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A CONTENT ANALYSIS STUDY OF FIVE SELECTED HIGH SCHOOL GEOGRAPHY TEXTBOOKS USED IN OKLAHOMA

The University of Oklahoma PH.D. 1985

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THE UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

A CONTENT ANALYSIS STUDY OF FIVE SELECTED HIGH SCHOOL GEOGRAPHY TEXTBOOKS USED IN OKLAHOMA

A DISSERTATION

SUBMITTED TO THE GRADUATE COLLEGE

in partial fulfillment of the requirements for the

degree of

DOCTOR OF PHILOSOPHY

By

MOHAMAD KHODR CHEBBO

Norman, Oklahoma

1985

A CONTENT ANALYSIS STUDY OF FIVE SELECTED

HIGH SCHOOL GEOGRAPHY TEXTBOOKS

USED IN OKLAHOMA

A DISSERTATION

APPROVED FOR THE DEPARTMENT OF SECONDARY EDUCATION

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A CONTENT ANALYSIS STUDY OF FIVE SELECTED HIGH SCHOOL GEOGRAPHY TEXTBOOKS USED IN OKLAHOMA

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DEDICATION

To:

Faculty and Staff

of

The Lebanese University

College of Education

Beirut, Lebanon

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ABSTRACT

A CONTENT ANALYSIS STUDY OF FIVE SELECTED
HIGH SCHOOL GEOGRAPHY TEXTBOOKS
USED IN OKLAHOMA

BY: MOHAMAD KHODR CHEBBO

MAJOR PROFESSOR: DR. ROBERT F. BIBENS

The major purposes of this study were to do a content analysis of five selected high school geography textbooks and to compare contents provided in each textbook to a list of categories that summarized what geographers and educators would recommend to include in a geography textbook used at the high school level.

Procedure: The content analysis technique was utilized for analysis and comparison. A list of seven content categories was developed. This list included: Physical, Human, Global, National, and Regional geography, Cartography, and Concepts and Relationships. Each category included several specific points that were analyzed for their inclusion, intensity, and degree of description and examplification. Collected data were re-sorted into nine format categories that analyzed the coverage of: pages devoted to the seven content categories, selected concepts, details of selected topics and concepts, selected relationships, selected facts, some topics for their inclusion or

omission, frequency of summary statements, provision of additional points, and frequency of figures and tables.

Findings and Conclusions: All five textbooks:

- focused on World geography
- approached the study of all regions in the world in a "traditional" and "conventional" way
- offered very few of the selected concepts, relationships, and details of selected topics and concepts
- relied on the use and provision of factual examples
- used summary statements in few instances
- relied most on pictures and provided very few tables.

Recommendations: Teachers should use textbooks as one of the many resource materials to which they might refer. They should also refer to Curriculum guidelines proposed at State- and Nation-wide levels when developing objectives for their courses. Authors and publishers of textbooks should consider the inclusion of what geographers and educators recommended to provide in a high school geography course or textbook. Authors and publishers should also revise their textbooks, include more concepts and relationships, and use some of the facts provided to support concepts and relationships. Similar studies were recommended to conduct such as content analysis of other geography textbooks, description of changes in their contents over the years, and assessment of the usefulness of the content analysis method for the analysis of textbooks.

CHAPTER I

INTRODUCTION AND PROBLEM STATEMENT

Introduction

Many teachers had either experienced or heard of the following manner of Social Studies' instruction, when the teacher used to sit at his/her desk (usually doing some personal work, or preparing him/herself for the next class), while students were asked to read silently in their books; and whenever someone had difficulty reading or understanding the material, the teacher would ask one of his/her "better" students to read that page orally and the rest of the class would follow that student in their books. Textbooks had been influential elements in education; all depending on how much teachers relied on them and how well they used them for classroom instruction. Since much of the classroom instruction was tied to textbook use, this gave textbooks a very important and influential role to play. Teachers, some of whom probably because of inadequate preparation in the subject, had been using textbooks as the only instructional material.

In the light of such teachers' dependency on textbooks, some states had regulated procedures and/or policies for textbooks selection and adoption (geography's textbooks in particular as being

the focus of this study). Oklahoma was among the State-wide textbook adoption policies' states. In order to get copies for students at no cost to the district, schools had to select one of the State-approved textbooks; otherwise, schools would have had to purchase their own non-approved texts. Within this context, the original problem, that of teachers being dependent on textbook content, was deeply intensified. The risks became greater than ever before that a bad choice of a textbook might generate worse results than those achieved in the past.

Recently, The Joint Committee On Geographic Education of The National Council For Geographic Education (NCGE) and The Association of American Geographers (AAG), developed a set of guidelines for geographic education. In the preface, the Committee listed some of the deficiencies in geographic education at all levels. For example, among a group of twelve-year-old American students, more than twenty percent could not locate correctly The United States on a map showing the whole world. A similar percentage identified Brazil as the United States.[1]

In order to reduce these risks, it was necessary to insure that textbooks used in classrooms fulfill the kind of objectives and goals sought in every course of study. Specifically, in order to achieve a better understanding of any subject, it was vital to include the essential facts, concepts, generalizations, hypotheses, and theories

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[1]The Joint Committee on Geographic Education of the NCGE and the AAG, Guidelines for Geographic Education in the Elementary and Secondary Schools, a draft copy, Washington, D.C., September, 1984, pp. 1-3.

that constituted the major elements of that discipline, in the textbooks that were designed to be used for teaching that subject. A brief example of some of the major approaches for geography education could be best drawn from William Pattison's four traditions in geography that he proposed in 1964:

1. Spatial tradition
2. Man-land tradition
3. Area studies tradition
4. Earth science tradition[2]

Another example, which was advocated by The Joint Committee of NCGE and AAG in its guidelines on geographic education, was the idea that geographic education "reinforces and extends the processes of critical thinking and problem solving. . . . We must know where and why events are occurring"[3]. In a similar way, Jacqueline Beaujeu-Garnier summarized the types of questions that a geographer may ask by using the following words: "where? what? how? when?"[4]. A "why" type of question could have been added to those four key-question words.

The emphasis on analyzing textbooks in general, and geography's textbooks in particular, arose from the widespread use

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[2]Bale, John, Norman Graves, and Rex Walford, Perspectives In Geographical Education, Oliver & Boyd, Great Britain, 1973, Section A, p. 2.

[3]NCGE and AAG's Joint Committee on Geographic Education, Ibid., pp. 2-3.

[4]Beaujeu-Garnier, Jacqueline, La Geographie: Methodes et perspectives, Masson & Cie, Editeurs, Paris, 1971, p. 25.

of, and heavy reliance on, textbooks in classrooms. Patrick and Hawke stated that "about ninety percent of classroom time, in both elementary and secondary schools, involves the use of curriculum materials. About two-thirds of this time is spent on printed materials, mainly textbooks"[5]. These authors identified the influence of textbooks on curriculum planning, especially in decisions about the scope and sequence of the content of geography courses. Instead of using curriculum guidelines, "teachers tend to disregard them . . . (they) depend on textbooks to guide course organization and day-to-day lesson plans"[6].

It was not the intention of this study to embrace all of the factors that influenced the teaching-learning processes, but a clear focus on one area such as textbooks' content was hoped to be fruitful. Two major questions formulated the essence of this study:

1. What were the major topics that constituted the scope of each of the five selected geography textbooks that were widely used in Oklahoma's high schools?

2. To what extent did those five texts accommodate the major topics that both geographers and educators believed to be important to include in a secondary school geography course?

Purpose of the Study

As indicated earlier, geographers' key questions were: where?,

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[5]Morrissett, Irving, ed., Social Studies in the 1980's: A Report of Project SPAN, Association for Supervision and Curriculum Development, Alexandria, Virginia, 1983, p. 39.

[6]Ibid., p. 40.

what?, how?, when?, and why?. The purpose of this study was to help educators in general, and teachers of geography at the high school level in particular, answer the following question: "Would the geography textbooks that Oklahoma's high schools widely used be the kind of curriculum material that geographers and geography educators would recommend and use?"

It was hoped that this study would reveal the major topics and points of emphasis in geography at the high school level and provide information regarding those topics to geography teachers and educators as an aid for reexamination of their classrooms' goals and objectives. Through the comparison between what was actually covered in textbooks and what was recommended to be included in such texts, teachers of geography should be able to identify the important points of concerns that needed to be stressed in classroom instruction. Therefore, they may be better prepared to teach such content.

Another purpose of this study was to develop a list of subject-matter categories and topics that could be used as the basis for a textbook selection criteria instrument, as well as for evaluating an existing textbook. This list should provide educators with information about what was important in geography so that they may consider including that in their school geography courses. Also, this list would encourage geographers, as well, to reconsider what was vital for students to know about geography and, therefore, be better prepared in terms of what to expect from those students when they would reach the college level.

Statement of the Problem

In Table 1, there was a list of the nine high school geography textbooks approved by the Oklahoma State Department of Education. This list included the title of each text, the author(s)' name(s), the publisher(s)' name(s), and the number of copies that were purchased by the Department during the fiscal years 1977-83; excluding the data for the two fiscal years of 1979-80 and 1981-82 because of some computer problems at the Department during those two years.

The main objective of this study was to do a content analysis of the five geography textbooks that were purchased most and perhaps (but not necessarily) most widely used in Oklahoma's high schools during the fiscal years 1977-83. Specifically, this study categorized the different topic areas that were included in each of the five textbooks according to a list of categories which was developed by this researcher using recommendations of some geographers and educators. Also, quantitatively, this study measured the intensity of each topic used within each category, across the five texts, by using frequencies and percentage figures of words and pages devoted for that in every text.

Importance of the Study

The significance of this study resided in the comparison of the content of the five selected geography textbooks. The main point was the relationship that existed between "content" and "intent". As described by Berelson, content analysis "is often done to reveal the purposes, motives, and other characteristics of the communicators as

TABLE 1
NUMBER OF COPIES OF THE NINE STATE-WIDE ADOPTED HIGH SCHOOL GEOGRAPHY TEXTBOOKS, DISTRIBUTED BY THE OKLAHOMA STATE DEPARTMENT OF EDUCATION, DURING FISCAL YEARS 1977-1983

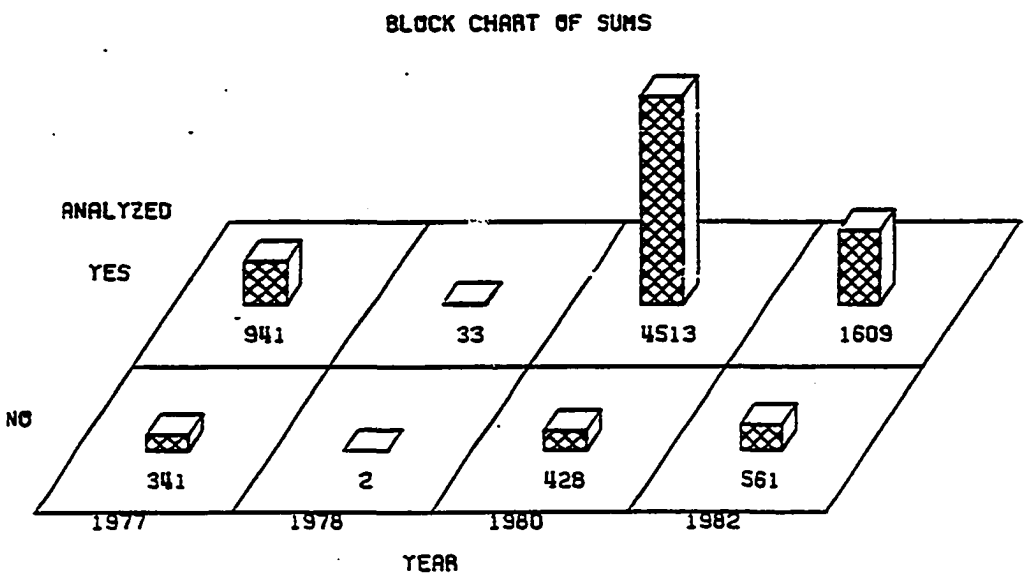
Title	Author(s)	Publisher(s)	Number of Copies
1. "World Geography Today"	Israel, Johnson, & Wood	Holt, Rinehart, & Winston	2,562
2. "Our World and Its People"	Kolevzon & Heine	Allyn & Bacon	2,223
3. "Land and People: A World Geography"	Danzer & Larson	Scott, Foresman	1,038
4. "The New Exploring A Changing World"	Schwartz & O'Connor	Globe	718
5. "World Geography"	Educational Challenges, Inc.	American Book Co.	555
6. "World Geography"	Pounds, et al.	Silver Burdett Co.	538
7. "Geography"	Getis, et al.	Houghton Mifflin	398
8. "The Wide World"	James, et al.	Macmillan Pub. Co.	373
9. "World Geography"	Gross	Follett Pub. Co.	23

SOURCE: The Annual Report of Free Textbook Distribution Service, Oklahoma State Department of Education, Fiscal Years 1977-83.

FIGURE 1

NUMBER OF COPIES OF THE NINE GEOGRAPHY TEXTBOOKS

DISTRIBUTED BY THE OKLAHOMA STATE DEPARTMENT OF EDUCATION TO PULIC HIGH SCHOOLS (DURING FISCAL YEARS 1977–1983)



they are (presumably) reflected in the content"[7].

It was very important to determine the types of geographical concepts, themes, hypotheses, and theories that were being offered in these five geography textbooks used in Oklahoma. This study analyzed the types of topics and concepts that the authors of those textbooks, and subsequently the educators who would be using those texts, were looking for and trying to implement.

Another significant goal of this study was the comparison which was conducted between the textbooks' content and the author's list of categories and topics that should be recommended for a geography text used at the high school level. Such comparison revealed the degree of congruence between what was emphasized in those textbooks and what should have been included according to that list of objectives. It was a comparison between what actually existed in the five geography textbooks and what educators and geographers would have liked to see in such textbooks.

Methodology

This study utilized the Content Analysis technique and applied it to five geography textbooks used widely in Oklahoma's high schools. The study established, and then used, external criteria to carry out its goals and objectives. These criteria were presented in the form of a list of topics and concepts that were considered to be representative of what a geography textbook should include.

---

[7]Berelson, Bernard, Content Analysis In Communication Research, Hafner Publishing Company, New York, 1971, p. 18.

An objective and systematic method of quantification was conducted throughout the study. Data were analyzed in different ways: actual frequencies, percentages, and other descriptive statistics. Data were, then, presented in different manners: tables, graphs, and maps.

Definition of Terms

State-wide adoption policy: a policy that required that in order to get copies at no cost to the district for students at any school, teachers and administrators had to adopt a textbook that was on the list of the state-approved textbooks.

State-approved textbooks: those texts that were approved by the State Department of Education and were on the list for textbook adoption. In the State of Oklahoma, the period of adoption used to be four years, but now it had been changed to five years starting the school year 1985-86.

Free copies of textbooks: the copies that the State Department of Education purchased and then distributed for schools upon request at no cost to the district, as long as the textbook was chosen from the list of State-approved textbooks.

Content categories: the seven categories of content developed by this author in chapter three and dealing with: Physical, Human, Global, National, and Regional geography, Cartography, and Concepts and Relationships.

Format categories: the nine categories of content format developed in chapter four, after re-sorting raw data. These categories dealt with

the coverage in terms of: pages, concepts, details, relationships, facts, topics included or omitted, summary statements, additional (unique) points, and figures and tables.

Subdivisions: the first degree divisions within each of the seven content categories identified by the researcher in Chapter III. Both categories and their subdivisions were drawn from the literature reviewed by the researcher in Chapter II.

Specific points: the second degree divisions within each of the subdivisions described above. These specifics were developed by the researcher. They constituted the basis for counting and quantification.

Topic: a specialized subdivision of an area of subject matter that was relatively cohesive and homogeneous, and could be considered for individual use and analysis. Usually, it covered a single aspect of a whole subject.

Concept: the type of content that resulted from categorizing several observations, after grouping them together on the basis of noting their similarities and ignoring their differences.

Content analysis technique: a method or a technique to reveal and describe the content of any material in an objective, systematic, and quantitative way.

Areal coherence: a concept that indicated how regions were not the product of a mere association of single elements, but of the interaction among those elements.

Localization: a concept that indicated how one principal activity in one region may attract other activities to that region and interact

with those activities to give that region a special and distinct aspect.

Spatial differentiation: The idea that each area or region differed from other areas surrounding it because of its distinct and particular characteristics (what things were there and how their spatial distributions differed from those in other areas).

Spatial distribution: the geographical distribution of the different areas from a spatial point of view (why and how things were where they were; what the patterns of their distribution in that area were).

Spatial interaction: the study of how different areas or regions interacted and communicated, and of what the patterns of that interaction were.

NCSS: The National Council for Social Studies.

OCSS: The Oklahoma Council for Social Studies.

NCGE: The National Council for Geographic Education.

AAG: The Association of American Geographers.

The Joint Committee on Geographic Education: a committee that included researchers from the National Council for Geographic Education and the Association of American Geographers.

HSGP: The High School Geography Project: a set of curriculum materials that was designed during the 1960's by the AAG (and the NCGE at its early stages of development). It was based on the inquiry approach of teaching. It contained six units that included curriculum materials, teaching objectives, and content and teaching strategies.

Overview of the Study

As presented, Chapter I included an introduction to the study, its purpose, its problem statement, a discussion of its importance, and a brief description of the methodology that was used.

Chapter II provided a review of the related literature, including the following areas of concerns: Social Studies' definition and goals, Learning principles, Geography's content at two levels: as a discipline and as a school subject, and textbooks' importance, selection, evaluation, and patterns' changes.

Chapter III provided a statement and a description of the method that was used in this study (content analysis). Also, it provided a description of the five textbooks' selection procedure, a list of the categories upon which content of the five texts were grouped and analyzed, and the methods of counting followed by the researcher.

Chapter IV presented the analysis of the five textbooks and their comparison to the author's list of content categories developed in Chapter III. Data were re-sorted into nine format categories and were presented and discussed.

Chapter V presented a summary of the study, of its findings, and the conclusions that were drawn from the previous chapter. Some recommendations to teachers, educators, and researchers were provided.

At the end, a bibliography section was provided to embrace all the references that were used for the development of this study.

CHAPTER II

REVIEW OF THE LITERATURE

In addition to the books and references which were cited in the bibliography, a computer search of CIJE-ERIC literature was conducted in order to complete the review of related literature to this study. The following descriptors were fed into the computer:

1. Geography and Geography Instruction
2. Textbooks, textbook selection, textbook evaluation, textbook standards, and textbook content
3. High Schools, Secondary Education, and Secondary Schools.

Another computer search in Dissertation Abstracts was conducted, and the following descriptors were used:

1. Geography and Geographic Instruction
2. Textbooks
3. Secondary School, Secondary Education, and High School.

A total of 80 items was listed on a computer printout. As shown in table 2, only fourteen items were found related to the subject of this study. Only six of the fourteen items were located in the University of Oklahoma's libraries or through the interlibrary loan service.

TABLE 2
NUMBER OF REFERENCES SEARCHED BY O.U. LIBRARIES' COMPUTER SERVICE SYSTEM

	Not Related To This Study's Topic	Related to this study:		Total
		Not Available at O.U. Librairies	Available at O.U. Libraries	
CIJE-ERIC	44	8	5	57
Dissertation Abstracts	22	-	1	23
Total	66	8	6	80

Instruction and Social Studies

In 1977, the National Council for Social Studies (NCSS) identified three major traditions in designing Social Studies programs in schools: Citizenship transmission, Social Science, and Reflective inquiry. The Council developed the following definition of Social Studies out of the three approaches, but focused mainly on citizenship education:

> The Social Studies is an integration of experience and knowledge concerning human relations for the purpose of citizenship education.[8]

During the same year, the National Council for Geographic

[8]Barr, Robert, James Barth, and Samuel Shermis, Defining the Social Studies, NCSS, bulletin #51, NCSS, Arlington, Virginia, 1977, p. 69.

Education (NCGE) published a set of Guidelines for Social Studies Programs, with geography as its focal point. Those guidelines dealt with two major areas: teaching social studies as a content and as a process. The authors who proposed those guidelines (Williams and Saveland) explained that social studies programs had to draw their content from the different social science disciplines and that the content must be of value to the individual student so that application to new situations could be made.[9] Williams and Saveland looked also at social studies' education as a process through which students would actively participate and get involved in all kinds of learning activities including the practice of decision making. Teachers had their share in that process: behavioral objectives and applications of some "known principles of learning" to instruction were highly recommended by the authors.

Earlier, in 1971, Jerome Bruner formulated four major features in any theory of instruction. These features dealt with both content and processes in education:

1. specification of the structure of the body of knowledge being taught

2. elaboration of specific sequences in which content had to be presented

3. specification of the experiences that had great influences on "predisposition toward learning"

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[9]Manson, Gary, and Merrill Ridd, ed., New Perspectives on Geographic Education: Putting Theory into Practice, Kendall/Hunt Publishing Company, Dubuque, Iowa, 1977, p. 58.

4. specification of the kind of rewards and punishments' approaches that would have been used during the learning-teaching processes.[10]

One of the important problems that educators were most concerned about was the problem of transfer of knowledge to learners. Dewey believed that interest should be the basis for any educational development:

> The problem of instruction is thus that of finding material which will engage a person in specific activities having an aim or purpose of moment or interest to him, and dealing with things not as gymnastic appliances, but as conditions for the attainment of ends.[11]

Dewey also viewed the problem of education as a "reconstruction or reorganization of experience which adds to the meaning of experience and which increases ability to direct the course of subsequent experience."[12] In a similar context, Bruner indicated that specific aspects of structure needed to be introduced earlier and then represented later.[13]

The problem of "what" to transfer to the learner was best illustrated in the different statements of Goals of Social Studies' education during the last three decades. In the 1950's, Carr and Wesley defined knowledge, values, and abilities as the major goals of

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[10]Bruner, Jerome, Toward A Theory of Instruction, The Belknap Press of Harvard University Press, Cambridge, Massachusetts, 1971, p. 40.

[11]Dewey, John, Democracy and Education, An Introduction to the Philosophy of Education, The Macmillan Company, New York, 1928, p. 155.

[12]Ibid, p. 89.

[13]Ball, p. 62.

social studies programs.[14] In the 1960's, Michaelis proposed several conceptual, affective, inquiry, and skills objectives to be included in social studies educational programs.[15] In the 1970's, the NCSS, in a position statement, identified four major areas of objectives for teaching social studies at all school levels: Knowledge, Abilities, Valuing, and Social participation.[16] In the 1980's, Morrissett and Haas anticipated that the goals of social studies would include the above four goals of NCSS, in addition to two others: citizenship and the joy of learning.[17]

Transferring knowledge to the learner had been a major goal of teaching social studies. One study questioned the abilities of classroom teachers of geography. Specifically, Joseph Pasztor, in his doctoral dissertation about geography teachers' knowledge and skill levels, raised the question: ". . . Do the classroom teachers . . . have an acceptable level of geographic knowledge and skills?"[18] He concluded that geography classroom teachers were less than adequately prepared in the discipline they were teaching.

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[14]Oliver, Pearl, Teaching Elementary Social Studies, a Rational and Humanistic Approach, Harcourt Brace Jovanovich, Inc., U.S.A., 1976, p. 332.

[15]Ibid.

[16]National Council for the Social Studies, Social Studies Curriculum Guidelines: Position Statement, NCSS, Washington, D.C., 1971, pp. 8-15.

[17]Morrissett, pp. 221-226.

[18]Pasztor, Joseph Leo, Geography's role in public education and a measure of teachers' knowledge and skill levels in relation to the discipline, a Ph.D. dissertation from the University of Oregon, March, 1981, p. IV.

Geography as a discipline

In a similar fashion, Geography's content, both as a discipline and as a school subject, had changed over the years. As a discipline, William Pattison proposed, in 1964, four areas (or traditions) under which all geographical work could be included:

1. The spatial tradition: which included all geographical relationships that could be explained by geometry and movement

2. The area studies tradition: which covered studies that would interpret location of places, their nature, character, and differentiation

3. The man-land tradition: which included studies about the mutual interaction between man and environment

4. The Earth science tradition: which embraced the study of the Earth, its water, its atmosphere, and its relation to the sun and to other planets.[19]

Pattison tried to cover, in his four traditions, all types of geography definitions that were given before that period of time. Human and cultural geography were included in the first three traditions. Physical geography was the main concern of the fourth tradition.

A year later, in 1965, Jan Broek provided the following seven basic concepts for looking at the Earth[20]:

1. The cultural appraisal of the Earth: where natural

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[19]Bale, p. 2.

[20]Ball, pp. 123-127.

resources were seen as a particular perception from man toward some earth properties. Cultural differences were seen as prerequisites for the study of differences in environment

2. The regional concept: which focused on understanding likenesses and differences between and among areas on the Earth

3. Areal coherence: which emphasized that existing phenomena in an area was the product of a systematic association of single elements and that the whole was not a summation of particles, but an internal consistency that united those particles

4. Spatial interaction: which was implied by areal differentiation and integration. In other words, specialization meant also interdependence, and interaction would become necessary to compensate areal deficits and lack of some goods or services

5. Localization: which meant the concentration of an activity in one area and the attraction of other activities to the same area

6. The significance of scale: where drawing conclusions about observations differed depending on the scale of investigation

7. The concept of change: which concentrated on the continuing changes that occurred over time in one area or of one event. When geographers described a place at one particular time, they assumed some persistence of what they had found; but changes, cycles, and fluctuations were needed to be taken into consideration.

