also coming to light suggesting that geography in higher education was suffering. A 1982 article in the *Chronicle of Higher Education* contended that geography had become a "beleaguered discipline" scarred by department closings and enrollment declines. The discipline was seen by many at that time to be a "loosely joined group of specialists that have little in common".⁵ Revelations such as this only heightened the level of concern about geographic illiteracy and the low status of the subject in schools.

In 1984, further evidence was offered to reinforce claims of widespread deterioration of geographic knowledge. In that year, a survey was taken of North Carolina college students, and one of the questions asked them to name the country drained by the Amazon River. Only 27 percent correctly answered the question. The same question was asked in a 1950 survey of college students in the same schools. Correct answers were given by 77.5 percent in the 1950 survey.⁶ Other surveys of geographical knowledge were yielding similar results. In one survey in Texas, 20 percent of the elementary school students mistook Brazil for the United States. On one map test, a sector of Central America was labeled as the U.S.S.R., and Canada was labeled as Africa.⁷ Another study involved first-year college students at a small Indiana college in 1984, in which 95 percent of them could not locate Vietnam on a map. One particularly pointed outcome emerged from a study of Washington, D.C. high school students in which 26 percent of the students could not shade in the United States on a map. In an isolated case, the 18-year-old child of a National Geographic Society

employee was considering applying for college and asked her mother: "Where's Ohio? Is Ohio in Illinois?"⁸ Outcomes such as these were obviously disturbing to educators and parents alike. The ultimate attacks on geographic illiteracy came from two major fronts. First, it was clear that geography in higher education needed strengthening. There was a groundswell of support for the belief that a resurgence in geography in the K-12 years could not occur unless geography was revived in the universities and colleges. B.L. Turner, chair of the Graduate School of Geography at Clark University, writing in 1987, summarized a perplexing dilemma in American education generally and geography specifically :

It is ironic that every major institution of higher learning and research in Europe—Cambridge, Oxford, the Sorbonne, Lund, Trier, the Soviet Academy of Sciences—has a large and strong department of geography. But try to find one at Yale, Princeton, Stanford, Michigan, or Northwestern Universities. In Europe, geography is considered an essential part of everyone's education at all levels, including primary school.⁹

Ronald F. Abler, a prominent American geographer and currently Executive Director of the Association of American Geographers, echoes Turner's concerns. Abler pointed out that universities in other countries take geography seriously and still hold geography to be a basic and central discipline, insisting that their citizens acquire geographically sophisticated visions of the world. "Most Americans ignore geography", Abler states, and he calls for a complete reversal of that attitude.¹⁰

It remains to be seen how geography will fare as an academic discipline in American universities and colleges. There are murmurs of change, but they are soft and nearly inaudible. However, there are particular colleges and universities where efforts in geographic education are underway to enhance the discipline in the K-12 years. This is the second front in the battle against geographic illiteracy: the enhancement of geography in the K-12 classroom. A great number of engagements have occurred, and many advances have been made.

III. The "Fundamental Themes in Geography" and the National Geographic Society's "Alliance" System

In 1984 a joint committee of geographers, representing the Association of American Geographers and the National Council for Geographic Education, published a slim monograph entitled, "Guidelines for Geographic Education : Elementary and Secondary Schools". The document was viewed by the committee as a "current statement for improving geographic education in the United States".¹¹ There are five fundamental themes in geography articulated in the document. The five themes are listed here, along with part of their description :

- 1) **Location : Position on the Earth's Surface.** Absolute and relative location are two ways of describing the position of people and places on the earth's surface.
- 2) **Place : Physical and Human Characteristics.** All places on the earth have distinctive tangible and intangible characteristics that give them meaning and character and distinguish them from other places.
- 3) **Relationships Within Places : Humans and Environments.** All places on the earth have advantages and disadvantages for human settlement. High population densities have developed on flood plains, for example, where people could take advantage of fertile soils, water resources, and opportunities for river transportation. By comparison, population densities are usually low in deserts. Yet flood plains are periodically subjected to severe damage, and some desert areas, such as Israel, have been modified to support large population concentrations.
- 4) **Movement : Humans Interacting on the Earth.** Human beings occupy places unevenly across the face of the earth. Some live on farms or in the country; others live in towns, villages or cities. Yet these people interact with each other : that is, they travel from one place to another, they communicate with each other as they rely upon products, information, and ideas that come from beyond their immediate environment.
- 5) **Regions : How They Form and Change.** The basic unit of

geographic study is the region, an area that displays unity in terms of selected criteria. We are all familiar with regions showing the extent of political power, such as nations, provinces, countries, or cities, yet there are almost countless ways to define meaningful regions depending on the problems considered.