Only two of Broek's seven basic concepts were not mentioned through Pattison's four traditions. Those were: the significance of scale and the concept of change.

In the same decade, Henry Warman identified nine concepts to be

used in building any geography curriculum. These were:[21]

1. Globalism: many geographical phenomena originated from the global shape of the Earth, its spinning, and its axis inclination

2. The round earth on flat paper: This concept covered all types of projecting the globe on a flat paper (map) and the different symbols appropriate for each type of projection

3. The life-layer: Which focused on recognizing that for every individual, each "standing room" had certain choice spots and that one's decision for choosing one spot was a compromise of the most favorable circumstances of earth, water, and air

4. Areal distinctions, differences, and likenesses: This concept was based on the approach that people and environments differed from one place to another

5. The region: Which had been the focus of geographers for many years. Recognition and identification of "meaningful aggregations in space" were the central steps in formulating the concept of region

6. Resources culturally defined: In this concept, resources were seen as a reflection of man's perception of nature. Different cultures may value the same resource differently

7. Man the chooser: This concept advocated the idea that people were "the ecological dominants" of their region. They should decide how to use their environment and resources

8. Spatial interaction: This concept focused on the

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[21]Feldman, Martin, and Eli Seifman, eds., The Social Studies, Structure, Models, and Strategies, Prentice-Hall, Inc., Englewood Cliffs, N.J., 1969, pp. 311-317.

dependence among different areas. Interaction could take different forms: commodities, goods, people, ideas, air masses, wind systems, etc. . .

9. Perceptual transformation: This was similar to the concept of change proposed by Broek. It implied that there was a continuous change in every landscape, feature, or phenomena; and that geographers should be aware of that.

Similarly, McFarren presented seven concepts that he believed geography textbooks ought to emphasize. These concepts were[22]:

1. emphasis upon place
2. interrelation of phenomena
3. Man as the central figure
4. culture and nature relationships
5. possibilism and choices given to humans
6. unity of geographical studies
7. changes in the field of geography.

A more complete list of guidelines about what geography ought to cover was developed by Nishi in which the following concepts were suggested[23]:

1. spatial distribution
2. areal coherence
3. regional concept

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[22]McFarren, George Allen, An Analysis of selected junior high school geography textbooks in relation to their treatment of certain basic geographic concepts, a Ph.D. dissertation from the Ohio State University, 1962, p. 29.

[23]Bale, pp. 268-269.

4. location theory

5. the cultural viewpoint

6. the human relationship to a natural resource

7. the dynamic nature of geographic analysis

8. the importance of time

9. spatial interaction

10. Man-land relationships

11. global interdependence.

In the 1970's, the perception of what geography had been, or of what it should cover, was still affected by Pattison's four traditions. Merrill Ridd combined the man-land and earth science tradition into one area which he called environmental. Then he proposed four new traditions in geography[24]:

1. The spatial tradition: exactly like Pattison's

2. The environmental tradition: which was a combination of Pattison's man-land and earth science traditions

3. The regional tradition: this was also similar to Pattison's area studies tradition

4. The experiential tradition: this was added by Ridd. It involved humanistic issues and had elements in all kinds of geographic studies.

Haggett, also, proposed five major themes for the study of geography[25]:

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[24]Manson, p. 18.

[25]Dollfus, Olivier, L'analyse géographique, "Que-sais-je?" series, Presses Universitaires de France, Paris, 1971, pp. 6-7.

1. Spatial differentiation

2. Regions and areas as units of study

3. Man-environment relationships, including the historical development of such relationships

4. Spatial distribution

5. Geometrical theme: which relied on mathematical techniques and was manifested by the use of maps in geographical studies.

In 1984, The Joint Committee on Geographic Education of the NCGE and the AAG outlined five "fundamental themes in Geography"[26]:

1. Location: which encompassed two different concepts: absolute and relative. Both concepts were aimed at "describing the positions of people and places on the earth's surface"

2. Place: which was described by its physical and human characteristics. Places uninhabited by humans would be defined by some "observed characteristics"

3. Relationships within places: humans and environments: Geography's focus should be on understanding the relationships between humans and their environment. Emphasis would be on the way those relationships developed and on their consequences on both people and environment

4. Movement: humans interacting on the Earth: movements would include those of people, products, information, and ideas. Emphasis should be on how transportation and communication lines could be used as indicators of global interdependence and interaction among places.

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[26]The Joint Committee on Geographic Education, pp. 5-8.

5. Regions: how they form and change: Region should be the basic unit of study in geography. Regions could be defined by different characteristics. They would provide convenience for the study of geography in schools. They could be used as an intermediate step between the study of local places and the knowledge of the whole planet.

Geography as a school subject

As a school subject, geography passed through a series of changes during the last two decades. Changes focused on two points: content and methods. Suggestions were made about moving the subject of geography in schools from relying on memorization of factual knowledge (also called geography of "Capes and Bays"), to using an inquiry-based approach for looking at and studying geographical phenomena.

Gunn listed the differences between the two trends in geography education[27]:

1. The old geography was based on memorization, while the new geography promoted the inquiry method

2. The old geography was preoccupied with factual knowledge, while the new geography was concerned with models and general principles

3. Learner was passive and receiving in the old geography, while in the new geography, he/she would become active and communicating

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[27]Kurfman, Dana, ed., Evaluation in Geographic Education, 1971 yearbook of NCGE, Fearon Publishers, Belmont, California, 1970, p. 41.

4. In old geography, emphasis was on static situations, while in new geography, emphasis would be on dynamic situations

5. Old geography was always coupled with history and/or geology, while new geography relied on a wide variety of other social sciences, as well as on physical and biological sciences.

Gunn reviewed the development of geography as a school subject throughout the years. He examined the way geography was taught in schools at the turn of this century. "Acquiring discrete items of information about the world without the accomplishment of an intellectual framework"[28] was the dominant way in teaching geography.

In the 1950's, school geography was mainly concerned with "Man-land relationships" and "culture region". In the 1960's, California State Department of Education developed a list of generalizations that were seen as essential to teach in school geography courses. Thirteen of the twenty-seven generalizations were dealing with physical geography and the rest with social geography. It was not until 1964, that the Wisconsin Department of Public Instruction gave equal importance to the process of conceptualization as to product. This important emphasis on the process of acquiring geographic concepts and generalizations reached its culminating point by the end of 1960's when the High School Geography Project (HSGP) was ready for use and application. This project started as a joint effort from the NCGE and the AAG in 1961, but moved entirely under the AAG supervision in 1964. Later, HSGP gained the financial

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[28]Ibid., pp. 44-49.

support of the National Science Foundation.

Gould argued that the advances that were taking place in geography as a discipline and their implications on changing school geography's image, were not due only to the development of theory but also to the development of technical innovations such as electronic mapping, remote sensing, and use of computers.[29] Gould presented how the HSGP illustrated the changes in geography education. He saw in HSGP the answer to the development of a new geography that required more thinking than memorizing.

Phillip Bacon also advocated the new changes in geography instruction. He stated:

> Many of the geographical facts that one might learn in grade four, for example, may well be untrue or irrelevant by the time one reaches high school.[30]

Bacon saw in understanding spatial distribution, spatial association, and spatial interaction, a significant change toward understanding why things were where they were instead of memorizing what things were there. The HSGP was a turning point in the recent history of geography instruction. According to Nicholas Helburn, the primary objective of the HSGP was to lead students to formulate geographical questions (such as what was there? how did it get to be there? whose decision was it? what factors influenced its growth in that place? etc. . . .), to gather information and data, to generate hypotheses and

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[29]Bale, p. 35.

[30]Skeel, Dorothy, ed., The Challenge of Teaching Social Studies in the Elementary School: Readings, Goodyear Publishing Company, Inc., Pacific Palisades, California, 1972, p. 50.

answers, and to evaluate the accuracy of these answers.

Helburn listed the following educational objectives of HSGP[31]:

1. Students would work with a variety of facts and generalizations from all regions of the world

2. Students should understand certain basic abstractions such as ecosystem, man-land relations, sequent occupancy, location, spatial distribution, areal association, etc. . .

3. Students should exercise four types of skills: awareness of place and its significance, ability to work with data, ability to define problems from data, and ability to solve those problems.

David Hill stated four strategies and assumptions about the HSGP. These were[32]:

1. Prepackaged and carefully structured materials would improve the teaching of geography

2. Use of information and data only for the purpose of emphasizing a concept

3. Use of a wide variety of instructional materials for the purpose of offering different experiences to the student and, consequently, increasing the probability of maintaining what was learned

4. Use of inquiry-learning strategy.

Lansky and Stafford examined one unit of the HSGP (Manufacturing) and deducted the following psychological assumptions

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[31]Ball, p. 230.

[32]Daniels, William Davis, An Investigation of Students' Attitudes Toward Geography Through the Use of the Strategies of the High School Geography Project (HSGP) at the College Level, a Ph.D. dissertation from the University of Maryland, 1974, p. 6.

about HSGP[33]:

1. People were always learning
2. People sought tension in the process of finding out
3. Emotions were essential parts of any situation
4. Learning depended upon feedback
5. Social structure affected learning in many ways.

These two authors believed that HSGP, through its inquiry method, was based on these psychological assumptions and that most of the learning activities that took place in the "Manufacturing" unit were direct application of those assumptions. Cirrincione depicted two major trends in HSGP: an emphasis on the inquiry method in learning concepts and generalizations and an emphasis on topical and systematic studies that represented the current focal points of geographical researches. In his study,[34] Cirrincione argued that traditional geography neither dealt with values directly nor had a common rationale with those values. He believed that, on the contrary, reflective methods provided "more effective means of treating values in geographic education". He claimed that the way with which students interacted with the problem--and the values in that problem--was effective and unique. He saw the role of the teacher at the beginning of the lesson as to help students "identify and articulate the problem

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[33]Gardner, William, and Fred Johnson, eds., Social Studies in the Secondary Schools: A Book of Readings, Allyn and Bacon, Inc., Boston, 1970, p. 249.

[34]Cirrincione, Joseph, The Role of Values in the Teaching of Geography, Ph.D. dissertation from Ohio State University, 1970, pp. 2-9.

and the value conflicts inherent in the problem rather than arriving at the identification of a preordained problem"[35]. He saw the role of the student as to analyze, choose, study, and conclude (or probably alter) some values in the problem being studied. Student was thoroughly and freely analyzing and reaching decisions without predetermined conclusions from the teacher.

Kohn did not see in the HSGP method alone, or the "analytic mode" as he called it, the educational alternative for the traditional method, or the "integrative mode"[36]. He believed that in the search for reality, geographers had to use both methods, analytic and integrative, to develop good insights into any problem. Even though he described the changes in geography education in schools as moving away from factually-oriented materials to an inquiry-based method, Kohn advocated the use of analytic method at the beginning, when formulating hypotheses. Later, at the stage of testing the applicability or finding different examples of those hypotheses, students ought to use the integrative mode. Kohn gave an example of a course of geography in which students might develop analytic concepts and generalizations about the distribution and growth of population, the increase in the world's supply of food, industrial ligation, etc. . . . and then study, for example, the major culture regions in the world in terms of those concepts and generalizations the students generated themselves. In another instance, Kohn gave an example of a generalization that

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[35]Ibid., p. 143.

[36]Chorley, Richard, and Peter Haggett, eds., Frontiers in Geographical Teaching, Methuen & Co. Ltd., London, 1970, pp. 297-308.

students might conclude through the analytic mode: variations from place to place in the density of rural farm population were directly related to the variations in average annual precipitation. Kohn explained how that generalization could be examined under the traditional integrative mode: understanding population distribution in a particular society.

When giving his personal views about the HSGP methods and strategies, Kaltsonnis was very positive. He viewed the HSGP as a set of curriculum that emphasized relationships and used a wide variety of instructional materials to carry out the different activities which formed major parts in that inquiry-based set of curriculum.[37] Kaltsonnis saw only one big mistake in HSGP: that HSGP should have been extended to cover all school grade levels from kindergarten to twelfth grade. His opinion was that students who had been exposed to a traditional type of geography all of the nine or ten years preceding high school grades, would find difficulties in adjusting to the inquiry strategies used by the Project.

Similarly, Pattison--after being the director of the HSGP for the period of 1961-63--examined some specific benefits that HSGP brought in terms of changing attitudes of both geographers and educators toward geography.[38] He saw in the HSGP the type of project that connected American geographers and educators. Before HSGP,

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[37]Bacon, Phillip, ed., Focus on Geography, Key Concepts and Teaching Strategies, NCSS 40th yearbook, NCSS, Washington, D.C., 1970, pp. 412-416.

[38]Ball, pp. 218-221.

separation between high school geography education and professional geographers had been the rule. HSGP brought the two groups together and became a major topic for discussion in many annual meetings of the NCGE and the AAG. Also, HSGP changed the professional geographers' attitudes toward the school learner. Before, the student was seen as a recipient of geographic knowledge, but after HSGP was proposed, learner became "to be seen more and more as someone acting rather than being acted upon." HSGP changed also the attitudes of school teachers and students toward professional geographers. Both teachers and students became exposed to the "geographer's way" of observing, collecting data, analyzing, and drawing conclusions. What made the real difference was the shift from geography as a subject dealing with concepts and facts to be acquired only, to a field that promoted inquiry and encouraged learners to seek answers.

Both Pattison and Kaltsonnis were drawing their personal views of HSGP. Other authors and researchers had done more in terms of studying and evaluating HSGP's usefulness and applicability. In 1969, Womack analyzed the inquiry-oriented HSGP's urban materials. He did an experimental study[39] to test whether students taught by the inquiry-oriented method of the HSGP would score better in urban geography than those taught by the traditional approach. Twelve teachers and 650 students in six junior high schools in the San Diego school district were involved in the study. The researcher grouped subjects into three

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[39]Womack, James Alonzo, An Analysis of Inquiry-Oriented High School Geography Project Urban Materials, a doctoral dissertation from the United States International University, January 1969.

groups with equal number of males and females in each group: a control group, an experimental group taught by a traditional method, and another experimental group taught by the HSGP inquiry method. Comparable types of knowledge were provided to both experimental groups (urban geography). The "growth of cities" urban knowledge test was administered. Data were subdivided by subjects' gender and reading abilities. Scores on pretest, posttest, and six months' retention test were collected. Womack's major findings were:

1. There was no statistically significant difference between the urban geography knowledge of the three groups

2. High-ability males and low-ability females were the only two subgroups that learned more effectively in the inquiry-based approach of HSGP.

In 1974, Daniels did a research study about students' attitudes toward geography. He wanted to test whether the use of HSGP approach would result in more positive gains in attitudes toward geography than did the traditional approach. Daniels had to develop a valid instrument to measure gains in attitudes toward geography. A control group and an experimental group of college level students were taught one geography course (Elements of Geography) through the use of the traditional approach and the inquiry-based HSGP approach, respectively. His major findings were[40]:

1. Students who were taught through HSGP did not show any significant gains in positive attitudes toward geography than those who

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[40]Daniels, pp. 63-74.

were taught through the traditional approach

2. Attitudes of students toward geography could be changed simply by exposing them to either one of the two approaches.

Content of school geography

The previous description of the "new geography" as a discipline and as a school subject lead the researcher to examine how the content of school geography had changed over the years. Lorrin Kennamer, Jr., examined the changes that occurred in school geography and identified some major trends in that change.[41]

In the nineteenth century, school geography was mainly descriptive, with some emphasis on physiography. In the 1930's, there was a rise of economic and commercial geography, but the term "geographical factors" was still associated with the physical, and not the human, aspects of any observation or phenomena. In the 1940's and 1950's, regional geography was the main topic in school geography courses. It started being local and descriptive, but later, it extended to cover all regions of the world. In the 1960's, new developments were introduced. Human and physical geography became equally important. In the 1970's, new approaches for teaching geography were suggested and supported, among which was the HSGP with focus on spatial distribution and spatial interaction.

This layout of changes that occurred in school geography can be supported by some examples taken from the literature pertaining to each period cited above. For example, in 1928, John Dewey saw geography as

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[41]Bacon, pp. 380-384.

a "body of facts and principles which have been discovered in other men's experience about the natural medium in which we live and in connection with which the particular acts of our life have an explanation"[42].

In 1933, in a chapter written by Alice Foster and Katharine Calloway and accepted by the National Society for the Study of Education, a proposed sequence for a geographic course at the senior high school level consisted of two parts[43]:

1. Commercial or economic geography that would examine commerce and industry in the world

2. Political geography which would study political affairs and political powers in the world.

In 1948, Warman, in proposing a world (or global) geography, advocated the idea that such a course should equally emphasize three areas in geography: human, physical, and regional:

> . . . a study of the population, occupation, production and general patterns in the light of the physical factors that should be followed ideally by giving attention to specific regions or countries.[44]

In 1964, a commission of the National Council for Geographic Education proposed the following potential sequence for geography

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[42]Dewey, Democracy and Education, p. 246.

[43]Whipple, Guy Montrose, ed., The Teaching of Geography, 32nd yearbook of the National Society for the Study of Education, Public School Publishing Company, Bloomington, Illinois, 1933, p. 287.

[44]Kohn, Clyde, ed., Geographic Approaches to Social Education, NCSS nineteenth yearbook, NCSS, Washington, D.C. 1948, p. 257.

courses at the senior high school level[45]:

1. Grade 10: world geography, or world patterns of economic or commercial geography, or economic geography

2. Grade 11: geography of Latin America and other special areas

3. Grade 12: geography of world cultures, or geography of selected areas, or world political geography, or geography of current world problems.

Clark identified three basic approaches for the teaching of geography[46]:

1. The topical approach: which would organize the study of geography in schools around particular topics. This approach was, then, newly introduced in school geography curriculum

2. The regional approach: which was the dominant approach for studying world geography. Clark, however, supported the shift from regions based on continents nation-states toward cultural regions

3. The conceptual approach: where geography courses could be centered around major geographic concepts. Clark adopted Warman's nine major concepts (cited earlier on pages 21-22).

In 1965, Philippe Pinchemel realized that the then school geography was oscillating between two extremes[47]:

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[45]Clark, Leonard, Teaching Social Studies in Secondary Schools; A Handbook, MacMillan Pub. Co., Inc., New York, 1973, pp. 203-204.

[46]Ibid., pp. 204-206.

[47]Unesco, Source Book for Geography Teaching, Longmans, Green, & Co., Limited, London, 1965, pp. 10-35.

1. A collection of facts which purpose was to provide learners with a complete picture of a continent, a region, or a state

2. A series of introductions to other specialized subject fields such as climatology, demography, economy, sociology, etc. . . .

Pinchemel believed that the first trend was a characteristic of geography in elementary schools and the second trend was the dominant approach in secondary schools. He also believed that the unique characteristic of geography was the analysis of relations between phenomena. Even when teaching a fact, relationships that resulted from the existence of that fact should be considered.

During this period of time (1960's), geography became associated with terms such as spatial distribution, spatial interaction, or spatial relationships of phenomena. In 1966, Nishi outlined the general content for a course in geography using the following six topics[48]: Man, environment, economics, natural resources, social-cultural-political patterns, and area studies. In order to approach these topics, Nishi suggested some geographic skills that would enable learners to develop the geographer's way of thinking. Some of the skills were: structured thinking, problem-solving, proper attitudes on alien ways of life, critical sensitivity to world affairs, the logical arrangement of space relationships, etc. . . .

Joseph Pasztor, in his doctoral research[49] presented a table of objectives that he adopted from Bennetts (1973) and in which four general educational objectives for teaching geography in public schools

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[48]Bale, pp. 271-273. [49]Pasztor, p. 163.

were listed: used knowledge, useful and cognitive skills, personal satisfaction, and citizenship. The concepts that Bennetts was advocating were: relative location, spatial distribution, areal association, spatial interaction, regions, change/dynamism, and cultural appraisal of the environment. These concepts had been widely promoted throughout the 1970's.

Peter Ambrose, in 1973, predicted several directions of school geography during the 1970's. He believed that changes would take the following patterns[50]:

1. From a factually-based to a concept-based subject

2. From regional to systematic work (more emphasis on process rather than form)

3. From compartmentalized to interdisciplinary approach of study

4. From qualitative to quantitative techniques of study

5. An increased emphasis on values.

John Everson applied Bruner's views on curriculum to education.[51] Everson proposed that a course of geography should:

1. Include the basic concepts of the subject of geography, including facts that would fit properly in the framework of those concepts

2. Introduce those basic concepts to students at an early age and then reintroduce the concepts in a spirally-designed curriculum

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[50]Walford, Rex., ed., New Directions in Geography Teaching, Longman Group Ltd., Great Britain, 1973, pp. 80-81.

[51]Ibid., p. 181.

3. Train learners to think geographically through problem solving techniques

4. Motivate the learner and raise his/her interest in the subject

5. Promote the use of discovery methods for better understanding of the basic concepts of geography.

In 1984, The Joint Committee on Geographic Education of the NCGE and the AAG proposed a sequence of geography courses that would be suitable for secondary schools[52]: For grades seven through nine, a one-semester state or regional geography and a two-semester world geography course were recommended. For grades eight through ten, a two-semester earth science course and a one-semester U.S. geography course were recommended. For grades nine through twelve, two one-semester courses were recommended to be selected from: environmental, urban, political, historical/cultural, economic, and local geography. Finally, Honor courses in geography were reserved for grades eleven and twelve.

As an example, a world geography course would include the study of Earth-Sun relationships, atmospheric and oceanic circulation, landforms, climate, population, economic linkages, cultural diffusion, etc. . . . Then, the course should apply the five themes of location, place, relationships within places, movement, and regions to some selected areas that would include case studies from each continent.

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[52]The Joint Committee on Geographic Education, p. 18.

Selection of regions would not necessarily be based on continents, it may focus on cultural, economic, political, or any other dimension that would promote the human-environment understandings.

School geography in Europe and the U.S.S.R.

In Europe, school geography went through similar stages of development and changes. Graves described the early school geography as being based on "inventory of factual information"[53]. But during the 1950's and 1960's, more and more emphasis was given to relationships between man and environment. A concentric type of syllabus (very similar to the American spiral organization of curriculum) was introduced by Wooldridge, who conceived "geography as being bound by the concentric circles of neighborhood, home region, country, and world". The place of geography in secondary schools in European countries was questioned and discussed by Tricart.[54] Because of the differences among the European countries' policies and views toward geography education, students, who finished their secondary studies, were unevenly prepared for higher education in terms of geographic facts, concepts, and generalizations.

In the U.S.S.R., school geography was divided into two sections: physical and economic.[55] Physical geography was taught in grades five

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[53]Graves, Norman, Geography in Education, Heinemann Educational Books, Ltd., London, 1975, pp. 41-61.

[54]Tricart, J., The Teaching of Geography at University Level, George Harrap & Co., Ltd., London, 1969, pp. 52-54.

[55]Cary, Charles, "Patterns of Emphasis upon Marxist-Leninist Ideology: A Computer Content Analysis of Soviet School History, Geography, and Social Science Textbooks," Comparative Educational

through seven in the following sequence:

- In grade five: general knowledge about physical geography
- In grade six: physical study of the continents.

Economic geography was taught in grades eight through nine, starting with that of the U.S.S.R. in grade eight and moving to that of foreign countries in grade nine. In the school year 1962-63, The Soviet Union added a social science course to its school curriculum. This course was to be taught in the tenth grade, which was the final year of secondary education in the Soviet Union. The major purpose for adding this course was to introduce school children to the basic concepts of the Marxist-Leninist ideology.

Textbooks

After reviewing the different changes and trends that occurred in school geography, it was essential to investigate how, and through which channels, the subject of geography had been presented to students. As for other subject matters, textbooks constituted the type of curriculum material that was most commonly available, as well as most commonly used in and outside classrooms. An EPIE study done in 1977, showed that about two-thirds of the time spent in classrooms on curriculum materials was devoted to printed materials, mainly textbooks.[56] Another study done by Texas Governor's Committee on Public Education found that "75 percent of students' classroom time and 90 percent of their homework time was spent using textbooks"[57].

Review, February, 1976, Vol. 20, n. 1, pp. 11-29.

[56]Morrissett, p. 39. [57]Ibid.

The effect of textbooks on teaching and learning processes was no doubt influential. Dewey's position on the value of textbooks in classroom situations was that "textbook and teacher vie with each other in presenting to the child the subject matter as it stands to the specialist"[58]. While specifying how textbooks influenced the learning processes, Dewey criticized the content of textbooks by not being directed to the learner's experience. Material was presented as if it was written to a specialist. It was not "translated into life-terms".

The influence of textbooks was best illustrated through decisions taken about the scope and sequence of any course of subject matter. Stake and Easley (1978) observed and concluded that teachers were using textbooks to guide their courses' organization and to plan their daily lessons, rather than referring to Education Departments' or local school districts' curriculum guides.[59]

Another study (by Klein and others, 1979) showed that over 75 percent of the teachers, who were asked to identify the sources that were influential in their decisions about what to teach, responded that those sources were[60]:

- Their own backgrounds and experiences
- Their students' interests and abilities.

Despite the conclusions of that study, most researchers still believe in the importance of textbook use either for direct instruction

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[58]Dewey, John, The Child and the Curriculum, The University of Chicago Press, Chicago, Illinois, 1922, p. 31.

[59]Morrissett, p. 40.

[60]Ibid.

or for use as a major resource of materials. Maxim estimated that up to 90 percent of all elementary school instruction was tied into textbook use.[61] The EPIE report found that the majority of teachers "neither have used, nor plan to use" supplementary materials.[62]

Textbooks were not only proven influential on teachers' planning of a course content, but also on students' learning as well. Mullis (1979) found that curricular instructional variables (including textbooks) accounted for most of the variations in students' learning; instructional materials were "more powerful than the students' type of school or home environment"[63].

This heavy emphasis on the use of textbooks necessitated the investigation of some of the advantages and disadvantages of textbooks' use in classroom instruction. Maxim presented and argued the following advantages of the use of textbooks[64]:

1. Reducing pressures usually associated with comprehensive preparations from the part of the teacher

2. Providing an orderly sequence of material across grade levels

3. Providing suggestions, through accompanying teacher's manual, about instructional activities

4. Describing minority groups and other ethnic and racial groups in a much fairer way

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[61]Maxim, George, Social Studies and the Elementary School Child, Charles Merrill Publishing Company, A Bell & Howell Company, Columbus, Ohio, 1983, p. 73.

[62]Morrissett, p. 41. [63]Ibid., p. 42. [64]Maxim, p. 74.

5. Recently developed: adopting conceptual-inquiry approaches to subject teaching.

Adding to the above advantages, Patrick and Hawke[65] cited the following from a study done in 1979 by Rasmussen in which textbooks were proven to be the most cost-efficient materials to be used in classroom instruction: "(textbook) is the best bargain available in the educational products marketplace".

On the other hand, some disadvantages of textbooks' use were discussed by Maxim. Most of the abuses could not be directly attributed to textbooks, but to teachers. The criticisms were[66]:

1. Textbooks may reduce or abolish teacher's creativity

2. By becoming the only reading material, textbooks may narrow the scope of students' exposure to and exploration of other references

3. Being written at one uniform reading level, textbooks may frustrate students with low reading ability and may lead to their disinterest in the subject

4. In cases when teachers get limited to the scope and sequence of textbook content, the amount of material to cover in classrooms may become tremendous

5. With the rapid developments and changes in contemporary societies, textbooks may quickly become outdated.

To the above disadvantages, Patrick and Hawke added one more: "textbook development is a careful and conservative process . . . it often takes anywhere from three to five years to develop a new

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[65]Morrissett, p. 40. [66]Maxim, pp. 73-74.

textbook"; in order to accommodate product to market changes during those years, publishers would only look for "safe decisions and conservative products"[67].

Studies had shown that, after spending that much time on textbook production, very few classroom teachers (less than one-fourth) were using books that were less than three years old. Almost one-third of the elementary teachers were using books that were more than seven years old.[68]

Problems and difficulties in using textbooks had existed ever since textbooks were put in use. In 1933, Wilson listed many examples of the difficulties encountered while using geography textbooks in classroom instruction. Some of those difficulties were[69]:

1. Dealing with objectives that were either not stated at all, not clearly defined, or unsuitable for school children

2. Dealing with context: in terms of difficult vocabulary, unclear style, unorganized material, little correlation with other subjects, etc. . .

3. Dealing with skill development: such as inadequacy of help in constructing and interpreting graphs, maps, and pictures, in problem-solving, and in using references

4. Dealing with students' interests and abilities: such as lack of opportunity for self-expression, inadequacy in assisting teachers overcome individual differences, little provision for

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[67]Morrisset, p. 40. [68]Ibid., p. 40.

[69]Whipple, pp. 475-479.

extra-curricular activities, etc. . . .

Later, in 1980, the National Council for Social Studies tried to focus attention on how to improve social studies' textbooks. Different suggestions and plans for correction were offered. Solutions were proposed for the following problems[70]:

1. Outdated content
2. Texts written at higher reading level
3. Reading pictures
4. Sex stereotypes
5. Ethnic stereotypes.

To Roberts, some of the basic difficulties encountered in geography teaching were not due to the nature of the subject itself, but to "the way the subject is taught and the antiquated organization of textbooks"[71]. In an attempt to set up some selection criteria for geography textbooks, Roberts adopted the following NCSS suggestions[72]:

1. Significance of the material to students
2. Accuracy of the content
3. Direct relationship to other materials
4. Development of accurate concepts
5. Development of critical thinking and problem-solving skills.

Few years earlier (in 1948), Edna Eisen did not pay that much

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[70]Patton, William, ed., Improving the Use of Social Studies Textbooks, Bulletin n. 63, NCSS, Washington, D.C., 1980, Chapters 1-6.

[71]Roberts, Raymond, "How Textbooks Influence the Curriculum in Geography," Journal of Geography, Vol. 57, May 1958, p. 256.

[72]Ibid., p. 255.

attention to the content of the text to be selected. Her criteria for geography textbook selection covered two major areas[73]:

1. The cognitive level of the material: such as gradation of difficulty and gradual increase in complexity

2. The technical attributes of the text such as: pictures covering the major characteristics of a region, material presented in a colorful and realistic style, and maps ready for students to use in doing explorations and discoveries.

In the 1960's, geography textbook selection criteria changed from what they were a decade ago. For example, in 1966, Long and Roberson examined, in detail, a resolution adopted by The General Conference of UNESCO at its eleventh session in August 1962, in which twenty criteria were used to review nineteen secondary school geography textbooks from six European countries. The twenty criteria could be grouped under "four aspects"[74]:

1. Objectivity: this aspect would require that content "be based on sound scholarship, and be free from bias, prejudice, and narrow preconceptions." It encouraged a development of international understanding, an absence of political denunciation, and an objective presentation of controversial issues

2. Accuracy: which implied accuracy of facts presented, clarity of the definitions of terms used, and accuracy and up-to-dateness of pictures, illustrations, and maps

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[73]Kohn, pp. 95-97.

[74]Long, M., and Roberson, B.S., Teaching Geography, Heinemann Educational Books Ltd., London, 1966, pp. 88-93.

3. Adequacy: which implied a basic coverage of the essential and significant facts about the area or the topic being studied and an attempt to do that coverage in a comprehensive and balanced way

4. Up-to-dateness: which focused on changes that were needed in statistics used, facts presented, and current geographical concepts.

Two more criteria were added by Long and Roberson to the above UNESCO's ones:

1. The presence of graphs, diagrams, maps and other types of illustrations that could help students acquire and actually imagine factual information provided in the text; those illustrations should be presented in an attractive way to readers

2. Adaptation to recent changes in teaching strategies and methods. A teacher would normally select a textbook that most adequately conformed to his/her teaching method. Therefore, a textbook should present a variety of presentation procedures which would promote the use of different teaching strategies for the same content material.

In 1969, four criteria for textbook selection were suggested by Fraenkel[75]:

1. Scientific validity and universal significance: manifested by up dated, fundamental, and applicable knowledge that would "help students gain self- and world-understanding"

2. Social and cultural significance: through understanding today's world, examining some values and value-conflicts, and promoting

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[75]Ball, pp. 197-198.

an understanding of change phenomena and procedures

3. Association with students' needs, interests, and development levels

4. Promotion for more breadth and depth of understanding: this could be developed by increasing the capacity for application to new situations.

At the State level of Oklahoma, there had been no organization or council that would have proposed some definite criteria for geography textbook selection. But, in a comparable study that analyzed some science textbooks, McKinney used criteria for science textbook selection that were developed by The Educational Practices Committee of The Oklahoma Science Teachers Association (OSTA). Of the nine criteria proposed by OSTA,[76] three had to do with students' abilities, interests, and developmental level. The remaining six criteria focused on method of teaching science (assumably inquiry) and on the use of teaching aids in science instruction. None of those criteria emphasized the basic and fundamental knowledge that could be drawn from the different branches of the science disciplines.

Recently, at the State level too, The Oklahoma Council For Social Studies developed an evaluation sheet for state-adopted social studies' textbooks designed primarily for world history and United States history texts. Both sheets[77] were being used in The

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[76]McKinney, Larry L., The Understandings of the Nature of Science, Learning in Science, and Science Teaching Held by Oklahoma Public School Administrators, a Ph.D. dissertation from the University of Oklahoma, Norman, 1980, pp. 10-11.

[77]Gates, Eddie, "State Adopted Textbooks, Social Studies Evalu-

Tulsa Public Schools Social Studies classrooms. Items that were on both lists could be used as textbooks' selection criteria since they covered almost all of the cognitive, affective, technical, and editorial aspects of any history textbook. In the part dealing with content, the instrument focused on:

1. Including information about all areas of the world
2. Studying their status during different periods of the history
3. Studying their cultures' elements (including Arts)
4. Promoting interaction with other disciplines such as geography, economics, etc. . .
5. Including recent major ideas and events
6. Exposing students to methods of thinking and investigating used by historians.

The instrument allowed the evaluation of how well the text provided for interdisciplinary approaches to study. It allowed the evaluation of the development of students' thinking abilities rather than memorization and of the suggested activities in terms of their level of thinking (according to Bloom's taxonomy) and in terms of their adaptation to students' learning styles, interests, and concerns. It also allowed the evaluation of the technical attributes of the text such as print, format, pictures, maps, colors, etc. . . .

In setting up guidelines for evaluating social studies textbooks, Oliner explored in detail two major components of any social

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ation Sheet," World History and United States History, [Received by mail from Mrs. Gates], Tulsa, Oklahoma, 1984.

studies' textbook: cognitive and affective domains, as well as the other components, such as scope and sequence, instructional strategies and resources, students' needs, technical attributes, and cost and availability.[78] Within the cognitive component, an evaluator should examine these three points in a text:

1. Concepts and generalizations: for their clarity, organization, orientation (in terms of disciplines), diversification, reflection of reality, etc. . .

2. Facts: for their accuracy and support of concepts and generalizations, up-to-dateness, and sources

3. Social issues: for their relation to concepts and generalizations, their clarity, and their identification of different alternatives.

As for the affective component, an evaluator should look for:

1. Value clarification: that might be illustrated in issues discussed, emotions promoted, or strategies implemented

2. Value inquiry: in terms of issues' presentation and of decision-making processes.

Taking precautions by setting up good selection criteria and following systematic and objective steps for textbook evaluation should not lead researchers to ignore or disregard some of the realities about the characteristics of textbooks that were common across all disciplines. Joyce and Alleman-Brooks revealed some of those

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[78] Oliner, pp. 274-275.

characteristics[79]:

1. The investment of millions of dollars by the publisher

2. The time that any textbook would take before being released

3. The rationale upon which textbooks were developed, by drawing content from prevailing and emerging views of social studies

4. The reading level at which textbooks were written (usually higher than what it was supposed to be)

5. The tendency to avoid conflicts and controversies

6. The disregard and ignorance of other school subjects.

The above characteristics, the previously presented criteria for textbooks selection, and some other personally-developed characteristics of textbooks lead many researchers to differentiate between several types of textbooks. Hannaire, in a UNESCO publication,[80] identified three different categories of textbooks:

1. Conventional textbooks: which could be considered as complete sources of information about one particular subject, or at least, they might give the reader such an impression

2. Textbooks based on practical exercises: unlike the conventional type, these textbooks were based on individual (or group) research work. They allowed a place for students' observation, reflection, and judgment. They did not give any clues to what the conclusions would be. Students had to draw that through their own

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[79]Joyce, William, and Janet Alleman-Brooks, Teaching Social Studies in the Elementary and Middle Schools, Holt, Rinehart and Winston, U.S.A., 1979, pp. 27-28.

[80]UNESCO, pp. 147-148.

processes of analysis and synthesis

3. Textbooks combining the two methods: these were based on including two parts in every unit or chapter: the first would expose students to practical and active work and the second would summarize the results in form of conclusions that should be drawn from the first part's observations and judgments.

Another study was conducted by Roberts, in which he examined the status of thirteen geography textbooks and found that, based on his own criteria, three categories were in existence[81]:

1. Traditional: based on memorization of a whole body of facts and statistics and on stereotypes in many different forms

2. Texts organized around the modern concepts in geography, including the learning principles of thinking, understanding, and associating

3. A combination of the two approaches.

Changes in geography textbooks' content

One of the conclusions that Roberts came up with was that "the organization of content could affect geographic learning in a large degree because textbooks constitute the main source of information to which most teachers are enslaved"[82]. This conclusion was very important because it made the connection between the content and the intent clear. Based on this relationship, it was important to review some of the changes in geography textbooks' content that occurred dur-

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[81]Roberts, p. 253.

[82]Ibid.

ing this century. A study, conducted by Jackson, tried to determine how some of the outmoded ideas that had been abandoned at the university level for quite a long time ago, were still found in high school geography textbooks. Jackson selected one theory in geography (environmental determinism) and used that as an index or "baseline" for measuring the time span between the abandon of that theory from university level (in the 1940's) and from secondary school geography textbooks.[83] For that purpose, Jackson examined forty-six texts that were published during the period 1900-1970, with unequal number of texts for each decade (because of availability problems). From 1900 to 1910, textbooks overemphasized the "deterministic" impact of environment on man. Climate was solely responsible for differences among civilizations and peoples. Racialism was illustrated through "the superiority of the so-called temperate climate" and the "easy going, even lazy" nature of man in hot-climate countries. From 1911 to 1940, environmental determinism was still carried on through geography textbooks. Climate was not only considered to determine man's activities, but also to shape "the physique of the inhabitants of a particular environment"[84]. From 1941 to 1960, the number of textbooks that clearly studied and discussed the environmental deterministic theory was declining. From 1961 to 1970, a sharp decline of that theory was found in geography textbooks. Concerns about the impor-

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[83]Jackson, Richard, The persistence of outmoded ideas in high school geography texts, The Journal of Geography, October 1976, Vol. 75, no. 7, pp. 399-408.

[84]Ibid., p. 402.

tance of culture in explaining the man-land association started to appear. Preston James was first to emphasize that in his text The Wide World. Some other texts were "rewritten with a de-emphasis on the deterministic statements", such as the one that was written by John Bradley: World Geography.

In the end, Jackson concluded that environmental determinism persisted in high school geography textbooks for twenty years after it was abandoned from college level. Jackson believed that the reason for such delay was that university level geography teachers and researchers rarely wrote textbooks for high school students. He found that less than twenty percent of the texts examined were written by geographers associated with university geography departments. Jackson also concluded that teachers would continue relying on textbooks for many reasons, some of which were:

1. Financial restrictions of school districts which would not encourage or permit the adoption of some innovative methods that were more expensive than textbooks

2. The heavy teaching load of social studies teachers would not permit teachers to try new approaches

3. The limited geography background of social studies teachers would force them to "rely on canned" material similar to what a text would provide

4. Infamiliarity with new approaches such as HSGP.

Finally, this researcher referred later in chapters three and five to some, but not all, of the literature reviewed in this chapter and used the guidelines and recommendations of the following profes-

sional geographers and educators for comparison and analysis: Pattison, Broek, Warman, McFarren, Nishi, Ridd, Haggett, Hannaire, Roberts, Clark, Gunn, Ambrose, and the Joint Committee of NCGE and AAG.

CHAPTER III

METHODOLOGY

Introduction

The main objective of this study was to analyze and compare the content of five selected geography textbooks used at the high school level in Oklahoma. In order to pursue this goal, a content analysis procedure was used. Berelson defined content analysis as the "research technique for the objective, systematic, and quantitative description of the manifest content of communication."[85] Budd, Thorp, and Donohew believed that content analysis should involve six states[86]:

1. Formulating a question or a hypothesis
2. Selecting samples and defining categories
3. Reading and coding according to some objective rules
4. Scaling or scoring items
5. Comparing those scores to other measurements of the variables in the study
6. Interpreting the findings according to some theories or concepts.

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[85]Berelson, p. 18.

[86]Budd, Richard, Robert Thorp, and Lewis Donohew, Content Analysis of Communication, The Macmillan Company, New York, 1967, p. 6.

Kerlinger described content analysis as "a method of observation. Instead of observing people's behavior directly, or asking them to respond to scales, or interviewing them, the investigator takes the communications that people have produced and asks questions of the communications"[87]. The content analysis technique started within the field of communication. This was why most of the major references related to this technique were written within that field. But content analysis expanded to include more and more application to different fields and involve different types of material such as books, magazines, articles, and motion pictures.

Procedure

A. State-wide and nation-wide textbooks adoption

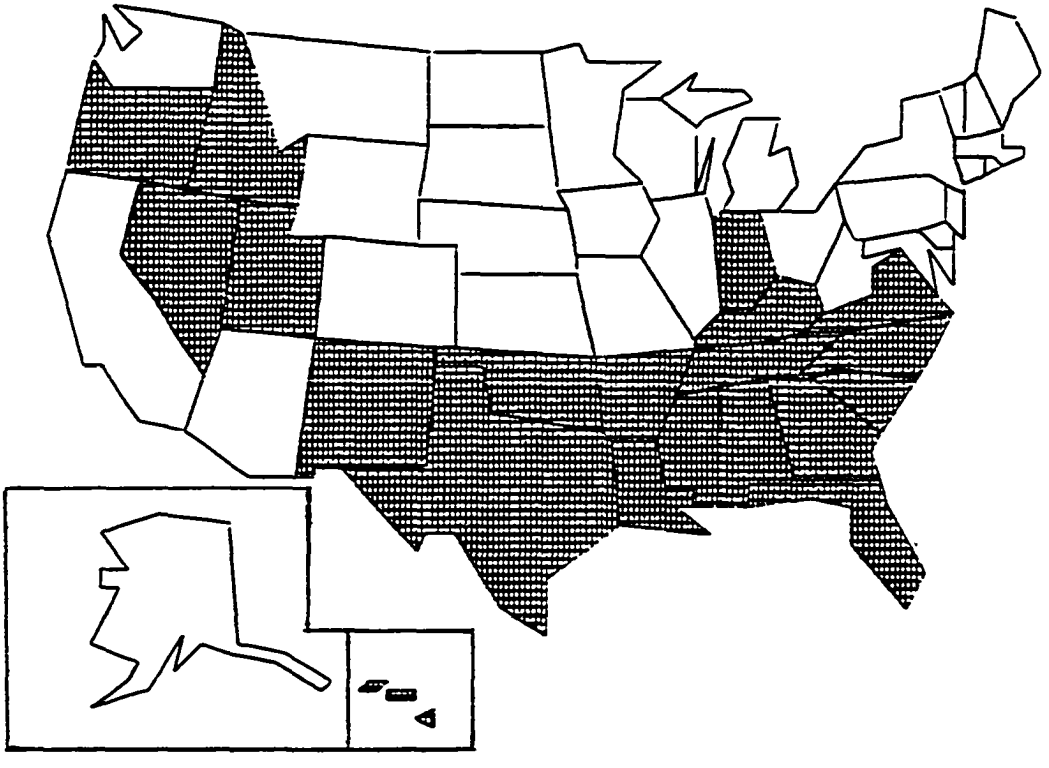
In table 1 on page 7, there was a list of the title, author(s)' names, publisher(s)' name(s), and the number of copies of the adopted geography textbooks that were purchased by the Oklahoma State Department of Education, during the fiscal years 1977-83. A paper by Weiss and Sturm presented at the NCGE Conference in Ocho Rios, Jamaica, 1983, investigated geography textbook adoption policies in all states of the U.S. Only twenty states were found to have state-wide adoption policies.[88] Interestingly, those states were spatially distributed in the south, and in the Mountain West area. "With the exception of Indiana, no state in the Midwest, Plains, or Northeast has a state-wide

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[87]Ibid., p. 2.

[88]See figure 2 on page 59.

FIGURE 2
STATES WITH ADOPTION POLICIES
FOR HIGH SCHOOL GEOGRAPHY TEXTBOOKS (1982)



SOURCE:GEOGRAPHY TEXTBOOKS:WHAT GETS CHOSEN WHERE
BY EDWIN WEISS AND REBECCA STURM,NORTHERN KENTUCKY UNIVERSITY 1983
(ERIC # ED 238801)
OTHER SOURCES INCLUDED ARIZONA, CALIFORNIA, AND WEST VIRGINIA AND EXCLUDED
HAWAII AND NEVADA FROM BEING TEXTBOOK ADOPTION STATES

adoption policy"[89].

Weiss and Sturm believed that the reasons behind state-wide adoption might include, among others, lack of confidence in leadership authority at a local level and political and social conservatism. Oklahoma was among the twenty states on their list, and noticeably, seven of the nine adopted geography textbooks in Oklahoma were among the top ten mostly recommended by all the twenty States.

In Table 3, ranks were shown of all nine textbooks adopted in Oklahoma, in terms of the frequency of their use at a state-wide level and at a nation-wide level. With regard to the frequency of selection of geography textbooks, the study by Weiss and Sturm found that the range varied from six years to two years. In Oklahoma, the nine adopted geography textbooks were for the period 1980-85. The study also found that no state had specific guidelines for geography textbook selection[90] and that large textbook adoption states, such as Texas, did not prove to have any remarkable influence on the other States' decisions about adopting and selecting geography textbooks for the high school level.

B. Selection of the five textbooks for analysis

For the purpose of this study, five statewide adopted high school geography textbooks constituted the subjects of analysis and

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[89]Weiss, Edwin, and Rebecca Sturn, "Geography Textbooks: What Gets Chosen Where," ERIC documentation, ED 238801, A paper presented at the National Council for Geographic Education Conference, Ochos Rios, Jamaica, October 23-28, 1983.

[90]Ibid., p. 3.

TABLE 3
RANK ORDER OF THE NINE STATE-WIDE ADOPTED HIGH SCHOOL GEOGRAPHY TEXTBOOKS AT STATE- AND NATION-WIDE LEVELS

Title	Rank Order According to Number of Copies Purchased in 1977-83 (in Oklahoma)	Rank Order According to Number of States that Recommended its Adoption in 1982	Actual Number of States that Recommended its Adoption
"World Geography Today"	1	1	16
"Our Land & Its People"	2	3	11
"Land & People: A World Geography"	3	2	15
"The New Exploring a Changing World"	4	7	8
"World Geography"	5	4	11
"World Geography"	6	9	6
"Geography"	7	13	3
"The Wide World"	8	15	3
"World Geography"	9	5	10

comparison. These five textbooks were selected from the nine textbooks adopted by the State of Oklahoma. The basis for their selection was the number of copies that were purchased and distributed by the Oklahoma State Department of Education, during the fiscal years 1977-83, to public high schools in Oklahoma.

The assumption was that these five texts that were mostly purchased and distributed to high schools, during the school years 1977-83, were the ones that were widely used during that period. However, this assumption could not be supported from the numbers given in Table 1, for these reasons:

1. The possibility that any school could choose its own textbook, even if it was not on the state adoption list, as long as that school could afford supplying enough copies to its students

2. The fact that in many schools, textbooks could be used for many years, as long as they were still in good shape. This meant that in a given year, one textbook may not appear on the purchase list of the State Department even though it was, probably, widely used

3. In some instances, when the adoption period approached its end, some schools probably liked to continue using the same textbook, therefore, they ordered new copies of that text during the last school year of the adoption period to make sure they would have enough copies to last for the next few years. This would increase the number of copies purchased by the State Department of Education without the indication of a more widespread use of that particular text. The researcher's expectation was that it was very rare for such cases to

happen, and therefore, those figures[91] may be considered as indicative of the actual geography textbooks' distribution and frequency of use.

C. Selection of the method

Content analysis technique was used in this study. It was an appropriate method through which the content of geography textbooks was identified in terms of its major ideas and topics, and in terms of their intensities and frequencies. Content analysis was used for comparing the five textbooks' content to a list of content categories that the researcher developed and reported its development in this chapter. The aim was to use this technique to draw inferences about relationships between what existed in the five texts and what was expected to be there.

One of the basic assumptions of the content analysis technique was the meaningfulness of the quantitative description of the content material itself. This meant that frequent occurrence of one concept or the amount of space devoted to a special topic may indicate the "importance" of that concept given to it by the author(s) of the text.

Quantification or counting was a major technique used in this study. According to Berelson, "of primary importance in content analysis is the extent to which the analytic categories appear in the content, that is, the relative emphases and omissions"[92]. Numerical frequencies and percentage figures dominated throughout the study.

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[91]Oklahoma State Department of Education, The Annual Report of Free Textbook Distribution Service, Fiscal years 1977-83, Oklahoma State Department of Education.

[92]Berelson, p. 17.

Counting, such as the number of pages related to one topic, the number of selected facts, concepts, definitions, and the types of details of selected topics and concepts, was conducted. Counting also included the number of tables and graphs offered in each text to clarify a particular concept or topic, as well as the number of other figures related to that concept or topic. Then, data were presented in different forms: tables, graphs, and maps. Therefore, content analysis technique was applied to compare the content of the five textbooks themselves, according to the list of categories developed by the researcher.

Since all of the textbooks were on the subject of world geography, the researcher compared and analyzed all of the chapters and topics representing the seven categories, except for the category of Regional geography. In each of the five textbooks, almost all parts of the world were studied and presented through a particular format. Therefore, the researcher examined and compared only two units of the Regional geography:

1. The European Countries' unit(s): including both Western and Eastern Europe, but not the U.S.S.R.

2. The Latin American Countries' unit(s): including Central and South America.

D. Selection of categories

According to Berelson, categorization was a tool upon which rested the success or the failure of any content analysis study. "A

content analysis can be no better than its system of categories"[93]. Different factors needed to be considered during the categorization process:

1. The nature of the problem that was investigated
2. The purpose of the study
3. The nature of the content that was analyzed
4. The type of analysis that was selected for the study.[94]

For this study, analyzing the content of five selected geography textbooks necessitated a balanced coordination among the following elements:

1. The content of the five geography textbooks
2. The comparison between what the five selected geography textbooks offered and what geographers and educators recommended to include in such textbooks used at high school levels
3. The format used to present the content of the five selected geography textbooks
4. The content analysis technique used as a tool for investigation and comparison.