The fundamental themes in geography have effectively made their way into the K-12 school social studies curriculum and are serving as the basis for a resurgence in geography. A number of articles, monographs, and books have been published in recent years focusing on the themes.¹² The movement has been widely accepted but not, however, without some criticism. Recently, an article by Robert Harper cautioned that the five themes are not enough in themselves to serve as the basis for a "new geography". Harper suggests that the five themes be used together with traditional approaches in geography to develop a new and more meaningful geography that will be recognized as essential in the general education of American students.¹³ Harper's appeal to "traditional" approaches is tied to the classic 1964 article by William D. Pattison which articulated four traditions in the discipline of geography.¹⁴ Despite these concerns, the themes have become the conceptual basis for new K-12 geography curricula.

The new curricula is being reinforced by the National Geographic Society, its highly successful Geography Education Program, and its associated institutes for teachers.¹⁵ Created in 1985, the Geography Education Program has the goal of restoring geography to America's classrooms "so that students can gain a better understanding of their world and become effective citizens".¹⁶ The program includes five major strategies:

- 1) Grass-roots organization: The Alliances
- 2) Teacher Education
- 3) Public Awareness Activities
- 4) Educational Materials Development
- 5) Outreach to Educational Decision-Makers¹⁷

Of primary concern here are strategies one and two. The Alliance system brings together academic geographers and classroom teachers in a collaborative effort to enhance geography education. The Alliances conduct summer geography institutes which

most interested teachers of geography and the social studies for two to three weeks of intensive work on geography understandings, concepts, and skills.¹⁸ The summer institutes have been highly successful, and their numbers have grown steadily since their inception in 1987. Figure 1 illustrates the growth of the Alliance Network since 1986. Since that year, the number of Alliances has expanded seven-fold.¹⁹ Plans for further expansion aim at a total of 55 Alliances in 1993.

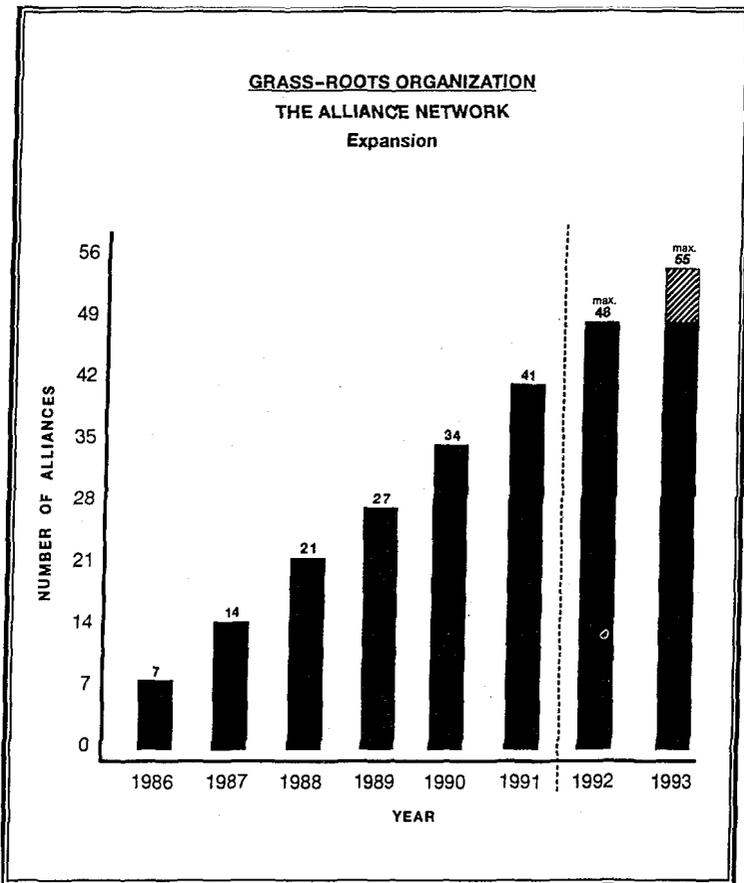


FIGURE 1
GROWTH OF THE NGS ALLIANCE SYSTEM,
ACTUAL AND PROJECTED, 1986-1993

Figure 2 identifies the number of teachers graduated from sum-

mer institutes up to 1991 and the number projected to graduate through the year 1995.²⁰ The program has been a resounding success. Yet, it has not gone without criticism. As late as November, 1989, an article by Gary Fuller appeared in *The Professional Geographer* with the title, "Why Geographic Alliances Won't Work".²¹ Fuller raises a number of concerns about the appropriateness of a cooperative effort between higher education and the schools. Responses by two geographers writing in support of Alliances follow Fuller's article in the same issue.

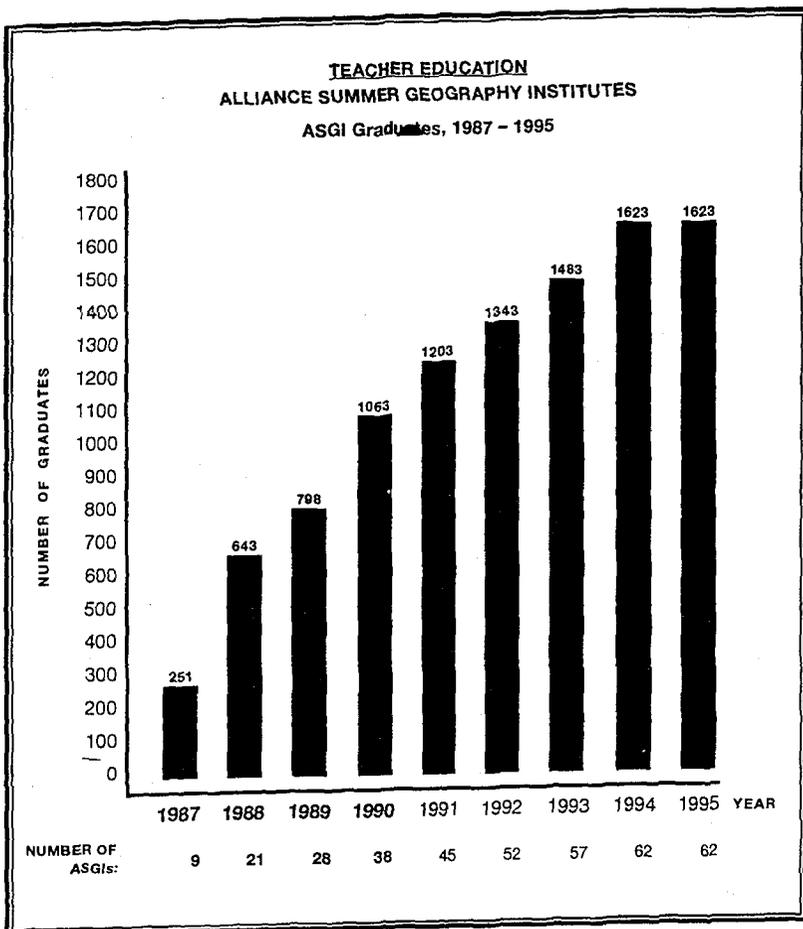


FIGURE 2
NUMBER OF ALLIANCE GRADUATES FROM SUMMER INSTITUTES,
ACTUAL AND PROJECTED, 1987-1995

Another recent, serious criticism centered around the major Alliance role assigned to classroom teachers who have modest course preparation in geography.²² Shortfall in course preparation is, of course, one of the primary reasons for a "reach-out" program of summer institutes. Although the summer institutes will not reach every teacher, there will be a significant number of teachers served. These teachers can, in turn, be resource persons for others in their school systems.

Finally, it must be pointed out that the Alliance program and the five themes are not the only efforts underway to improve geography instruction. The Princeton-based Educational Testing Service published a set of "geography objectives", to provide a conceptual structure for geography in the curriculum. These objectives aim at improving three major areas of the discipline : 1) skills and tasks 2) knowledge and concepts (content), and 3) geographic inquiry (knowing, understanding and applying). Further, the objectives aim at incorporating these three areas within the well-recognized sub-disciplines of physical geography and human geography. Against this matrix the objectives specify the following key areas of understanding : location (absolute and relative), physical and cultural characteristics of places, human impact on the environment, spatial interaction, and the region.²³ These five areas are, as one may conclude, very close to the five fundamental themes found in the *Guidelines*.