In order to develop a system of content categories, the researcher referred to the literature reviewed in Chapter II and drew a general pattern of categories from the following authors' and organizations' publications: Pattison, Broek, Warman, McFarren, Nishi,

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[93]Berelson, p. 147.

[94]Budd, Richard, and Robert Thorp, An Introduction to Content Analysis, A publication of the State University of Iowa, School of Journalism, 1963, p. 39.

Ridd, Haggett, and the Joint Committee on Geographic Education.

Also, the researcher listed in detail some specific points which constituted a major focus for comparison and analysis. The following categories, along with their specific points, were developed to fit the scope of this study, to be as comprehensive as possible, and to be mutually exclusive:

Physical Geography

This category included materials that dealt with:

A. Land forms: including:

1. A definition (or a description) of landforms
2. Examples of the different types of landforms
3. A description of the forces that generated changes in land forms
4. A description of the continuously changing shapes and forms
5. Examples of humans' role in changing landforms
6. Examples of their uses by, and their effects on humans
7. Examples of locations of different types of land forms

B. Climate: including:

1. A definition (or a description) of climate
2. A definition (or a description) of weather
3. Examples of the difference between climate and weather
4. Examples of the different types of climatic zones
5. Examples of locations of the climatic zones
6. A description of the principal elements of climate and

weather such as temperature, humidity, etc. . .

7. Examples of how climate influenced the living styles of humans.

C. Vegetation and soil: including:

1. A definition (or a description) of soil
2. A description of the elements and types of soil
3. Examples of changes in soil
4. A description of the role of vegetation in changing the soil in any area
5. A description of the different types of vegetations
6. Examples of how soil and vegetation affected human settlements and activities
7. Examples of how humans affected soil and vegetation in any area in the world
8. Examples of locations of the different types of soil and vegetation from around the world.

D. Water resources: including:

1. Examples of the different types of water resources
2. Examples of their locations in the world
3. A description of the water cycle on the Earth
4. Examples of how cultures adjusted to the type of water resources found in their areas.

E. Mineral and energy resources: including:

1. Examples of the different types of these resources
2. Examples of their geographical distributions in the world

3. A description of how cultures appraised them differently
4. Examples of different uses of these resources.

Human Geography

This category included materials that dealt with:

A. Population: including:
   1. Definitions (or description) of: population density, growth, and movements
   2. Examples of the different types of the above concepts from around the world
   3. Examples of how the physical, cultural, social, and economic characteristics of one society affected those concepts.

B. Economy: including:
   1. Types and examples of locations of major economic activities: agriculture and fishing, industry, commerce and services, and communication and high-tech industry
   2. Examples of the different types of economic interactions among regions and countries in the world
   3. Examples of some of the economic problems facing many countries around the world.

C. Culture: including:
   1. A definition (or a description) of culture
   2. Examples of different types of cultures in the world

3. A listing and a description of culture's elements such as religion, values, architecture, arts, etc. . .
4. A definition (or a description) of cultural diffusion
5. Examples of cultural diffusion within and across cultures.

D. Transportation and communication: including:

1. A description of the different modes of transportation and communication
2. Examples of how transportation and communication influenced the global interaction among different countries in the world
3. Examples of the major routes and networks of transportation and communication.

E. Urbanization: including:

1. A description of the history of the urbanization phenomena
2. A description of the forces that accelerated urban development
3. A description of the characteristics of the urban life: physical, social, cultural and economic
4. Examples of the major urban areas in the world
5. Examples of some urban problems
6. Examples of rural-urban and urban-urban interactions and interdependence.

Global Geography

This category included materials that dealt with:

A. Earth-Sun relationships: including:

1. A definition (or a description) of the solar system, stars, and planets
2. A description of how the solar system worked and functioned
3. Examples of the effects of the Sun on Earth's people, climates, and resources.

B. Globalism: including:

1. A description of the global shape of the Earth
2. Examples of the effects of the Earth's spinning, rotation, and axis inclination on some geographical phenomena.

National Geography

This category included materials that dealt with:

A. Physical geography of the United States: The researcher analysed the following topics and evaluated them according to the criteria used in examining physical geography in general, except for the definitions of terms and the examples that were not applicable for the U.S.:

1. location
2. landforms
3. climate and climatic zones
4. vegetation and soil

5. water resources
6. mineral and energy resources.

B. Human geography of the United States: The researcher analyzed the following topics and evaluated them according to the criteria used in examining human geography in general, except for the definitions of terms and for the examples that were not applicable for the U.S.:

1. population
2. economy
3. culture
4. transportation and communication
5. urbanization
6. localization.

C. Regions of the United States: including:

1. A description of the basis upon which regions in the U.S. were chosen
2. Inclusion of all areas of the U.S.
3. A description of the location and the boundaries of each region
4. A listing of the states included within each region
5. Examples of the physical and human settings of each region
6. Examples of regional interdependence and interactions.

Regional Geography

This category included materials that dealt with:

Regions of the world: including:

1. A coverage of all major areas and continents of the world
2. Defining the location of each region or country and its boundaries
3. A description of the physical characteristics of the region or the country, using the criteria proposed in the category of Physical geography
4. A description of the cultural, social, and economic characteristics of the region or country, using the criteria proposed in the category of Human geography
5. Examples of how some of the geographical concepts (proposed later) could be applied in the study of regions and countries.

Cartography

This category included materials that dealt with:

A. Map projection: including:
   1. A definition (or a description) of map projection
   2. Inclusion of the following elements in that definition: direction, symbols, scale, and title.

B. Types of map projection: including:
   1. Reasons for the differences among the types of map projection
   2. A description of some principal types of map projections

3. Examples of each type of map projections.

C. Applications of the different types of map projection: including:

1. Examples of who used which type of map projection
2. Examples of the advantages of using a particular type of projection to study a specific phenomenon
3. A description of different types of maps.

Concepts and Relationships

This category included materials that dealt with:

A. Location: including:

1. A definition (or a description) of each of its two aspects: absolute and relative
2. A description of the different elements that intervened in locational decisions
3. Examples of the different locational decisions taken by groups of people to settle or maintain a living in a particular area.

B. Localization: including:

1. A definition (or a description) of this concept
2. Examples of areas characterized by one main economic or social activity
3. Examples of how other activities were attracted to an area after the establishment of the original activity.

C. The concept of change: including:

1. Examples of the different types of changes

2. Examples of that concept drawn from both physical and human geography.

D. Scale of analysis: including:

1. A definition (or a description) of the term "scale of analysis" or of any other similar term
2. Examples of how conclusions about a particular observation might differ depending on the scale of analysis
3. Examples of cases where a particular scale was more appropriate to use than others.

E. The regional concept: including:

1. A definition (or a description) of this concept
2. Examples of the different ways of defining one region
3. A description of the different elements that aggregated in space to form a region.

F. Areal coherence: including:

1. A description of how regions were the product of a systematic association of single elements
2. Examples of how these elements interacted to produce a whole which was not a mere association of those single elements
3. Examples of different settings where similar elements interacted differently to produce another distinctive phenomenon.

G. Man-environment relationships: including:

1. A description of this mutual relationship, such as the adaptation concept

2. Examples of how environment affected humans

3. Examples of how humans affected environment

4. Conclusions or suggestions about how to preserve the environment, and how to exploit it efficiently.

H. Spatial distribution, differentiation, and interaction: including:

1. Definitions (or descriptions) of all these concepts

2. Examples from around the world of each one of them

3. Examples of how these concepts were applied to explain differences, likenesses, and interactions among areas or countries in the world

4. Examples of interdependence among world regions.

E. Counting and scoring

The categories developed by the researcher were used as a basis for comparison and analysis. They were intended to be comprehensive and representative of the geographical topics considered important by both geographers and geography educators. These categories were compared in different ways:

1. In terms of their inclusion or omission in each of the five textbooks

2. In terms of their intensities or the number of words and/or pages devoted to each topic or concept

3. In terms of the number of the specific details and examples of the selected topics and concepts provided within each category.

The researcher adopted and used several ways of counting and

recording. In some instances, counting the number of words was used as a way for comparison (this was the case with definitions of selected concepts). In other instances, counting the number of examples and/or specific details about one topic was another approach for comparison (this was the case with the search for examples of selected facts, concepts, relationships, and elements of some geographic topics and concepts).

During the process of counting and recording data, it was necessary to follow a consistent method of recording. Therefore, the following notes about some specific cases that the researcher faced, were important to mention because treatment of subsequent cases had to be similar, if not identical:

1. If a particular example of a specific point was repeated in different places in the chapter—or even in the book—, it was counted as being one example only for that particular point

2. On the contrary, any item that was used by the textbook's author(s) as an example of several topics or specific points, was counted every time it was mentioned, but within different categories or subdivisions

3. While searching for examples of concepts and relationships, non-examples were counted too

4. Regarding the regional geography category, these textbooks approached this type of content either by having an introductory chapter about the whole continent or region, followed by separate chapters about individual countries, or by presenting the whole continent or region in detail, followed by the study of some selected

countries in that region. For the first type, the researcher did not analyze the introductory chapters' content, and for the second type, the researcher did not analyze content concerning the selected countries studied

5. Regarding the concept of change, examples from other categories (such as National and Regional geography) were counted and added to that concept's specific points

6. While counting the number of pages devoted to all categories and their subdivisions, the researcher used the word "Other" to include all materials not included within any of the seven content categories, such as skill development exercises, tests' questions, follow-ups, units' summaries, and units' titles

7. In some instances, the researcher found some specific points in one (or more) textbook(s) but did not count them because they were presented in a form of a map, a graph, or a table, with no reference to that figure's content within the text of the chapter itself.

F. Comparison and interpretation of data

As presented in this chapter, each of the seven categories had several subdivisions, within which the researcher developed some specific points to analyze. Comparison of the subdivisions was conducted in two ways:

A. Qualitatively: by

1. Examining the inclusion of all the specific points defined by the researcher

2. Examining the content for other additional points not defined by the researcher, but discussed in detail in the text
3. Providing examples and non-examples of the topic, concept, or generalization under study
4. Relating examples and the specific points to the original topic through a summary statement
5. Providing visual illustrations, such as maps, figures, pictures, etc., to clarify and examplify the topic.

B. Quantitatively: by

1. Counting the number of words in each text representing some of the specific points, such as definitions of concepts that the researcher examined and analyzed
2. Counting the number of examples and non-examples provided for the other specific points indicated through the categorization system
3. Counting the number of the different elements used to describe, in detail, a special topic or concept
4. Counting the number of the visual illustrations related to the topic under study.

In addition, nine format categories were developed in chapter four to describe the format of the content found in each textbook. Data were, then, presented and interpreted according to both content and format categories.

CHAPTER IV

DATA PRESENTATION AND ANALYSIS

Introduction

Seven content categories were developed and used in this study to achieve the goal and purpose of accomplishing a content analysis of five selected high school geography textbooks. One of the assumptions of this study was that textbooks' contents reflected the kind of topics, concepts, details, relationships, and facts that authors and publishers of these textbooks believed to be significant to include in a geography textbook at the high school level. Seven categories were used to organize the analysis of these textbooks and to categorize their contents according to some specific points elaborated within these categories. The researcher's intention was to develop a category system that would identify all major topics included within each textbook, and to record, count, and analyze as much content of the five selected textbooks as possible. In table 4 and in figure 3, numbers and percentages of pages, in each of the five textbooks, that the seven categories could analyze, were presented and illustrated.[95]

This study was designed to answer two questions: (1) What were

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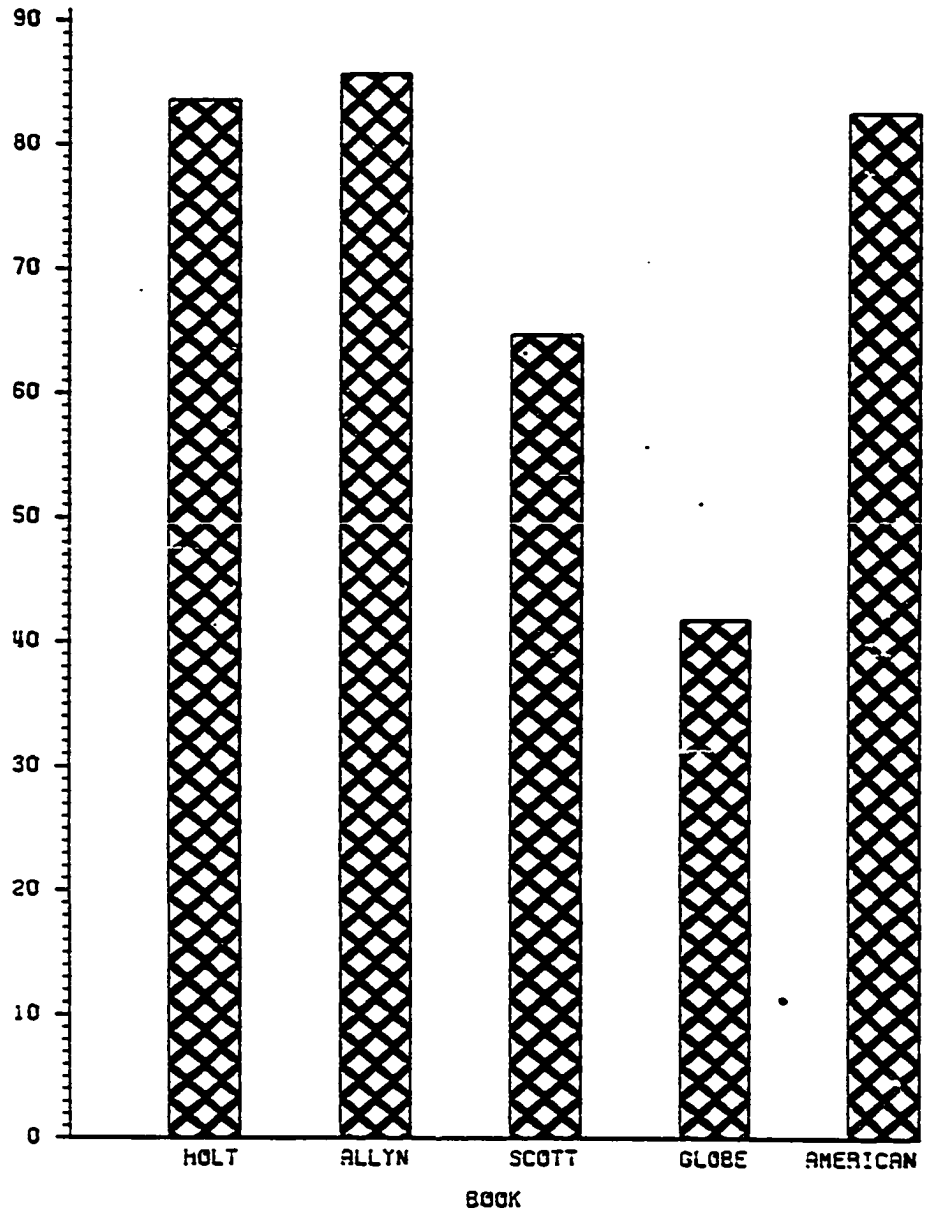
[95]For simplification purposes, first publisher's last name was used to refer to each textbook. For more details, see page 7.

FIGURE 3

PERCENTAGE OF PAGES INCLUDED BY ALL CATEGORIES

(DEVELOPED BY THE RESEARCHER)

IN THE FIVE SELECTED GEOGRAPHY TEXTBOOKS



the major topics and areas of study that constituted the scope of the five selected high school geography textbooks? and (2) to what extent did these five texts accommodate the major topics and areas of study that both geographers and educators recommended to include in a secondary school geography course?.

TABLE 4
NUMBER AND PERCENTAGE OF PAGES INCLUDED BY ALL CATEGORIES

	Holt	Allyn	Scott	Globe	American
Total number of pages	551	558	624	595	499
Number of pages included	461	478.5	403.5	249	412
Percentage of pages included	83.6	85.7	64.7	41.8	82.6

During the process of data collection, the specific points identified in each subdivision of all categories were, first, located in the five textbooks. Then, they were recorded on tally sheets for counting purposes. From tally sheets, data were then transferred to large tables where they were grouped according to the seven categories. During the process of recording data, the researcher followed consistent ways of counting and recording (described in Chapter three). The final form of the tabulated raw data was presented in appendix A.

As Berelson suggested, "The general categories of a content analysis must be stated in analyzable forms appropriate to the particular content under investigation"[96]. For this study, the format used to

[96]Berelson, p. 164.

present content to students was as important as the content itself. Also, according to Eggen, "content exists in three primary forms—facts, concepts, and generalizations"[97]. Therefore, it was necessary that collected data be re-sorted, using the following nine format categories:

1. Coverage of the content categories of this study in each textbook

2. Coverage of selected concepts

3. Inclusion of some details related to the selected topics and concepts

4. Coverage of selected relationships and interactions

5. Coverage of selected facts--those related to the concepts, definitions, and relationships studied

6. Inclusion or omission of some selected topics

7. Frequency of summary statements

8. Provision of additional (unique) points

9. Frequency of figures and tables related to the topics studied.

In this chapter, analysis of the content of the five selected high school geography textbooks followed these nine format categories. These nine categories were used for simplifying the analysis of the five textbooks, in terms of the seven content categories developed in chapter three.

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[97]Eggen, p. 32.

Coverage of Content Categories in Each Textbook

The first step for analyzing the content of the five selected geography textbooks was to describe the scope of content presented and discussed in each text. This format category was important because it enabled the researcher to compare these five textbooks in terms of their arrangement of content, their sequence of units of study, and the scope of their content in relation to the system of categorization of this study.

All five textbooks focused on World Geography, and all had the word WORLD in their titles. As presented in figure 4, the largest number of pages in each text was devoted to the category of Regional geography. Although the number of pages devoted to each category differed from one text to another, all five textbooks included content that could be analyzed by the researcher's seven categories, with the exception of the category of Concepts and Relationships, which was sparsely distributed within each textbook.

A general pattern of content organization was found in almost all five textbooks: 1) each text was divided into many units--nine to eleven units--with the exception of American Company's (three units), 2) all textbooks' first units dealt with some, if not all, of the general geography categories: Physical Geography, Human Geography, Cartography, and Concepts and Relationships, and 3) the remaining units were related to the categories of National and Regional geography. As shown in table 5 and in figure 4, six of the seven content categories were included in each textbook (the category of Concepts and Relation-

TABLE 5
NUMBER OF PAGES DEVOTED TO EACH CATEGORY

Category	Holt	Allyn	Scott	Globe	American
Physical geography	25	34.5	30	17.75	72
Human geography	6	5	13.5	6.75	76
Global geography	4	9	10.5	3.25	4
National geography	69	83	54.5	24.5	31
Regional geography	350	340	277	186.75	227
Cartography	7	7	18	10	2
Subtotal	461	478.5	403.5	249	412
Other	90	79.5	220.5	346	87
Total	551	558	624	595	499

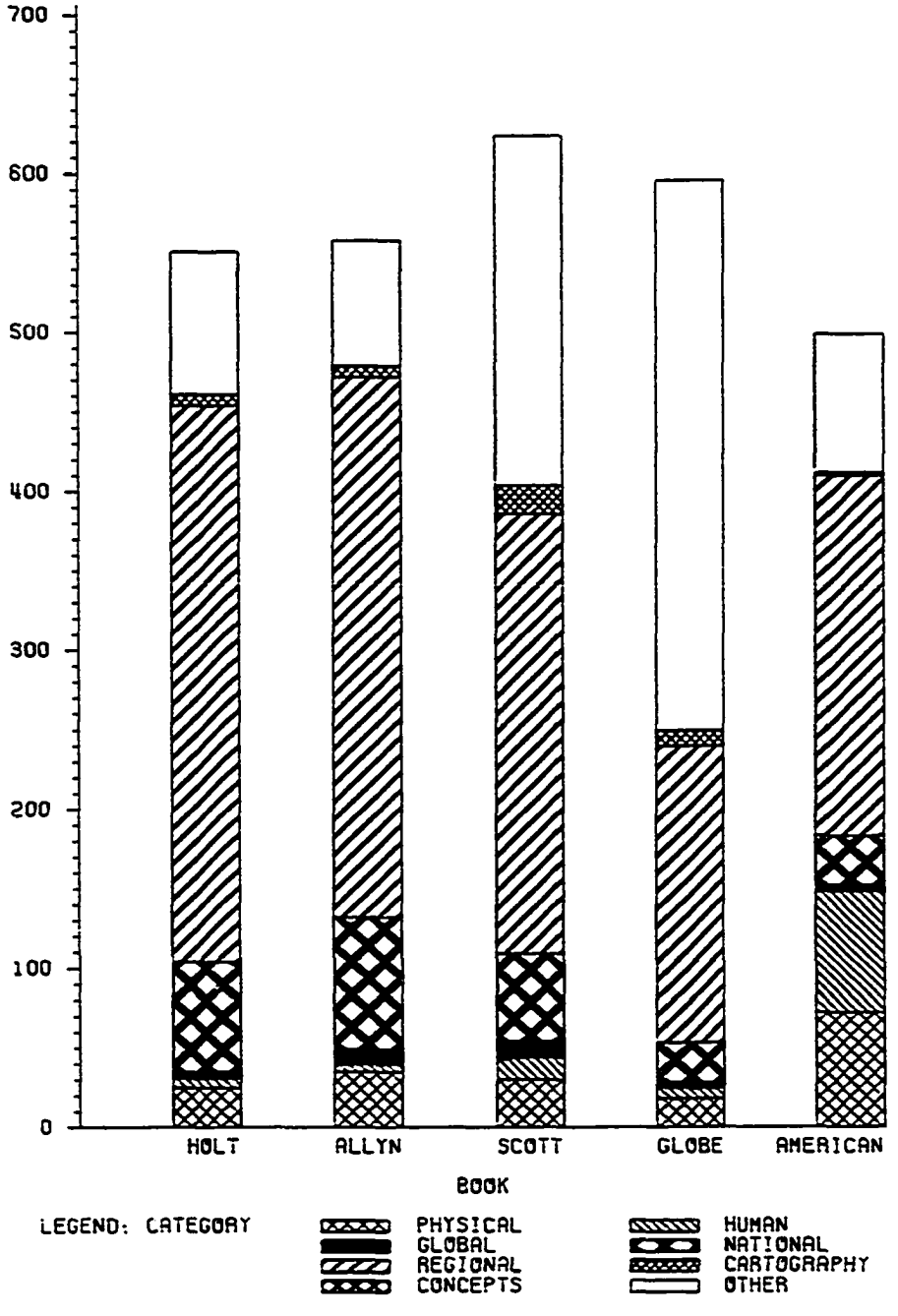
ships was excluded because it was sparsely distributed within the other categories).

An examination of this table indicated that American Company's text devoted more pages to the categories of Physical and Human geography than did the other texts. Holt's and Allyn's textbooks devoted more pages to the categories of National and Regional geography than did the other texts. Scott's text allocated more pages to the category of Cartography than did the other textbooks. Globe's text had a large number of pages classified as "other" in this table and these pages were not directly related to any of the seven content categories. These pages included exercises, test questions, map skills, follow-ups, and units' titles. These pages outnumbered the content

FIGURE 4

NUMBER OF PAGES DEVOTED TO EACH CATEGORY

ACROSS THE FIVE SELECTED GEOGRAPHY TEXTBOOKS



categories' pages themselves in Globe's text. As shown in table 4, only 41.8 percent of Globe's text could be analyzed by all categories. The number of pages devoted to six categories and to their subdivisions was shown in table 6. The researcher concluded that, first, in all five textbooks, there were few pages related to the topics of water resources and of mineral and energy resources within the general category of Physical geography. Second, and in all five textbooks, there were also few pages related to the concept of culture within the general category of Human geography. Third, in chapters related to the category of Regional geography, Scott's text devoted fewer pages to the topic of the Soviet Union than did the other four texts. Fourth, Allyn's textbook devoted a greater number of pages to the topic of the United States than did the other texts and was the only text in which no other country or region was assigned more pages than the United States.

TABLE 6
NUMBER OF PAGES RELATED TO EACH SUBDIVISION OF ALL CATEGORIES, ACROSS THE FIVE SELECTED GEOGRAPHY TEXTBOOKS

Subdivision for Category	Holt	Allyn	Scott	Globe	American
A. Physical geography:					
Landforms	5.5	13	15	3	24
Climate	9.5	16	15	8.75	24
Vegetation and soil	7.5	1.5	0	1	13
Water resources	1.5	2	0	3	7
Mineral and energy resources	1	2	0	2	4

TABLE 6 - continued

Subdivision for Category	Holt	Allyn	Scott	Globe	American
B. Human geography:					
Population	1	2	0	0	21
Economy	2	0	1	2	19
Culture	2	1	9	4.5	0
Transportation and Communication	0	2	0	.25	19
Urbanization	1	0	3.5	0	17
C. Global geography:					
Earth-Sun relationships	1.5	.25	6	1.25	0
Globalism	2.5	8.75	4.25	2	4
D. National geography:					
National geography: The U.S.	69	83	54.75	24.5	31
E. Regional geography:					
Latin America	57.5	53	58	31.25	35
Europe	79.5	69.5	55.5	29	37
Soviet Union	39	37.5	6.5	22.5	23
Asia (Far East)	56	69.5	70*	36.5	36.5
Africa (South of the Sahara)	48.5	51	40*	22.75	32.5
North Africa and the Middle East	34.5	25	0	23.5	28.5
South Pacific regions	21	11.5	38	12.25	24.5
Canada	14	23	9	9	10
F. Cartography:					
Map projections	7	7	18	10	2

TABLE 6 - continued

Subdivision for Category	Holt	Allyn	Scott	Globe	American
G. Other:	90	79.5	220.5	346	87

*These figures were for the whole continent, since North Africa and the Middle East were not studied separately.