The Educational Testing Service document is important because it specifically draws attention to the crucial area of geographical inquiry. That is, educators must be aware not only of content and tools, but of how to reach students to use acquired knowledge. Finally, neither the Themes nor the Objectives emphasize enough the importance of scale and time in geographical studies. All of the concepts included in both documents are applicable at all scales of investigation, from the local to the global. It is true as well that a significantly thorough and in-depth geographical study cannot be done without including the time element. In short, a study must include the important temporal sequence of events that brought to the place its current spatial configuration (form), and the set of dynamic operations (functions and processes) that together give it geographical definition.

IV. The Geography Assessment Framework

The three-part objectives set developed by Educational Testing Service serves as a basis for a new program to assess geographic knowledge. The Geographic Assessment Framework for the 1994 National Assessment of Education Programs (NAEP) will result in nationwide testing on geographic knowledge for students in

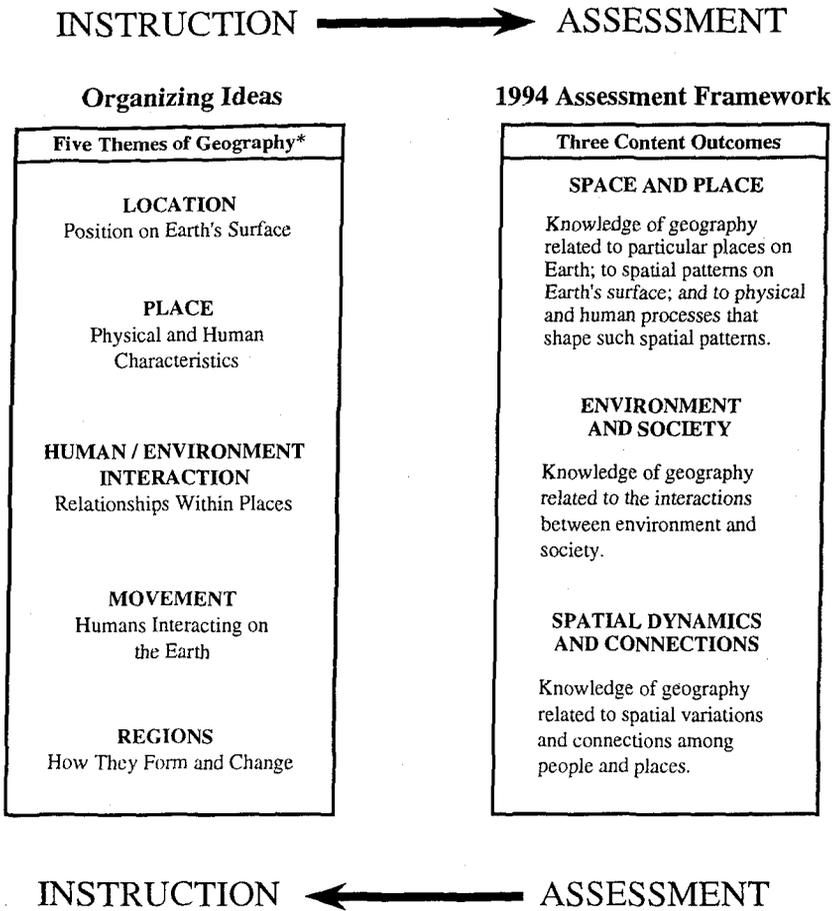


FIGURE 3
RELATIONSHIP BETWEEN THE FIVE THEMES AND THE NAEP 1994 ASSESSMENT FRAMEWORK

grades four, eight, and twelve. Testing will begin in 1994.²⁴

The testing program assumes that instruction in geography proceeds from materials organized around The Five Themes of Geography. The actual assessment activity, however, will test in three content outcome areas: Space and Place, Environment and Society, and Spatial Dynamics and Connections (Figure 3 illustrates these relationships).

Further, the testing program establishes a three-part Cognitive Dimension including: Knowing, Understanding, and Applying, the latter described as a "range of higher order thinking skills", and sets them in matrix context with the three Content Outcomes. The matrix is illustrated in Figure 4, along with illustrative questions.