This study did not cover all regions of the world being presented in each textbook. The researcher chose only two regions for comparison and analysis: Latin America and Europe. As shown in table 7 and in figure 5, number and percentage of pages that were analyzed differed from those listed in table 4:

TABLE 7
NUMBER AND PERCENTAGE OF PAGES ANALYZED IN THIS STUDY

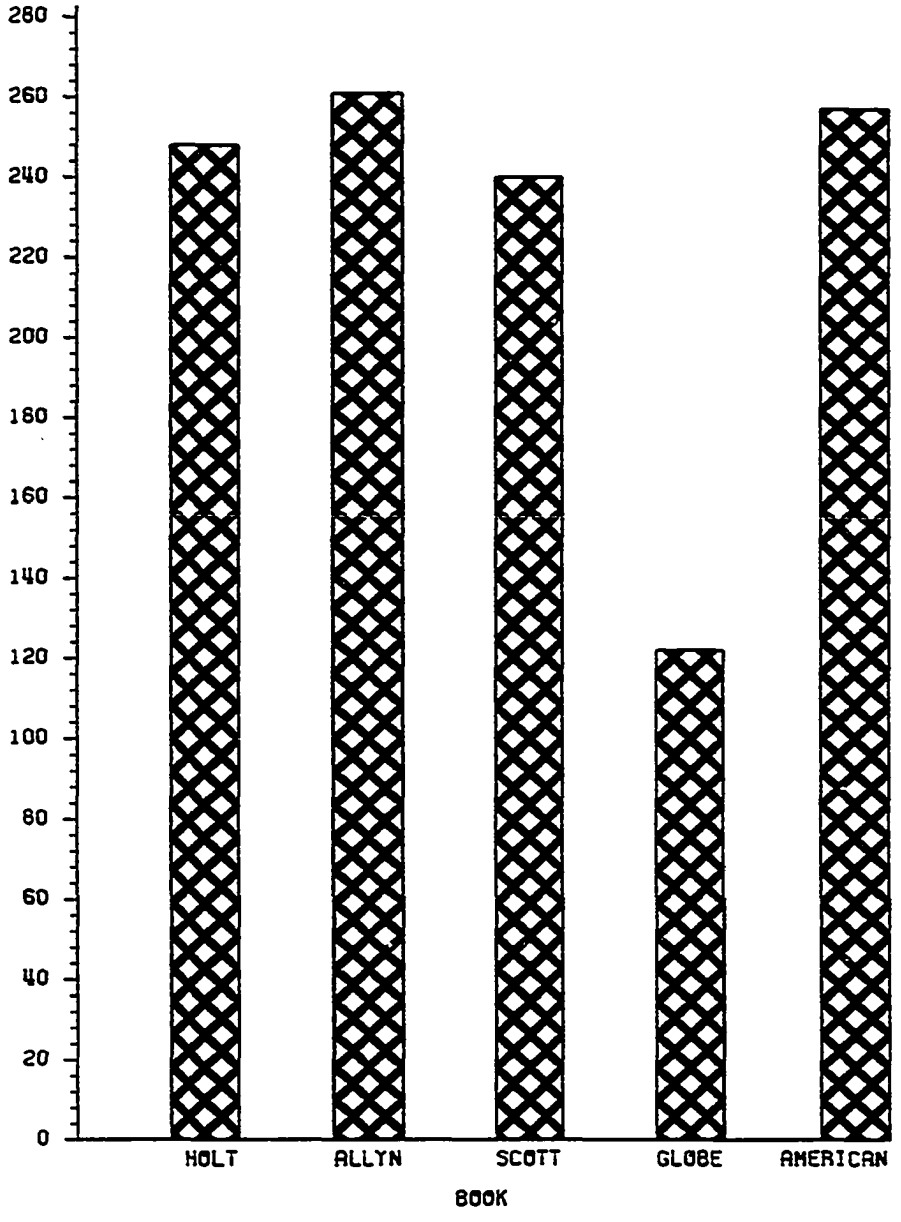
	Holt	Allyn	Scott	Globe	American
Number of pages analyzed	248	261	240	122	257
Total number of pages	551	558	624	595	499
Percent of pages analyzed	45	47	38	21	52

Although this was discussed later, Globe's text, which had a small percentage of content pages covered by all categories and a small number of pages analyzed by the researcher, had one of the largest average number of figures per page analyzed (1.36 figures/page analyzed).

FIGURE 5

NUMBER OF PAGES ANALYZED IN THIS STUDY

IN THE FIVE SELECTED GEOGRAPHY TEXTBOOKS



In summary, all five textbooks focused on world geography, particularly, the geography of the U.S. (National geography category) and of other countries and regions (Regional geography category). The latter constituted the largest section in each textbook. Few pages were allocated to the general geography categories, especially to Human geography (except in American Company's text). None of the five texts devoted any pages to content related to the category of Concepts and Relationships. In all five textbooks, more pages were devoted to some specific topics, such as the study of continents and countries, than to others, like water resources, mineral and energy resources, and culture. In terms of including the selected content categories in each textbook, both Holt's and Allyn's devoted a substantial number of pages to the categories of Physical, National, and Regional geography. Scott's textbook devoted more pages to the categories of Global geography and Cartography than did the other texts. Globe's text did not surpass the other textbooks in devoting more pages in any of the other content categories. Also, Globe's text had a very large number of pages classified as "other" and, consequently, had a small percentage of pages actually covered by the category system of this study. American Company's textbook devoted more pages to the two general categories of Physical and Human geography than did the other texts.

Finally, in consistency with the focus of all five textbooks on the study of regions of the world, Holt's and Allyn's texts were ranked first and second among the five selected geography textbooks, in terms of coverage of content related to the categories of National and

Regional geography. But if coverage of the categories of Physical and Human geography was desirable to include, then, American Company's textbook would have been ranked first among all five texts. Globe's text was ranked fifth in both cases.

Coverage of Selected Concepts

The form of content described and analyzed in this section was concepts. As defined by Eggen, concepts were "the form of data or form of content that results from the categorization of a number of observations . . . grouped together and then abstracted in the sense that similarities are noted and differences ignored"[98]. To learn concepts requires observation, categorization, and abstraction. In teaching geography, concepts should constitute an important part of the curriculum. In the guidelines for geographic education proposed by the Joint Committee on Geographic Education, three of the five "fundamental themes in geography" were concepts: location, place, and regions.

Learning the definition of a concept is one aspect of learning the concept. Therefore, in this study, definitions of selected concepts formed a major part of the seven content categories developed and used for analysis of the five selected textbooks. As shown in table 8 and in figure 6, the number of definitions related to the 25 concepts found in each textbook was relatively small. Scott's textbook provided more definitions related to the selected 25 concepts than did the remaining textbooks. Homogeneity existed among these five

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[98]Eggen, p. 40.

TABLE 8
NUMBER OF DEFINITIONS OF SELECTED CONCEPTS IN EACH TEXTBOOK

	Holt	Allyn	Scott	Globe	American
Number of definitions	9	4	11	6	8

textbooks, in terms of the number of concepts for which examples were provided. The researcher examined the provision of examples of these selected concepts. The following were the number of concepts found in each textbook:

TABLE 9
NUMBER OF THE SELECTED CONCEPTS FOR WHICH EXAMPLES WERE PROVIDED

	Holt	Allyn	Scott	Globe	American
Number of concepts	10	10	11	6	11

As shown, Globe's text offered fewer examples of the selected concepts than did the other four texts. For a closer examination, it was important to locate those examples of concepts, and then, compare these figures across the five textbooks. As shown in table 10 and in figure 7, differences existed among textbooks in this regard:

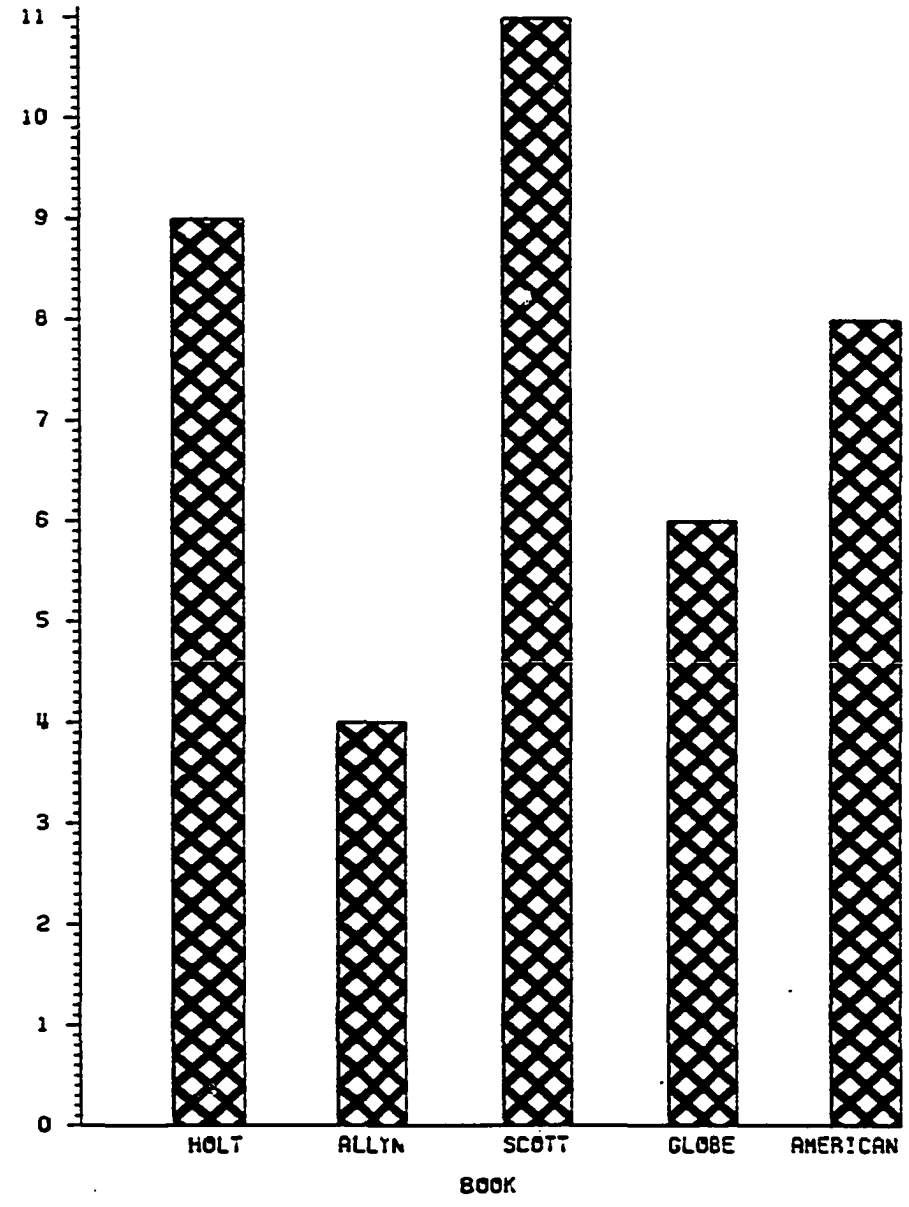
TABLE 10
NUMBER OF EXAMPLES OF SELECTED CONCEPTS FOUND IN EACH TEXTBOOK

	Holt	Allyn	Scott	Globe	American
Number of examples	133	112	54	60	73

There were differences among textbooks in offering examples of concepts. With the exception of American Company's textbook, the

FIGURE 6

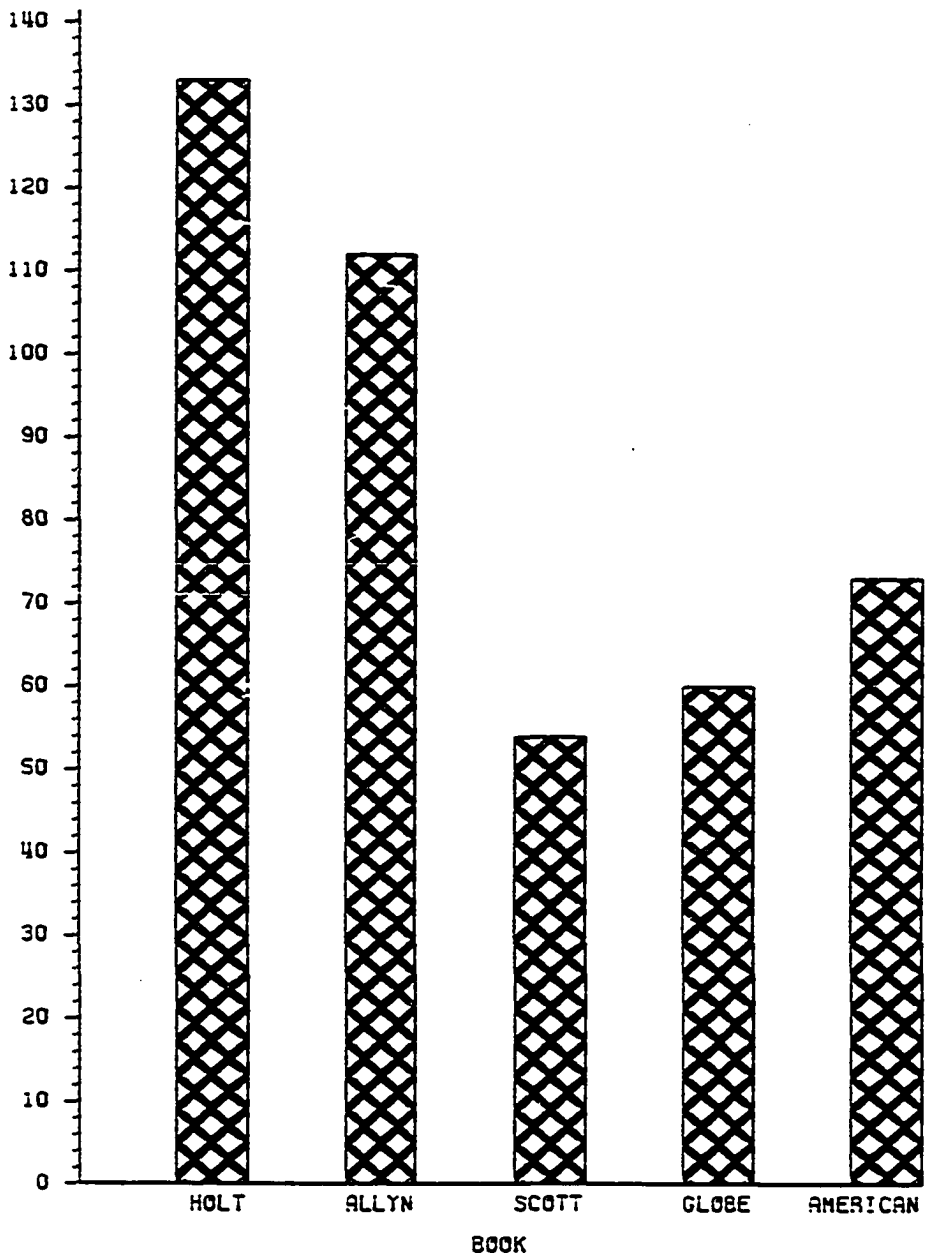
NUMBER OF DEFINITIONS OF SELECTED CONCEPTS FOUND IN ALL CATEGORIES
IN THE FIVE SELECTED GEOGRAPHY TEXTBOOKS



TOTAL NUMBER OF DEFINITIONS RESEARCHED IN THIS STUDY WAS TWENTY FIVE

FIGURE 7

NUMBER OF EXAMPLES OF SELECTED CONCEPTS IN ALL CATEGORIES
IN THE FIVE SELECTED GEOGRAPHY TEXTBOOKS



pattern of distribution of the five selected textbooks according to the number of examples of concepts found, corresponded to the pattern of the frequency of these textbooks' use in Oklahoma's public high schools. One way to compare definitions of concepts across the five texts was to count the number of words used in all definitions and to calculate their averages per definition, as shown in table 11 and in figures 8 and 9. With the exception of Globe's text,the average number of words per definition decreased gradually from 22.3 in Holt's text to 16.4 in American Company's:

TABLE 11
NUMBER OF WORDS USED TO DEFINE SELECTED CONCEPTS IN EACH TEXTBOOK AND THEIR AVERAGES PER DEFINITION

	Holt	Allyn	Scott	Globe	American
Number of words	201	79	197	135	131
Number of definitions	9	4	11	6	8
Average number of words/ definitions	22.3	19.8	17.9	22.5	16.4

Another indicator that was used to show how these five textbooks stressed the use of concepts, was the average number of examples of concepts per page analyzed, and this was shown in table 12 and in figure 10. These averages indicated that one example of a concept was found every two to four pages of content, in the five selected textbooks. But the average number of pages for finding one definition

FIGURE 8

NUMBER OF WORDS USED IN DEFINING SELECTED CONCEPTS IN ALL CATEGORIES
IN THE FIVE SELECTED GEOGRAPHY TEXTBOOKS

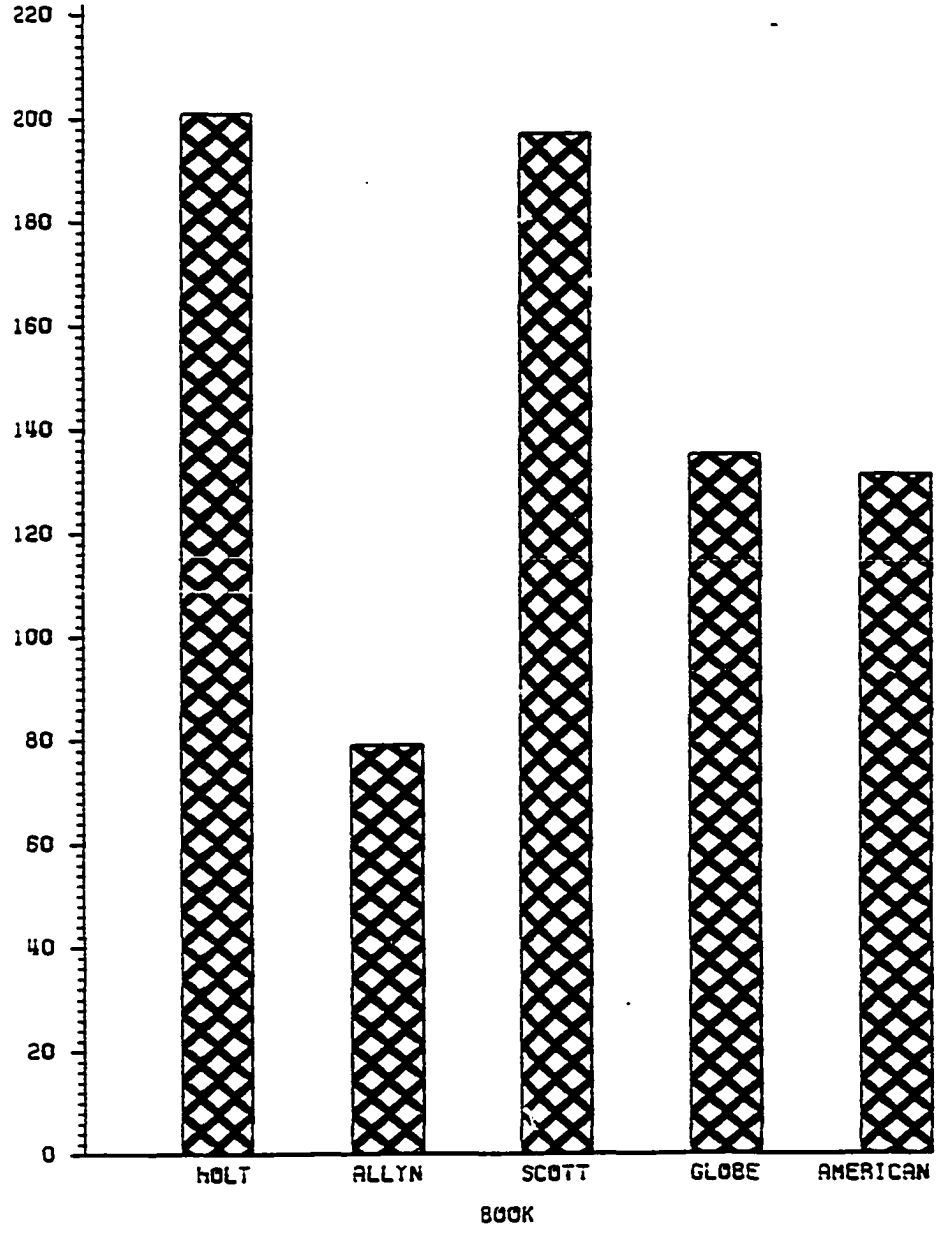
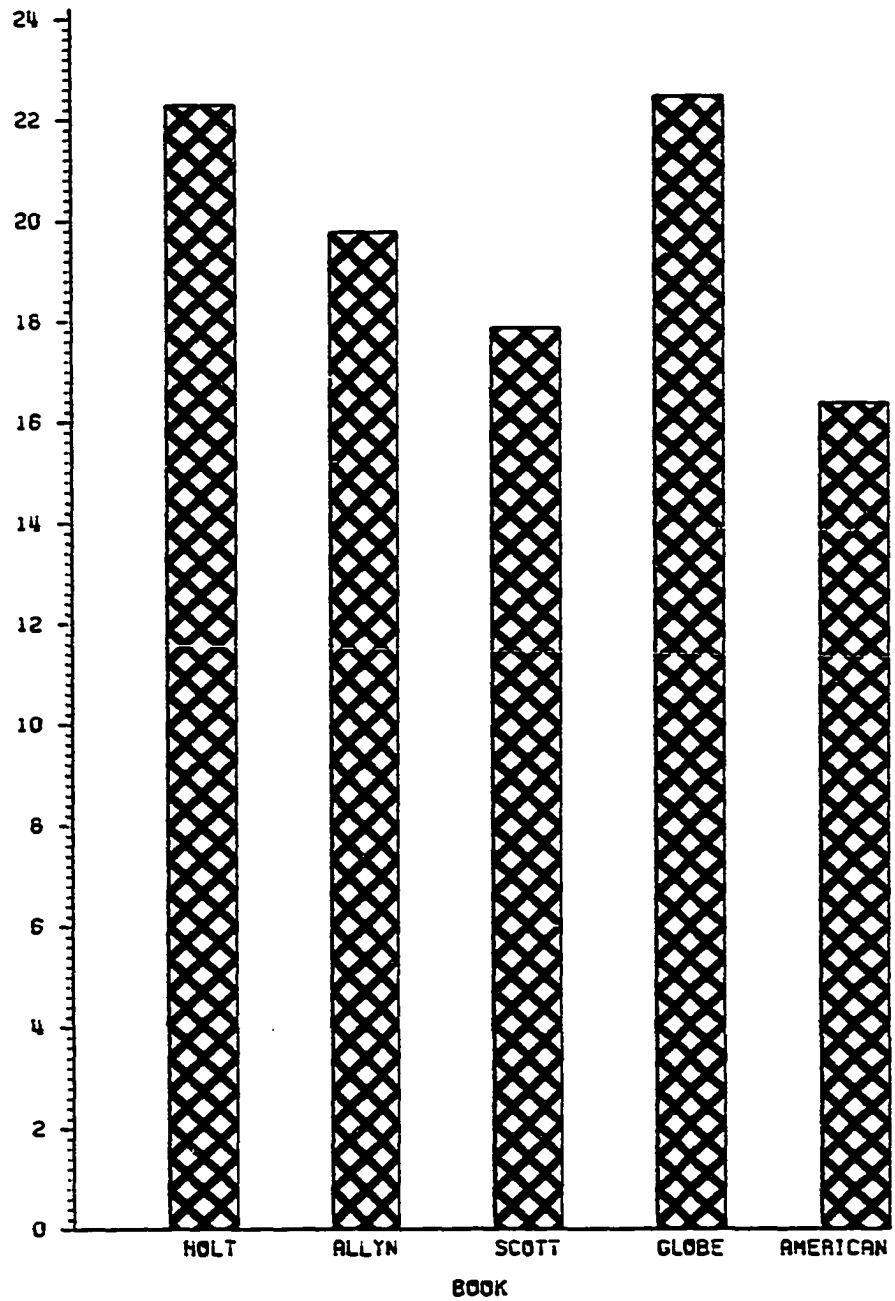


FIGURE 9

AVERAGE NUMBER OF WORDS PER DEFINITION

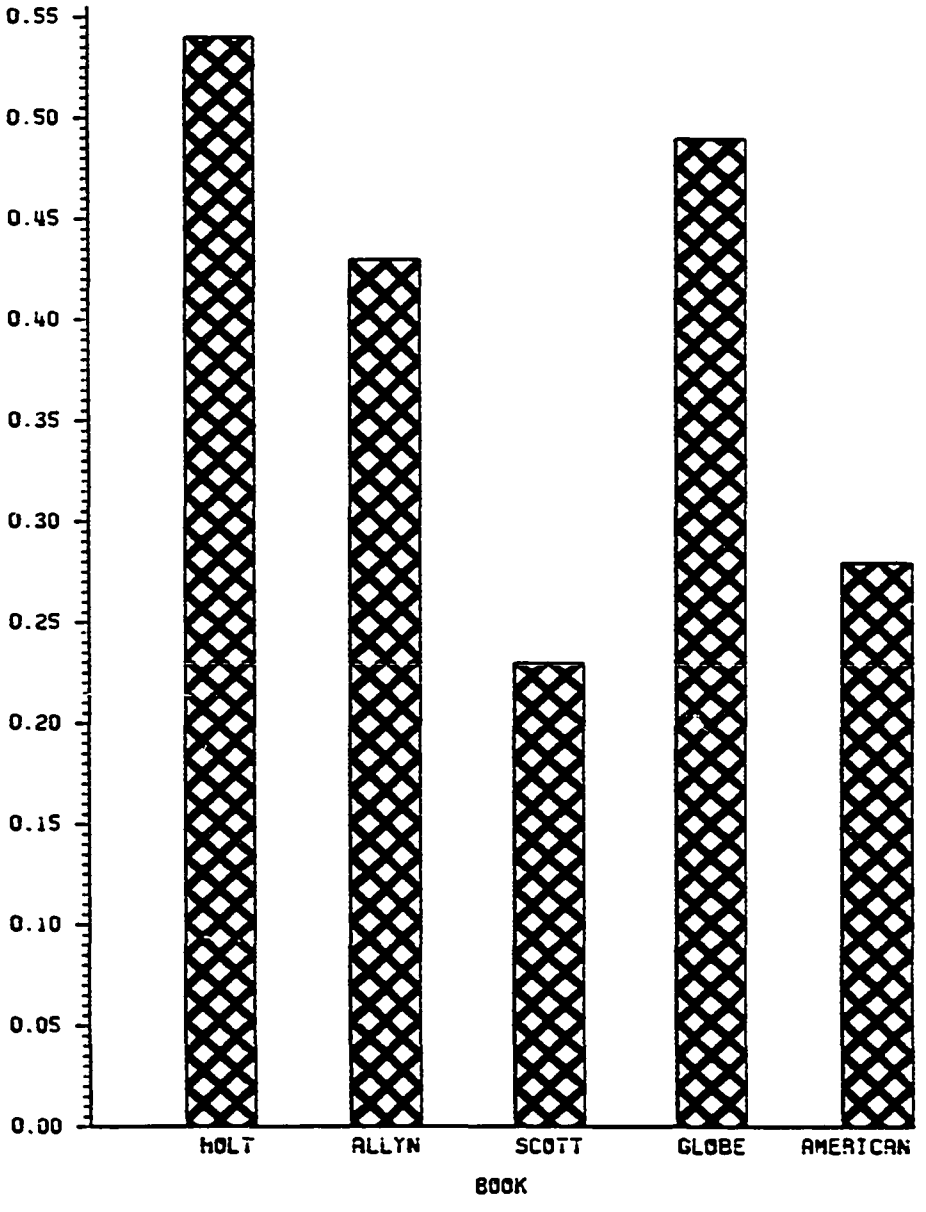
IN THE FIVE SELECTED GEOGRAPHY TEXTBOOKS



ALL THESE FIGURES WERE AVERAGED USING THE NUMBER OF DEFINITONS OF SELECTED CONCEPTS ANALYZED IN EACH TEXTBOOK

FIGURE 10

AVERAGE NUMBER OF EXAMPLES OF SELECTED CONCEPTS PER PAGE ANALYZED
IN THE FIVE SELECTED GEOGRAPHY TEXTBOOKS



ALL THESE FIGURES WERE AVERAGED USING THE NUMBER OF PAGES ACTUALLY ANALYZED IN THIS STUDY

TABLE 12
AVERAGE NUMBER OF EXAMPLES OF SELECTED CONCEPTS PER PAGE ANALYZED

	Holt	Allyn	Scott	Globe	American
Average	.54	.43	.23	.49	.28

was much larger. There were few definitions within each textbook and, as shown in table 13, the number of pages needed in each textbook in order to locate one definition of a concept was large in all textbooks:

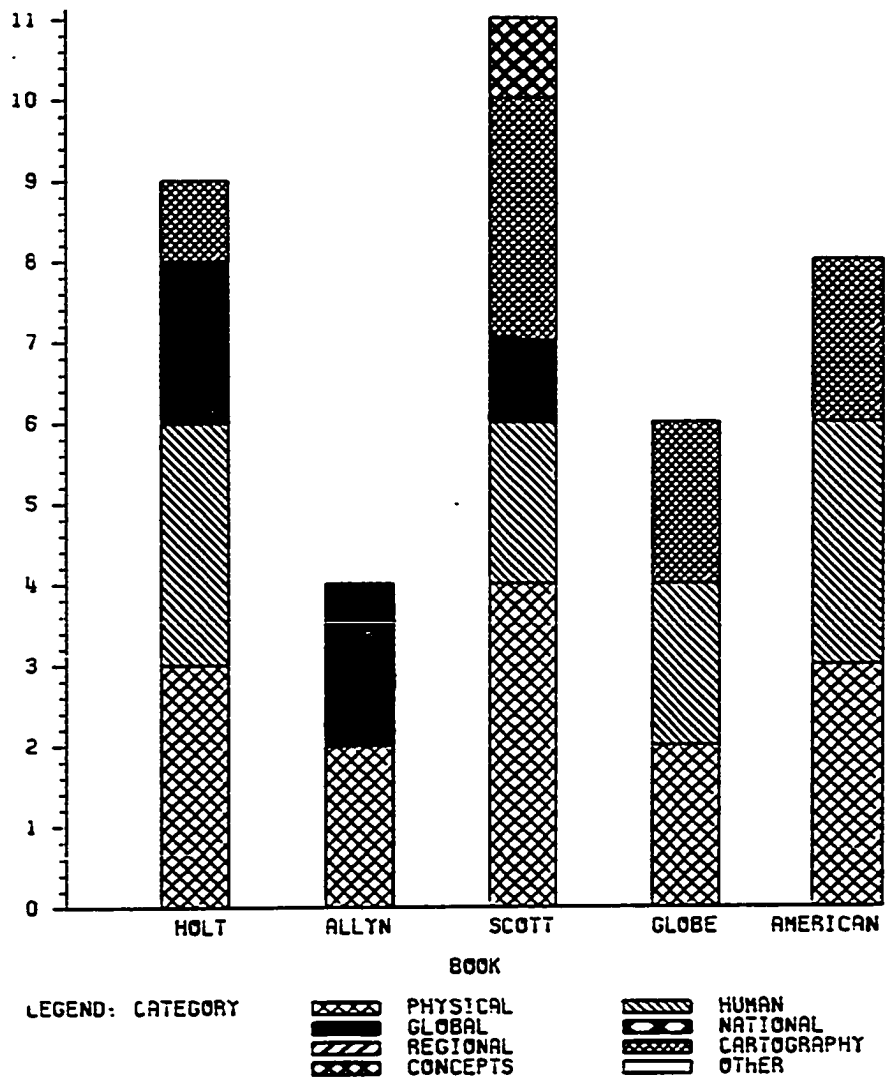
TABLE 13
AVERAGE NUMBER OF PAGES NEEDED TO LOCATE
ONE OF THE SELECTED DEFINITIONS

	Holt	Allyn	Scott	Globe	American
Number of pages needed	28	65	22	20	32

As shown, only Allyn's textbook deviated from the other four texts, in terms of the frequency of definitions in its content (an average of one definition every 65 pages of content). This observation about Allyn's textbook could also be supported by the results shown in table 14 and in figures 11 and 12. Examination of this table indicated the absence of definitions concerning the categories of Human geography and Cartography from Allyn's textbook and of definitions concerning the category of Global geography from Globe's and American Company's textbooks. With the exception of only one definition of a concept in Scott's text, definitions of the selected concepts which this study

FIGURE 11

NUMBER OF SELECTED DEFINITIONS FOUND IN EACH CATEGORY
ACROSS THE FIVE SELECTED GEOGRAPHY TEXTBOOKS
(DEFINITIONS OF SELECTED CONCEPTS)

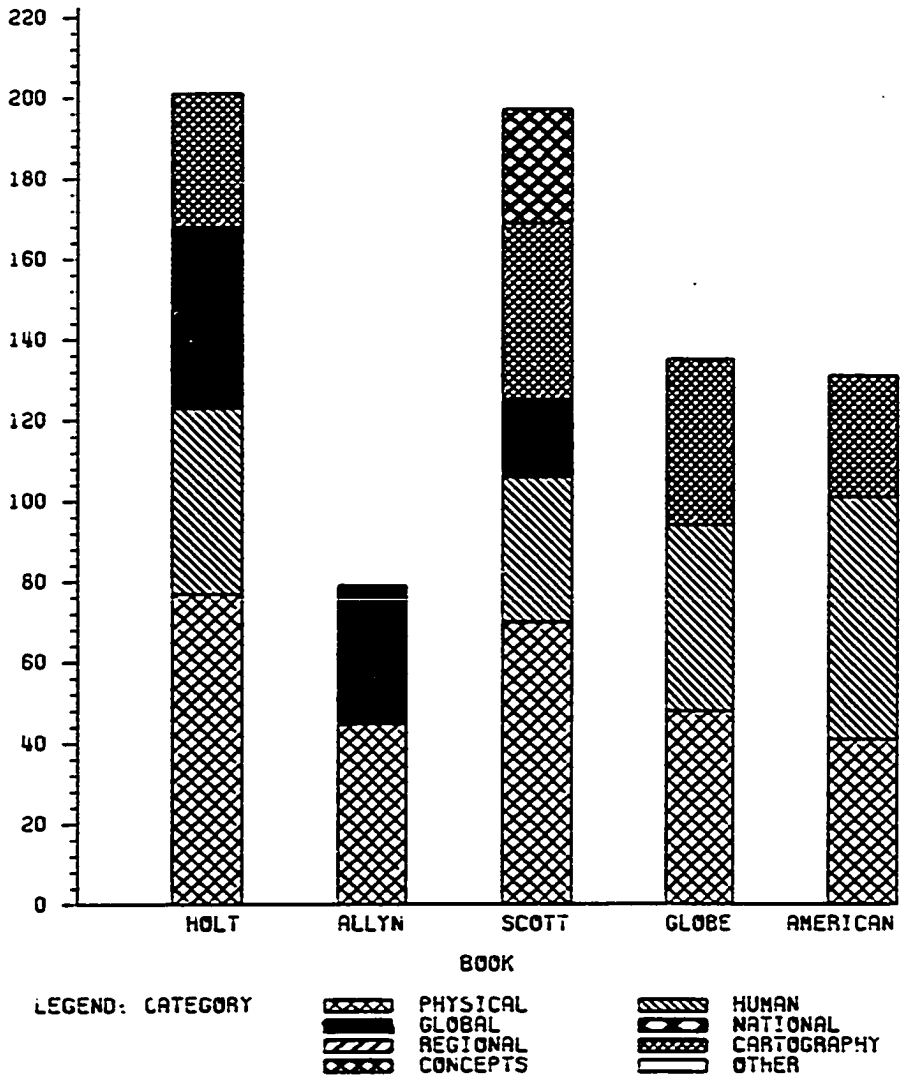


THE CATEGORIES OF NATIONAL GEOGRAPHY AND OF REGIONAL GEOGRAPHY WERE NOT INCLUDED BECAUSE OF THE CATEGORIZATION SYSTEM FOLLOWED BY THE RESEARCHER

FIGURE 12

NUMBER OF WORDS USED IN DEFINITIONS OF SELECTED CONCEPTS FOUND IN EACH CATEGORY

ACROSS THE FIVE SELECTED GEOGRAPHY TEXTBOOKS



THE CATEGORIES OF NATIONAL GEOGRAPHY AND OF REGIONAL GEOGRAPHY WERE NOT INCLUDED BECAUSE OF THE CATEGORIZATION SYSTEM FOLLOWED BY THE RESEARCHER

TABLE 14
NUMBER OF DEFINITIONS OF SELECTED CONCEPTS, AND OF WORDS USED IN THESE CONCEPTS, WITHIN EACH CATEGORY

	Holt		Allyn		Scott		Globe		American	
Category	Def./Words		Def./Words		Def./Words		Def./Words		Def./Words	
Physical	3	77	2	45	4	70	2	48	3	41
Human	3	46	0	0	2	36	2	46	3	60
Global	2	45	2	34	1	19	0	0	0	0
Cartography	1	33	0	0	3	44	2	41	2	30
Concepts	0	0	0	0	1	28	0	0	0	0
Total	9	201	4	79	11	197	6	135	8	131

analyzed within the category of Concepts and Relationships were not provided in all five textbooks. Another observation was drawn from comparing figures 11 and 12: Scott's textbook, which ranked first in terms of number of definitions offered in all categories, ranked second in terms of total number of words used in these definitions. On the other hand, numbers of definitions found in each category could be more meaningful if they were compared in terms of their distribution across the related pages. Since the number of definitions in each category was not large enough to calculate averages per page analyzed, average number of pages per definition were used for such comparison. These averages were presented in table 15:

TABLE 15
AVERAGE NUMBER OF PAGES NEEDED TO LOCATE ONE OF THE SELECTED DEFINITIONS IN EACH CATEGORY

Category*	Holt	Allyn	Scott	Globe	American
Physical	8	17	17	9	24
Human	2	0	7	3	25
Global	2	4	10	0	0
Cartography	7	0	6	5	1

*The category of concepts and relationships' figures were not provided in this table for two reasons: (1) separate pages devoted completely to these concepts or to their definitions were not found and (2) definitions of these concepts did not exist in almost all five texts.

As shown in table 15, categories with large averages were the ones that either included very few definitions or expanded across many pages. This quantitative comparison of provision of definitions and examples of concepts across the five selected geography textbooks should be completed with table 16. Examination of this table indicated the lack of definitions (or even existence) of concepts in all five textbooks, especially the selected concepts listed within the category of Concepts and Relationships.

In summary, in all five texts, the number of definitions and examples of concepts that were provided, defined, or clarified was small. The average number of words per definition ranged from 16 to 23 words. One example of a concept was found in every two to four pages and one definition was located in every 20 to 30 pages, across all five texts (except for Allyn's). Also, with the exception of one concept in

TABLE 16
NUMBER OF WORDS USED TO DEFINE THE FOLLOWING CONCEPTS

Term/Concept	Holt	Allyn	Scott	Globe	American
Landforms	37	0	18	0	0
Climate	16	26	15	18	14
Weather	24	19	17	30	13
Soil	0	0	20	0	14
Population growth	0	0	0	0	31
Population density	11	0	15	0	13
Population movements	0	0	0	0	16
Culture	17	0	21	30	0
Cultural diffusion	18	0	0	16	0
Solar system	30	0	19	0	0
Star	15	12	0	0	0
Planet	0	22	0	0	0
Map projection	33	0	14	0	0
Direction	0	0	0	24	0
Symbols	0	0	11	0	15
Scale	0	0	19	17	15
Scale of investigation	0	0	0	0	0
Region	0	0	28	0	0
Areal coherence	0	0	0	0	0
Spatial distribution	0	0	0	0	0

TABLE 16—continued

Term/Concept	Holt	Allyn	Scott	Globe	American
Spatial differentiation	0	0	0	0	0
Spatial interaction	0	0	0	0	0
Absolute location	0	0	0	0	0
Relative location	0	0	0	0	0
Localization	0	0	0	0	0

Scott's text, none of the concepts listed within the content category of Concepts and Relationships was found in all five texts. Most of the selected concepts found in the five textbooks were located within other content categories.

In terms of relating the analyzed concepts to the seven content categories, definitions of concepts were not found in relation to the categories of National and Regional geography, although these categories constituted most of the content of these textbooks. The concepts of "climate" and "weather" were defined in all texts. The concept of "region" was defined in Scott's text only. Definitions of concepts related to the category of Physical geography were found in at least two of the five textbooks.

In terms of each textbook's points of emphasis, Holt's text described many of the selected concepts, clarified them by examples, and defined them explicitly. Allyn's text offered a small number of definitions of concepts (one in every 65 pages analyzed), but did not offer any definitions of concepts or terms related to the categories of

Human geography, Cartography, and Concepts and Relationships. Allyn's text did better in providing examples of selected concepts than in defining them. Scott's text provided more definitions and more concepts examplified than did the other textbooks. Scott's text offered few examples of these concepts (one in every four pages). Scott's text offered the only definition of one concept ever found in these five textbooks related to the category of Concepts and Relationships (the concept of "region"). Globe's text did not provide as many concepts as did the other texts. Also, the number of definitions of these concepts, the total number of words used in these definitions, and the number of examples of concepts offered were small in Globe's text. The average number of words per definition was larger in Globe's text than in the other texts. American Company's text clarified more concepts by examples than did the other texts, defined the concepts of population growth, density, and movements, but had a small average number of words per definition.

Finally, Holt's and Scott's textbooks were ranked first and second among the five selected geography textbooks, in terms of describing, defining, clarifying by examples, and providing the selected concepts analyzed in this study. Allyn's text was ranked fifth in this regard.

Inclusion of Some Details Related to Selected Topics and Concepts

Topics in general, and concepts in particular, were analyzed in terms of the inclusion of some details such as: types, elements, forces, modes, and characteristics. Search for such details was

essential in determining the major emphases in each of the five selected geography textbooks. Limiting the analysis to the inclusion or exclusion of topics and concepts would not have lead to a comprehensive content analysis. Therefore, the degree of detail to which each of the selected topics and concepts was described was the main point of this section.

Within each of the seven content categories, there were several specific points which guided the search for a listing of types, elements, forces, modes, or characteristics of a particular topic or concept. The number of details for the selected topics and concepts provided within each category across the five selected textbooks was shown in table 17 and in figures 13 and 14. The focus of this section of analysis was on the provision of such details and on their numbers; therefore, averages per page analyzed were not calculated.

With the exception of American Company's textbook, numbers of details found in each category, across the five selected textbooks, were consistent with the textbooks' pattern of use in Oklahoma's public high schools. In this section of analysis, it was necessary to examine every specific point for which different numbers of details were found in each textbook and to compare this type of content, using the seven content categories developed in this study. Within the category of Physical geography, comparison of the five textbooks' contents in terms of the number of details found related to this category was shown in table 18. As shown in this table, emphasis was on landforms and climate in this category, across all five texts. Exceptions appeared in few incidents in some textbooks, such as: types of vegetation in

TABLE 17
NUMBER OF DETAILS OF SELECTED TOPICS AND CONCEPTS, FOUND WITHIN EACH CATEGORY

	Holt	Allyn	Scott	Globe	American
Physical	51	40	44	59	69
Human	20	20	13	10	41
National	99	97	47	55	73
Regional	155	126	119	86	105
Cartography	18	14	20	16	4
Concepts and Relationships	7	16	9	7	8
Total	350	313	252	233	300

TABLE 18
NUMBER OF DETAILS OF SELECTED TOPICS AND CONCEPTS FOUND WITHIN THE CATEGORY OF PHYSICAL GEOGRAPHY

	Holt	Allyn	Scott	Globe	American
Types of landforms	12	5	4	4	10
Forces that change landforms	6	6	8	8	6
Elements of climate	5	8	0	9	7
Types of climatic zones	12	11	12	12	10
Elements of soil	1	1	8	5	2
Types of soil	0	1	12	4	0
Types of vegetation	9	0	0	2	10

FIGURE 13

NUMBER OF DETAILS OF SELECTED TOPICS AND CONCEPTS
FOUND IN THE FIVE SELECTED GEOGRAPHY TEXTBOOKS
(TYPES,ELEMENTS,FORCES,MODES,AND CHARACTERISTICS)

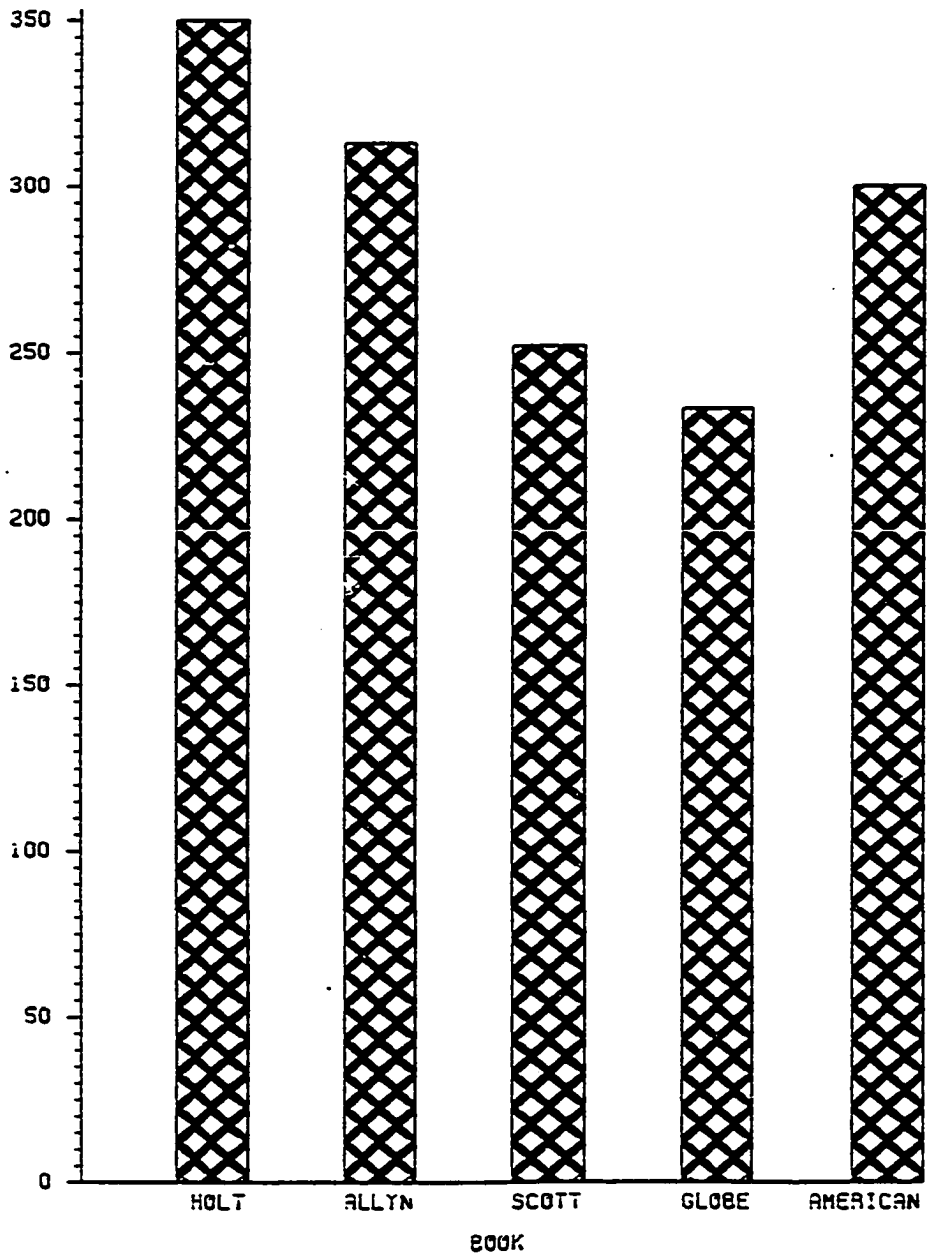
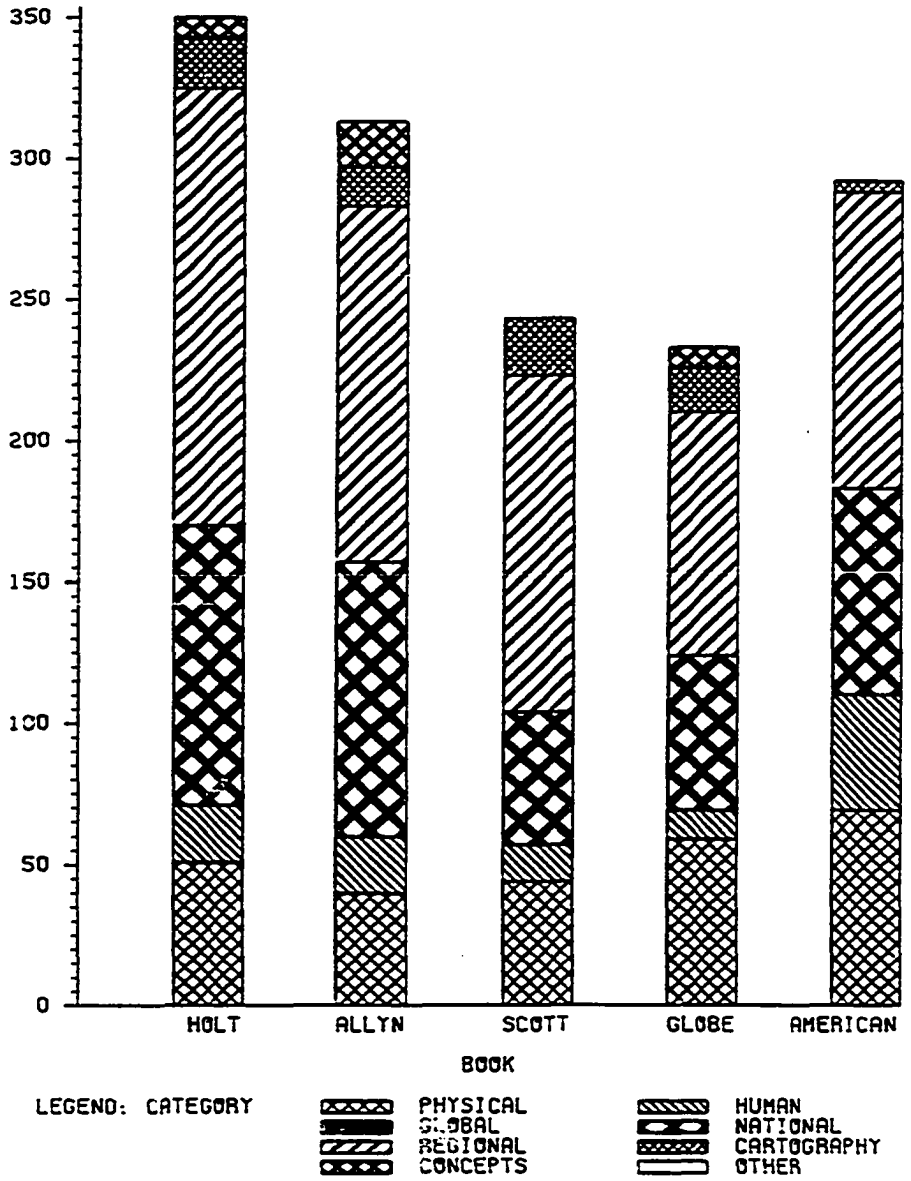


FIGURE 14

NUMBER OF DETAILS OF SELECTED TOPICS AND CONCEPTS FOUND IN EACH CATEGORY

ACROSS THE FIVE SELECTED GEOGRAPHY TEXTBOOKS
(TYPES,ELEMENTS,FORCES,MODES,AND CHARACTERISTICS)



THE CATEGORY OF GLOBAL GEOGRAPHY WAS NOT INCLUDED
BECAUSE OF THE CATEGORIZATION SYSTEM FOLLOWED BY THE RESEARCHER

TABLE 18–continued

	Holt	Allyn	Scott	Globe	American
Types of water resources	0	3	0	8	6
Types of mineral and energy resources	6	5	0	7	18
Total	51	40	44	59	69

Holt's and in American Company's texts, types of soil in Scott's text, and types of mineral and energy resources in American Company's text. Some textbooks did not provide details for some topics within this category, such as types of soil in Holt's text, although they did provide such details within the related sections of the categories of National and Regional geography (see tables 20 and 21).