This NAEP geography initiative is ambitious.²⁵ It calls for national testing, the first undertaking of its type. The initiative aims specifically at geography as a school subject, and this decision is clearly tied to the national education goals discussed earlier which identified geography as one of five core subjects to receive special attention. The initiative does not, however, consider geography as a subject within the larger context of the social studies. On the contrary, geography is viewed a separate subject, a position similar to one stated in a geographic education document of the International Geographical Union :

*Geography in secondary schools ... should be taught as an autonomous core subject. In order to guarantee a sound preparation for the future, geography should be a separate subject taught by specialist geography teachers, and it should be part of the education core of primary and secondary school curricula*²⁶

In countries that have incorporated the social studies model of education, a movement to create separate geography courses will be problematical. Schools in the United States have used the social studies framework for decades; and geography is a key subject within the social studies context. Attempts to alter this subject relationship are certain to encounter considerable resistance. It is perhaps better to consider the role of geography and other social studies subjects within the social studies context, one which relies on a holistic approach to the study of human groups on the surface of the earth.

GEOGRAPHY ASSESSMENT FRAMEWORK ELEMENTS

Cognitive Dimension	Content Dimension		
	Space and Place	Environment and Society	Spatial Dynamics and Connections
Knowing	Where is the world's largest tropical rain forest?	What mineral resources are often extracted by strip mining?	What factors stimulate human migrations?
Understanding	Why are tropical rain forests located near the equator?	Explain the effects of strip mining and shaft mining on the landscape.	Explain the motivations of modern day Mexicans and Cubans for immigrating to the U. S.
Applying*	Support the conclusion that tropical rain forests promote wide species variation.	How can both economic and environmental interests be reconciled in an area of strip mining?	Compare current settlement and employment patterns of Cuban and Mexican immigrants in the U. S.

Note: Example questions are illustrative only, and are not meant to represent the full array of assessment content.

* Applying = A range of higher order thinking skills.

FIGURE 4
 COGNITIVE AND CONTENT DIMENSIONS OF THE
 GEOGRAPHY ASSESSMENT FRAMEWORK.

V. The Social Studies Context

The social studies may be loosely defined as a school subject that applies selected, appropriate concepts, understandings, generalizations, skills, ideas, values, and attitudes derived primarily from social sciences and other pertinent disciplines to the study of a period/area. The term "period/area" is used to identify a place on the earth's surface within an appropriate temporal context. Events in history, for instance, cannot be separated from the places in which they occur; and the events that make up places are inextricably tied to, and explained by, processes that occur over time. Thus, the age-old case of the inseparability of history and geography, of time and space, seems eminently sound.

The social studies uses an integrative approach in striving toward synthesis of appropriate materials drawn from the disciplines in a truly interdisciplinary effort. Figure 5 illustrates how the social studies can be taught regardless of grade level, K-12. Whatever the subject, its content base will be found in the drawing together of the suitable combination of essential ideas representing the cognitive and affective domains from the social science disciplines surrounding the circle in the diagram. For instance, an early elementary teacher intending to build a set of lessons on the subject of "neighborhood" would have at his/her disposal appropriate materials on this topic developed in the vast social science literature. The task of the teacher is to create the best combination of cognitive and affective materials for use in his/her specific classroom setting.

Clearly, the task of developing a truly integrated, synthesized, and interdisciplinary social studies subject is not easy. The job can be very time consuming and the social studies approach implies that the teacher is suitably familiar with salient aspects of all the social sciences. It is highly unlikely that this is the case with the majority of teachers.

The difficulty in selecting appropriate material for a social studies subject is eased somewhat with the Five Themes conceptual framework now used in geography. Figure 6 shows the relationship of the social studies subject, geography, and geography's Five Themes. In building the social studies subject, cognitive inputs for the geography components are more easily accessed by

HOW DOES SOCIAL STUDIES WORK?