Within the category of Human geography, few details were provided in each textbook, particularly in Scott's and in Globe's texts, and results were shown in table 19. As shown in this table, American Company's textbook offered more details within this category, but did not describe types and elements of cultures. Types of economic interactions were not mentioned in all five texts and types of economic activities were more often discussed within the categories of National and Regional geography.

Within the category of National geography, details of selected topics were located in all five textbooks. Types of landforms, of climatic zones, of mineral and energy resources, of economic activities,

TABLE 19
NUMBER OF DETAILS OF SELECTED TOPICS AND CONCEPTS
FOUND WITHIN THE CATEGORY OF HUMAN GEOGRAPHY

	Holt	Allyn	Scott	Globe	American
Types of economic activities	2	0	3	5	6
Types of economic interactions	0	0	0	0	0
Types of culture	3	0	0	0	0
Elements of culture	8	7	4	5	0
Modes of transportation	0	8	0	0	7
Modes of communication	0	5	0	0	8
Forces accelerating urbanization	0	0	2	0	4
Characteristics of urban life	7	0	4	0	16
Total	20	20	13	10	41

and of modes of transportation in the U.S. constituted most of the details provided and results were shown in table 20. Among these specific points, forces that change landforms were not frequently listed or specified in all five textbooks. Also, some other points were not explained in some textbooks, such as: types of soil, vegetation, and water resources in Scott's, Globe's, and American Company's texts, modes of communication in Scott's and Globe's texts, and basis for regional division of the U.S. in all texts (but Allyn's). The latter point was interesting, since most of the textbooks approached the study of the U.S. on a regional basis, without specifying

TABLE 20
NUMBER OF DETAILS OF SELECTED TOPICS AND CONCEPTS
FOUND WITHIN THE CATEGORY OF NATIONAL GEOGRAPHY

	Holt	Allyn	Scott	Globe	American
Types of landforms	8	6	7	8	4
Forces that change landforms	2	3	3	2	1
Types of climatic zones	10	7	0	8	6
Types of soil	6	4	0	2	1
Types of vegetation	4	1	0	2	5
Types of water resources	6	6	0	2	2
Types of mineral and energy resources	20	21	10	15	12
Subtotal	56	48	20	39	31
Types of economic activities	8	9	3	5	8
Types of cultures	5	5	0	3	7
Modes of transportation	8	7	4	3	5
Modes of communication	5	2	0	0	7
Forces accelerating urbanism	6	10	0	4	8
Characteristics of urban life	4	9	17	1	0
Regions of the U.S. studied	7	4	3	0	7
Basis for regional division	0	3	0	0	0
Subtotal	43	49	27	16	42
Total	99	97	47	55	73

the reason(s) behind such division. The number of details of topics and concepts related to the category of Regional geography was shown in tables 21 and 22:

TABLE 21
NUMBER OF DETAILS OF SELECTED TOPICS AND CONCEPTS
FOUND WITHIN THE CATEGORY OF REGIONAL GEOGRAPHY (EUROPE)

	Holt	Allyn	Scott	Globe	American
Types of landforms	15	6	8	8	11
Forces that change landforms	2	1	3	1	2
Types of climatic zones	8	5	5	4	2
Types of soil	0	1	5	0	1
Types of vegetation	3	4	4	1	3
Types of water resources	4	4	4	4	3
Types of mineral and energy resources	22	19	11	9	6
Subtotal	54	40	40	27	28
Types of economic activities	7	6	8	8	9
Types of culture	15	15	8	2	8
Modes of transportation	8	7	5	4	5
Modes of communication	2	1	4	3	0
Forces accelerating urbanism	5	5	3	0	1
Subtotal	37	34	28	17	23

TABLE 21-continued

	Holt	Allyn	Scott	Globe	American
Number of countries studied	30	5	24	5	29
Total	121	79	92	49	80

TABLE 22
NUMBER OF DETAILS OF SELECTED TOPICS AND CONCEPTS
FOUND WITHIN THE CATEGORY OF REGIONAL GEOGRAPHY (LATIN AMERICA)

	Holt	Allyn	Scott	Globe	American
Types of landforms	6	3	6	3	6
Forces that change landforms	1	0	3	0	2
Types of climatic zones	7	7	8	6	5
Types of soil	1	0	3	0	1
Types of vegetation	3	3	7	3	5
Types of water resources	5	2	2	2	2
Types of mineral and energy resources	23	19	11	9	16
Subtotal	46	34	40	23	37
Types of economic activities	5	6	4	5	5
Types of culture	6	4	5	8	10
Modes of transportation	4	5	1	3	4
Modes of communication	0	0	0	0	0
Forces accelerating urbanism	3	3	1	3	2

TABLE 22-continued

	Holt	Allyn	Scott	Globe	American
Subtotal	18	18	11	19	17
Number of countries studied	33	4	14	3	26
Total	97	56	65	45	80
Total of both Europe's and Latin America's	218	135	157	94	160

Comparison of these two tables (Regional geography category) to table 20 (National geography category) revealed several observations. First, within the category of Regional geography, details were numerous across all textbooks. Second, texts that did not mention details about selected topics within the study of the U.S., did provide such details within the study of Europe and Latin America--Scott's text was a good example, in terms of describing details about some of the physical geography aspects of some countries. Third, Allyn's and Globe's textbooks approached the study of other countries by using the whole continent as an area of study and then providing few examples of the countries included in these continents. Holt's, Scott's, and American Company's textbooks described, in detail, almost all countries included in these continents, along with brief introduction chapters about the whole continent. Fourth, details that were not covered or described within the general categories of Physical and Human geography, were

examined within the categories of National and Regional geography, and vice versa.

Within the category of Cartography, few differences among the first four textbooks were found. Only American Company's text did not offer as many details as did the other texts:

TABLE 23
NUMBER OF DETAILS OF SELECTED TOPICS AND CONCEPTS FOUND WITHIN THE CATEGORY OF CARTOGRAPHY

	Holt	Allyn	Scott	Globe	American
Elements of map projections	3	4	4	3	4
Reasons for differences in projections	2	0	3	2	0
Types of map projections	4	5	5	5	0
Types of maps	9	5	8	6	0
Total	18	14	20	16	4

Within the category of Concepts and Relationships, only three points were searched for in relation to the following concepts: change, location, and region. Results of such comparison were shown in table 24. Allyn's and Globe's textbooks, which provided some details about elements of region, did not provide a definition of this concept. Scott's text which did provide a definition of the concept of region, did not specify details about elements of region.

TABLE 24
NUMBER OF DETAILS OF SELECTED CONCEPTS FOUND WITHIN THE CATEGORY OF CONCEPTS AND RELATIONSHIPS

	Holt	Allyn	Scott	Globe	American
Types of changes	2	2	1	2	1
Elements of locational decisions	5	5	8	0	7
Elements of a region	0	9	0	5	0
Total	7	16	9	7	8

In summary, all five textbooks offered many details related to the category of Physical geography. Most of their emphasis was upon types of landforms and of climatic zones. However, instances of details about forces that changed landforms were rare in all five textbooks. More details of selected topics and concepts were provided within the category of Physical geography than were within the category of Human geography. In particular, there were no detailed descriptions of types of economic interactions, across all five textbooks. Also, there was no description of the reasons for regional division of the U.S., in almost all texts.

In terms of relating the analyzed details of selected topics and concepts to the content categories of this study, most of the details described were found within the categories of National, Regional, and Physical geography, particularly, Regional geography. However, in almost all five textbooks, details that were not provided within the

general geography categories (whether Physical or Human) were found within the categories of National and Regional geography. Also, details that were not found within the category of National geography, were often located within the category of Regional geography.

In terms of each textbook's points of emphasis, Holt's text described different types of vegetation and of cultures. Allyn's text specified some reasons for regional division of the U.S. Also, Allyn's textbook approached the study of regions of the world by focusing on the whole continent or area; therefore, most of the details related to this category were not located within the study of each country included in that continent or region. This same approach was also followed in Globe's text. Scott's textbook described different types of soil within the category of Physical geography, but offered very few details related to the category of Human geography. Globe's text offered few details of selected topics and concepts related to the category of Human geography, and to all categories. Globe's text did not surpass other textbooks in providing details related to any category or specific topic. American Company's textbook listed and described different types of vegetation and of mineral and energy resources. American Company's textbook surpassed all other texts in offering details related to the category of Human geography, but did not describe the points that were analyzed within the category of Cartography.

Finally, Holt's and American Company's textbooks were ranked first and second among the five selected geography textbooks, in terms of providing details of the selected topics and concepts analyzed in

this section. Allyn's text was ranked fifth in this regard.

Coverage of Selected Relationships and Interactions

Relationships and interactions within and across places constituted a major part in teaching geography, at all levels. Two of the five important themes in geography proposed by The Joint Committee On Geographic Education, focused on relationships within places and on interactions occurring among humans on the Earth. In this section, relationships and interactions were drawn from all content categories. These were specific points which guided content analysis and reflected, described, analyzed, or examplified relations and interactions that occurred at three levels: Nature-Nature, Nature-Human, and Human-Human. All of these specific points focused on the provision of examples of the effects that resulted from the selected interactions and relationships. These specific points were listed in table 25, along with the number of the examples provided in the five selected geography textbooks.

The pattern of distribution of the total number of these examples was similar to the pattern of textbooks' use in Oklahoma's public high schools (with the exception of Scott's text). More examples of some of these relationships were found in the first two textbooks (Holt's and Allyn's) than in the other three texts. These relationships were: mutual interactions between landforms and humans, effects of climate on humans, effects of humans on soil, effects of physical environment on population growth and movements, and effects of localization of one activity in one area on location of other activi-

TABLE 25
NUMBER OF EXAMPLES OF SELECTED RELATIONSHIPS
PROVIDED WITHIN EACH TEXTBOOK

Relationship:	Holt	Allyn	Scott	Globe	American
Effects of humans on landforms	4	6	0	2	2
Effects of landforms on humans	27	26	6	13	7
Effects of climate on humans	10	23	5	19	2
Effects of vegetation on humans	1	1	0	9	3
Effects of soils on humans	2	0	3	4	2
Effects of humans on vegetation	5	3	2	0	5
Effects of humans on soil	19	13	3	2	5
Effects of vegetation on soil	1	1	0	0	1
Effects of physical environment on population growth, density, and movements	15	15	6	6	8
Effects of social environment on population growth, density, and movements	4	4	10	1	14
Effects of economic environment on population, growth, density, and movements	11	10	11	4	13
Effects of transportation on communication and interaction	0	2	0	2	8
Effects of the sun on humans	0	0	0	0	0
Effects of the sun on climate	0	0	1	6	0
Effects of the sun on resources	1	0	1	0	0
Effects of Earth's spinning	1	0	0	1	0
Effects of Earth rotation	2	2	2	2	2
Effects of Earth axis inclination	6	4	6	6	4

TABLE 25-continued

Relationship:	Holt	Allyn	Scott	Globe	American
Rural-urban interaction	1	0	1	0	1
Urban-urban interaction	0	0	0	0	0
Effects of localization on economic activities	5	8	2	0	2
Effects of the scale of investigation on conclusions	0	0	0	0	0
Total	115	118	59	77	79

ties in the same area. The major examples of relationships in Scott's and in American Company's textbooks were of the effects of physical, social, and economic environments on population growth and movements. In Globe's textbook, the effects of physical environment on humans were stressed more than in any other textbook (effects of landforms, climate, vegetation, and soil on humans). In all five textbooks, few examples of other relationships and interactions were provided, such as: effects of vegetation on soil, the Sun's effects on both humans and natural environment, rural-urban and urban-urban interactions, and effects of changing the scale of investigation on drawing conclusions.

Comparison of the average number of examples of relationships and interactions per page analyzed showed little deviation from the pattern of the frequency of these examples. This pattern was described and illustrated in table 26 and in figure 16:

FIGURE 15

NUMBER OF EXAMPLES OF SELECTED RELATIONSHIPS AND INTERACTIONS
IN THE FIVE SELECTED GEOGRAPHY TEXTBOOKS

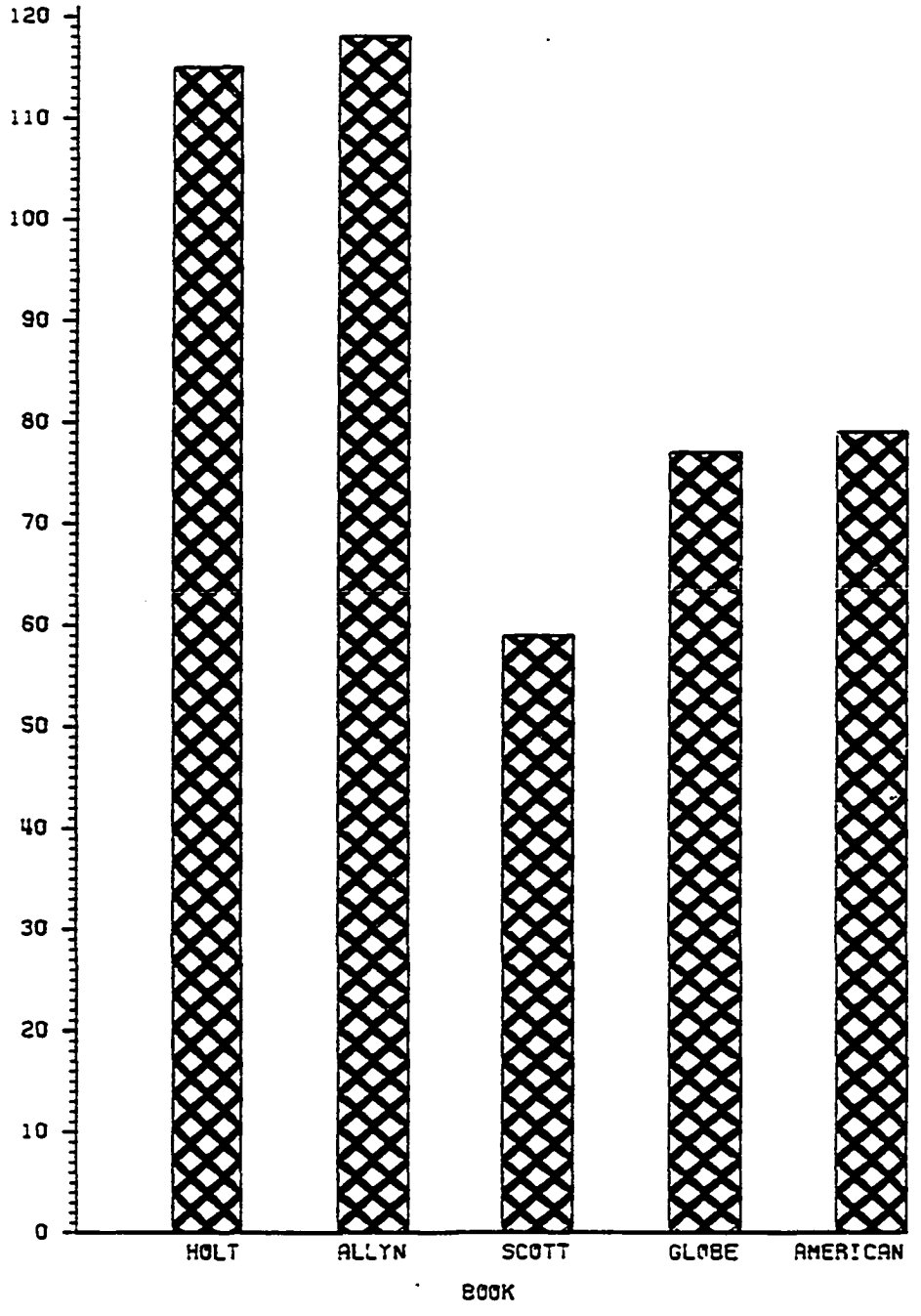


TABLE 26
AVERAGE NUMBER OF EXAMPLES OF SELECTED
RELATIONSHIPS PER PAGE ANALYZED

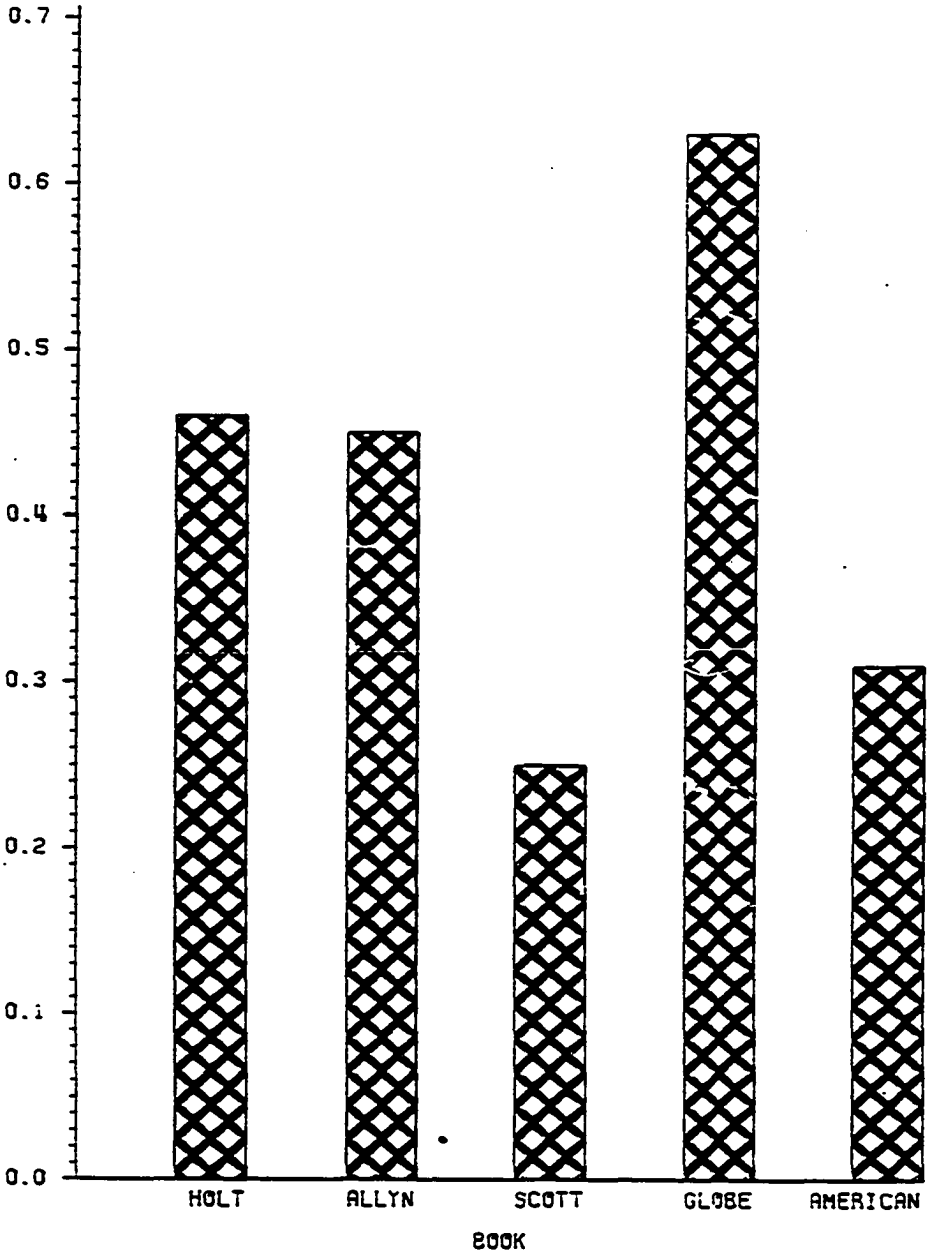
	Holt	Allyn	Scott	Globe	American
Number of examples found	115	118	59	77	79
Number of pages analyzed	248	261	240	122	257
Average	.46	.45	.25	.63	.31

Globe's textbook had a larger average number of examples of relationships than did the other four texts, partially because of the small number of pages analyzed in it (122 pages). In general, one example of a relationship or an interaction was found in every two to four pages, across the five textbooks.

In relation to the seven content categories developed for this study, the number of examples of relationships and interactions found in each category differed within and among textbooks. These numbers were listed and illustrated in table 27 and in figures 17 and 18. Several observations were drawn from this table. First, most of the examples of selected relationships were found within the categories of National and Regional geography. This finding was consistent with the large percentage of pages devoted to these two categories, in all five textbooks. Second, American Company's textbook provided more examples of relationships within the category of Human geography than did all other texts. Third, Globe's text offered more examples of relationships within the category of Global geography than did all

FIGURE 16

AVERAGE NUMBER OF EXAMPLES OF SELECTED RELATIONSHIPS AND INTERACTIONS
(PER PAGE ANALYZED)
IN THE FIVE SELECTED GEOGRAPHY TEXTBOOKS



ALL THESE FIGURES WERE AVERAGED USING THE NUMBER OF PAGES ACTUALLY ANALYZED IN THIS STUDY

TABLE 27
NUMBER (AND AVERAGE NUMBER PER PAGE ANALYZED) OF EXAMPLES OF SELECTED RELATIONSHIPS FOUND WITHIN EACH CATEGORY

	Holt		Allyn		Scott		Globe		American	
	Number	Average	Number	Average	Number	Average	Number	Average	Number	Average
Physical	11	.44	16	.46	0	0	19	1.05	9	.13
Human	6	1.0	8	1.6	1	.07	2	.29	29	.39
Global	10	2.5	6	.67	10	1.0	15	5.0	6	1.5
National	34	.49	39	.47	24	.44	10	.4	8	.26
Regional	22	.16	25	.2	11	.1	27	.45	19	.26
Concepts	5	0	8	0	2	0	0	0	2	0

other texts. However, Globe's text did not provide examples of relationships within the category of Concepts and Relationships, and particularly, in relation to the concept of localization.

Averages (per page analyzed) of the number of examples of relationships and interactions offered within each category, differed from the frequency of these examples, because of differences in the number of pages devoted to each category. Examples of such differences were found in the average number of examples within the categories of National, Regional, and Global geography, across all five textbooks and within the category of Human geography in Allyn's and American Company's textbooks.