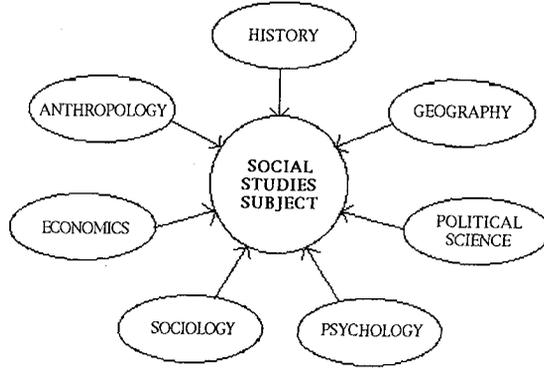


FIGURE 5
A GENERALIZED MODEL OF THE RELATIONSHIP BETWEEN THE SOCIAL SCIENCES AND A SOCIAL STUDIES SUBJECT

...THE FIVE THEMES

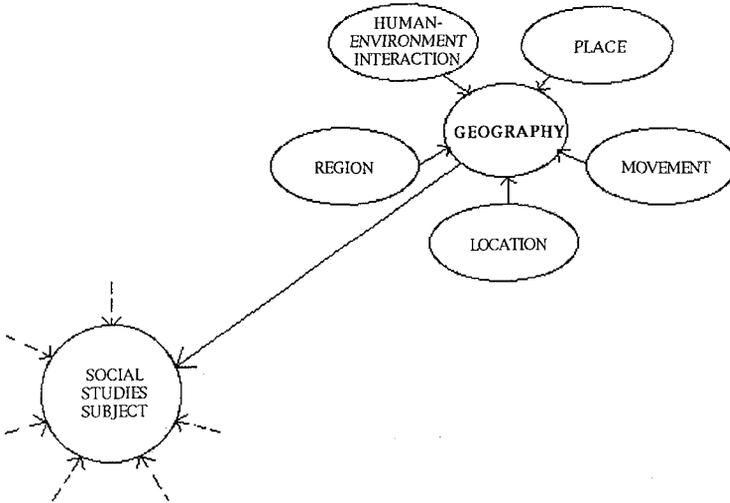


FIGURE 6
GEOGRAPHY'S FIVE THEMES CAN BE HELPFUL IN THE SELECTION OF APPROPRIATE COGNITIVE MATERIAL FOR A SOCIAL STUDIES SUBJECT

virtue of the Five Themes structure. It must be emphasized, however, that the Themes address only cognitive materials to develop

HISTORY'S "VITAL THEMES AND NARRATIVES"

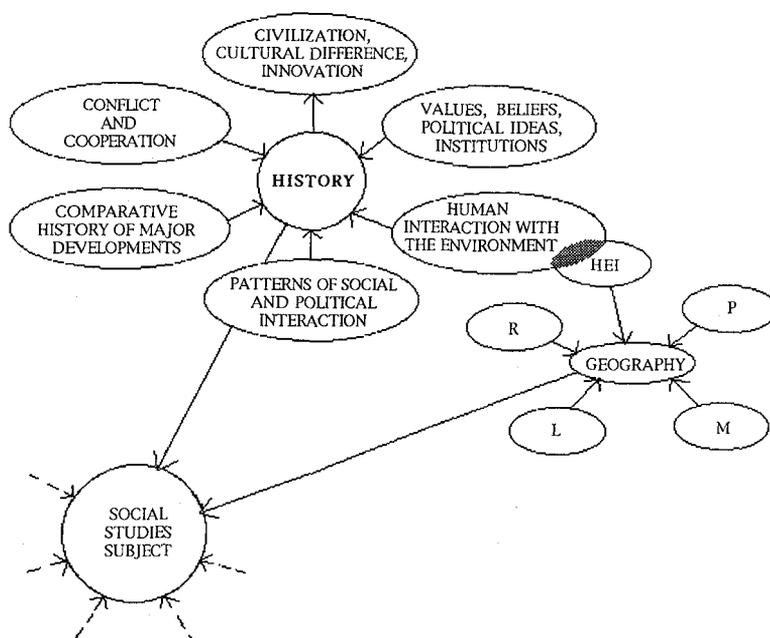


FIGURE 7

THE SOCIAL STUDIES SUBJECT IS FURTHER ENHANCED THROUGH HISTORY'S VITAL THEMES AND NARRATIVES. NOTE THE OVERLAP IN THIS EXAMPLE OF SIMILAR CONTENT IN THE THEMES OF BOTH GEOGRAPHY AND HISTORY

areas; the affective domain within the subject must be accessed through other sources. Nonetheless, the conceptual structure of the Themes does ease the task of accessing geographic inputs for the subject.

Patterned after the Five Themes in geography is history's Vital Themes and Narratives.²⁷ Figure 7 illustrates the conceptual structure within the discipline of history. It is interesting to note the overlap of themes from history and geography dealing with humans and the environment. To suggest that geography (or history) should be offered as a separate subject is to ignore the clear connections between them.

It must be re-emphasized, as well, that the conceptual structure underlying any social studies subject operates at all scales of investigation from local to global, and through time (Figure 8).

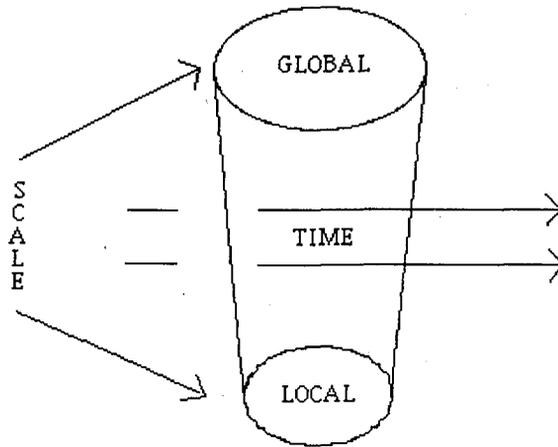


FIGURE 8

GEOGRAPHICAL CONCEPTS OPERATE AT ALL SCALES AND THROUGH TIME

VI. Future Strategies in Teacher Education

The Geography Education Program of the National Geographic Society outlined a four-point set of future strategies for teacher education:

- 1) Develop stronger links with colleges of education.
- 2) Initiate efforts to bridge the gap between colleges of education and geography departments.
- 3) Increase outreach to national teacher certification organizations.
- 4) Encourage infusion of geographic concepts and methods into existing curricula for social studies education.²⁸

These goals are eminently sound. It is crucially important that future social studies teachers be well-grounded in geography, and the other social sciences, no matter what their area of concentration happens to be. It is equally important to bring together professors of geography and professors of social studies' methodologies to further enhance the geographic understanding. In many cases, the social studies methods instructor is poorly educated in geography. When this is the case, pre-service teachers are likewise ill-prepared to incorporate a significant geographic component into their subjects.

The enhancement of connections between professors of geography and social studies methods instructors is especially important in U.S. higher education. The reason becomes clear when it is

noted that the geography education curricula in Korean colleges of education, for instance, include three major categories : courses in geography as a discipline (provided in U.S. schools by departments of geography) ; education foundations for pedagogical knowledge (provided in U.S. schools by departments of education) ; and geography-specific teaching methods and learning theories (*not* normally provided in U.S. higher education).²⁹ The third category of instruction insures that geography will be adequately taught. Instruction of this type is widely ignored in U.S. higher education.

In a recent meeting of National Geographic Society (NGS) Alliance coordinators, a number of ideas were discussed about future directions in geographic education.³⁰ NGS sees physical geography as an appropriate analytical framework for environmental education, a broad topic that is making its way into many K-12 educational settings. NGS notes what it calls the "re-emergence" of physical geography and sees that discipline as the likely connection with earth science in the study of environmental topics. There is a great deal of logic in this view. However, most social studies teachers, even those with more than a cursory acquaintance with geography, are least prepared in physical geography. Considerable efforts will be needed to change this situation.

VII. Conclusions

Geography in the schools is getting a great deal of attention. Many efforts are underway to improve the status of the geography in the K-12 years. Efforts in this regard on the part of NGS are commendable and it is hoped that they will be continued.

Despite recent successes in improving geographic education, there are a number of situations that are yet to be resolved. Among them are the proposed movement of geography away from the social studies. Such a move would be counterproductive to the stated integrating, synthesizing, and interdisciplinary approach of the social studies, attributes which should be enhanced. A more appropriate move would be to insure the incorporation of sound geographic content within all social studies subjects at every level.

Related to the first situation is the relative weakness in U. S. higher education in developing geography-specific teaching methods and learning theories. These key methods should be addressed by methods instructors, but in many cases these faculty are not adequately prepared in geography.

The recent inclusion of environmental studies in the K-12 years will bring far-reaching changes. Geography would seem to be the

ideal setting for dealing with environmental problems. Yet, most social studies teachers do not have strong geography preparation and even those with some course background in geography are generally not well prepared in physical geography.

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