In summary, all five textbooks presented many examples of land-forms-humans' relationships and of the effects of physical, social,

FIGURE 17

NUMBER OF EXAMPLES OF SELECTED RELATIONSHIPS AND INTERACTIONS
ACROSS THE FIVE SELECTED GEOGRAPHY TEXTBOOKS

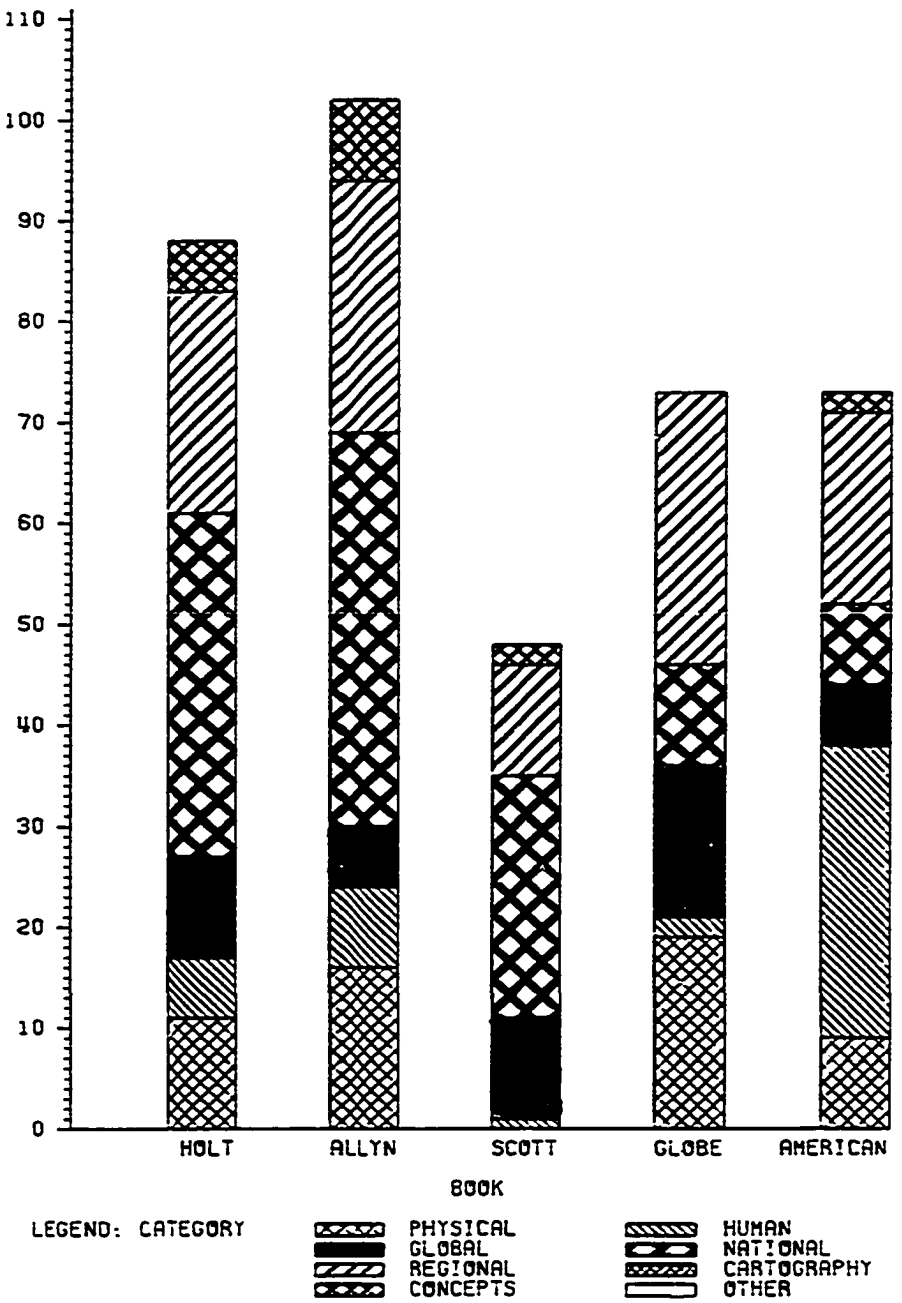
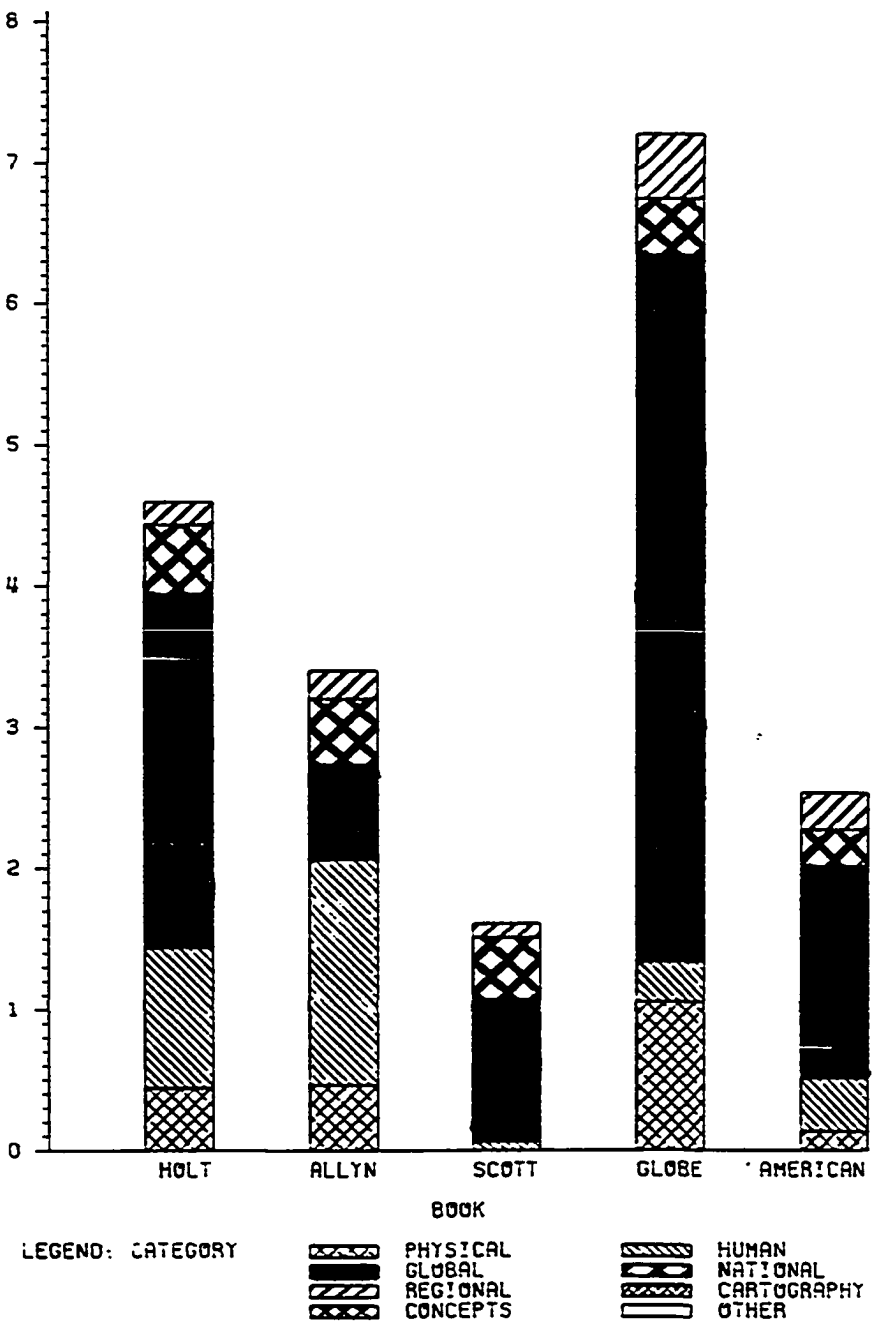


FIGURE 18

AVERAGE NUMBER OF EXAMPLES OF SELECTED RELATIONSHIPS PER PAGE ANALYZED
(IN EACH CATEGORY)
ACROSS THE FIVE SELECTED GEOGRAPHY TEXTBOOKS



and economic environments on population growth, density, and movements. An average of one example of relationships was found in every two to four pages. Very few examples were offered, in all texts, to describe effects of the Sun on natural environment, effects of transportation on communication and interaction, and rural-urban interactions. No single example was offered in any of the five texts of the Sun's effects on humans, of urban-urban interactions, and of the effects of changing the scale of investigation on drawing conclusions.

In terms of relating the selected relationships to the seven content categories of this study, most of the examples were found related to the categories of National and Regional geography. Globe's text offered many examples of relationships related to the categories of Physical, Global, and Regional geography. American Company's text provided more examples of relationships related to the category of Human geography than did the other texts. Allyn's text provided more examples of relationships related to the categories of National geography and Concepts and Relationships than did the other texts.

In terms of each textbook's points of emphasis, Holt's and Allyn's textbooks were very close in terms of the number of examples of relationships provided. Both texts provided many examples of interactions between humans and environment and of the effects of localization of one activity in an area on attracting other activities to that area. Scott's text emphasized most the effects of physical, social, and economic environments on population growth, density, and movements, but provided few examples of relationships related to the categories of Physical, Human, and Regional geography. Globe's text

emphasized on the effects of landforms, climate, vegetation, and soil on humans, but did not provide examples of relationships related to the category of Concepts and Relationships. American Company's text had a large number of examples of relationships related to the category of Human geography, especially, of the effects of different environments on population's demography and of the effects of transportation on communication and interaction. American Company's text provided few examples related to the categories of Global and National geography.

Finally, Globe's and Allyn's textbooks were ranked first and second among the five selected geography textbooks, in terms of their coverage of the selected relationships analyzed in this section. Scott's text was ranked fifth in this regard.

Coverage of Selected Facts Related to Concepts, Definitions, and relationships studied

According to Eggen, facts were "singular in occurrence, . . . have occurred in the past or exist in the present, . . . have no predictive value, and . . . are acquired through the process of observation"[99]. Eggen criticized and questioned any curriculum that highly relied on facts. In this study, some facts were selected for analysis and comparison on the basis of their use in relation to topics, concepts, details, and relationships being examined. Even within this

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[99]Eggen, pp. 36-37.

restriction, the number of factual examples analyzed in each textbook was larger than the number of examples provided for other format categories (details, concepts, and relationships), both separate and combined. Numbers of selected factual examples in each textbook and their averages per page analyzed were shown and illustrated in table 28 and in figures 19 and 20:

TABLE 28
NUMBER (AND AVERAGE NUMBER PER PAGE ANALYZED) OF FACTUAL EXAMPLES OF SELECTED CONCEPTS, DETAILS, AND RELATIONSHIPS FOUND IN ALL TEXTBOOKS

	Holt	Allyn	Scott	Globe	American
Number of factual examples	1396	1133	582	553	569
Number of pages analyzed	248	261	240	122	257
Average number of facts/pages analyzed	5.6	4.3	2.4	4.5	2.2

These figures were based on counting only the examples (and non-examples) of facts that the researcher looked for specifically. The number of factual examples across the five selected textbooks was relatively large, for two reasons:

1. The frequent use of facts as concrete examples to support generalizations, to clarify concepts, and examplify relationships

2. The nature of many of the specific points used in the

FIGURE 19

NUMBER OF FACTUAL EXAMPLES OF SELECTED CONCEPTS, DETAILS, AND RELATIONSHIPS
FOUND IN THE FIVE SELECTED GEOGRAPHY TEXTBOOKS

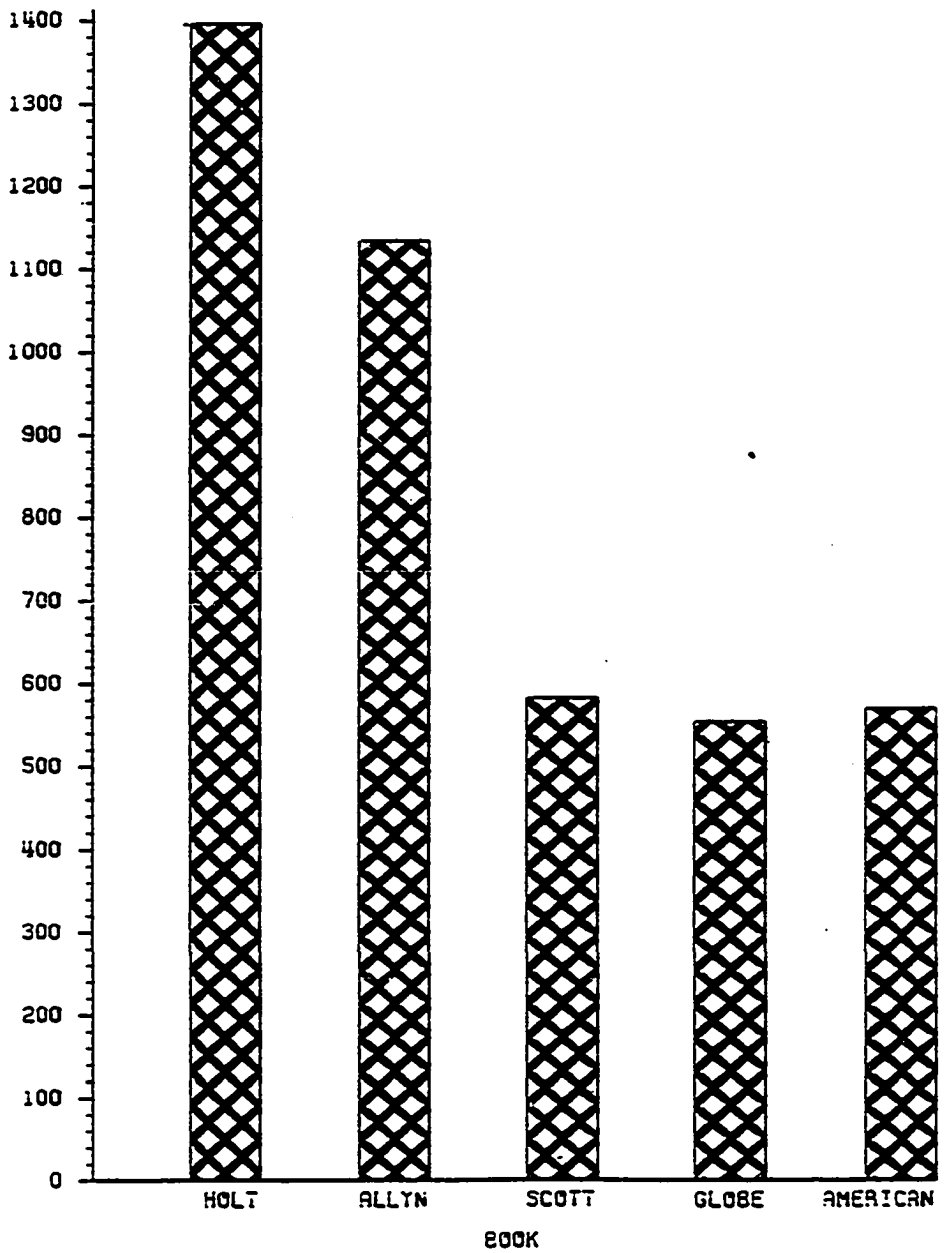
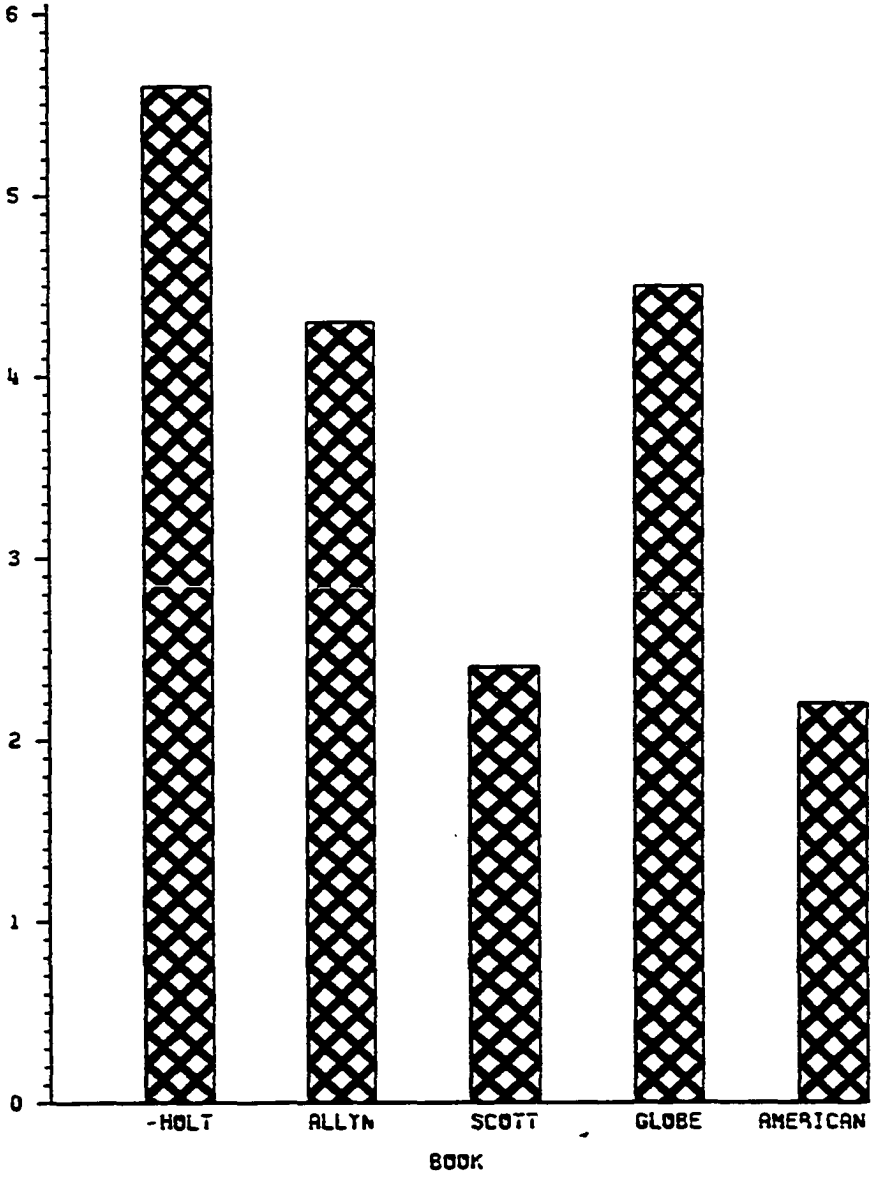


FIGURE 20

AVERAGE NUMBER OF FACTUAL EXAMPLES OF SELECTED CONCEPTS, DETAILS, AND RELATIONSHIPS

(PER PAGE ANALYZED)
IN THE FIVE SELECTED GEOGRAPHY TEXTBOOKS



ALL THESE FIGURES WERE AVERAGED USING THE NUMBER OF PAGES ACTUALLY ANALYZED IN THIS STUDY

categorization system of this study.

With the exception of American Company's text, the pattern of distribution of the five selected textbooks according to the number of factual examples found, corresponded to the pattern of the frequency of these textbooks' use in Oklahoma's Public High Schools—to the number of copies distributed by the State Department of Education to public high schools in Oklahoma. Also, with the exception of Globe's textbook, the average number of facts per page analyzed decreased gradually from Holt's text (5.6 per page) to American Company's text (2.2 per page) and this was shown and illustrated in table 28 and in figure 20.

The number of selected facts found in each category across the five selected geography textbooks was also presented and illustrated in table 29 and in figure 21:

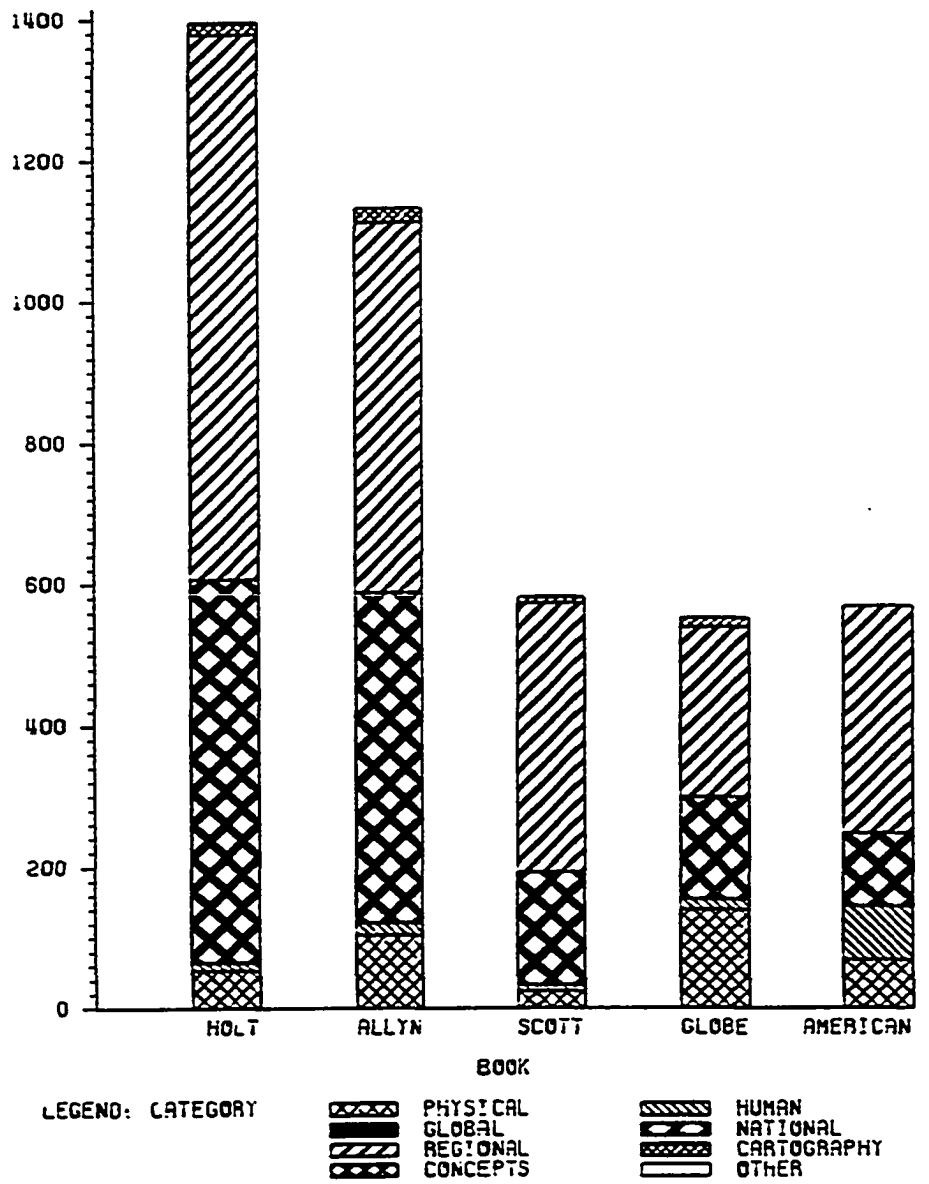
TABLE 29
NUMBER OF FACTUAL EXAMPLES OF SELECTED CONCEPTS, DETAILS, AND RELATIONSHIPS FOUND WITHIN EACH CATEGORY

	Holt	Allyn	Scott	Globe	American
Physical geography	54	104	24	140	69
Human geography	11	18	9	15	76
National geography	542	467	160	144	103
Regional geography	772	524	380	241	321
Cartography	17	20	9	13	0
Total	1396	1133	582	553	569

FIGURE 21

NUMBER OF FACTUAL EXAMPLES OF SELECTED CONCEPTS,DETAILS, AND RELATIONSHIPS FOUND IN EACH CATEGORY

ACROSS THE FIVE SELECTED GEOGRAPHY TEXTBOOKS



THE CATEGORIES OF GLOBAL GEOGRAPHY AND CONCEPTS AND RELATIONSHIPS WERE NOT INCLUDED, ACCORDING TO THE CATEGORIZATION SYSTEM FOLLOWED BY THE RESEARCHER

As shown in this table, there were differences within and among textbooks, in terms of their use of factual examples related to the specific points developed in each of the content categories. Differences were examplified by the wide ranges that existed between the smallest and the largest numbers of facts provided in these textbooks. For example, the range between Globe's and Scott's texts was 116 within the category of Physical geography (almost six times as much in Globe's as in Scott's) and between American Company's text and Scott's text was 65 within the category of Human geography (almost 8.5 times as much in American Company's text as in Scott's). In addition, there were differences across categories too. The researcher used the same specific points of the categories of Physical and Human geography for counting facts within the categories of Regional and National geography. As shown in table 29, while numbers of selected factual examples in the categories of general geography were below 200 (or even between 10 and 20 in some instances), these numbers increased to reach 700 in some cases within the categories of National and Regional geography.

Comparison of the average number of facts per page analyzed was shown in table 30 and in figure 22. Differences existed among categories, in terms of their use of factual examples. Both National and Regional geography categories had the largest averages within the five selected textbooks. Only one average stood out from another category: the average number of factual examples in Globe's text, within the Physical geography category (7.78). American Company's textbook did not provide any of the factual examples analyzed in this

TABLE 30
AVERAGE NUMBER OF FACTUAL EXAMPLES (PER PAGE ANALYZED) OF SELECTED CONCEPTS, DETAILS, AND RELATIONSHIPS FOUND WITHIN EACH CATEGORY

Category	Holt	Allyn	Scott	Globe	American
Physical geography	2.16	2.97	.8	7.78	.96
Human geography	1.84	3.6	.64	2.14	1.0
National geography	7.86	5.63	2.91	5.76	3.32
Regional geography	5.64	4.28	3.35	4.02	4.46
Cartography	2.43	2.86	.5	1.3	0

study, within the category of Cartography.

The distribution of factual examples of the selected specific points analyzed in this study was shown in table 31. Examples of locations of types of landforms, of different types of climate, of water resources, and of mineral and energy resources were frequent throughout the category of Physical geography and the related sections of the categories of National and Regional geography. Within the category of Human geography and the related sections of the categories of National and Regional geography, emphasis was on examples of locations of economic activities, of economic problems, of major routes and networks of transportation and communication, and of major urban centers. Within the category of Cartography, most of the emphasis was on the advantages of each type of map projections.

Examination of the distribution of examples of these specific points across the five selected textbooks, revealed some important

FIGURE 22

AVERAGE NUMBER OF FACTUAL EXAMPLES OF SELECTED COCEPTS, DETAILS, AND RELATIONSHIPS FOUND IN EACH CATEGORY

(PER PAGE ANALYZED)

ACROSS THE FIVE SELECTED GEOGRAPHY TEXTBOOKS

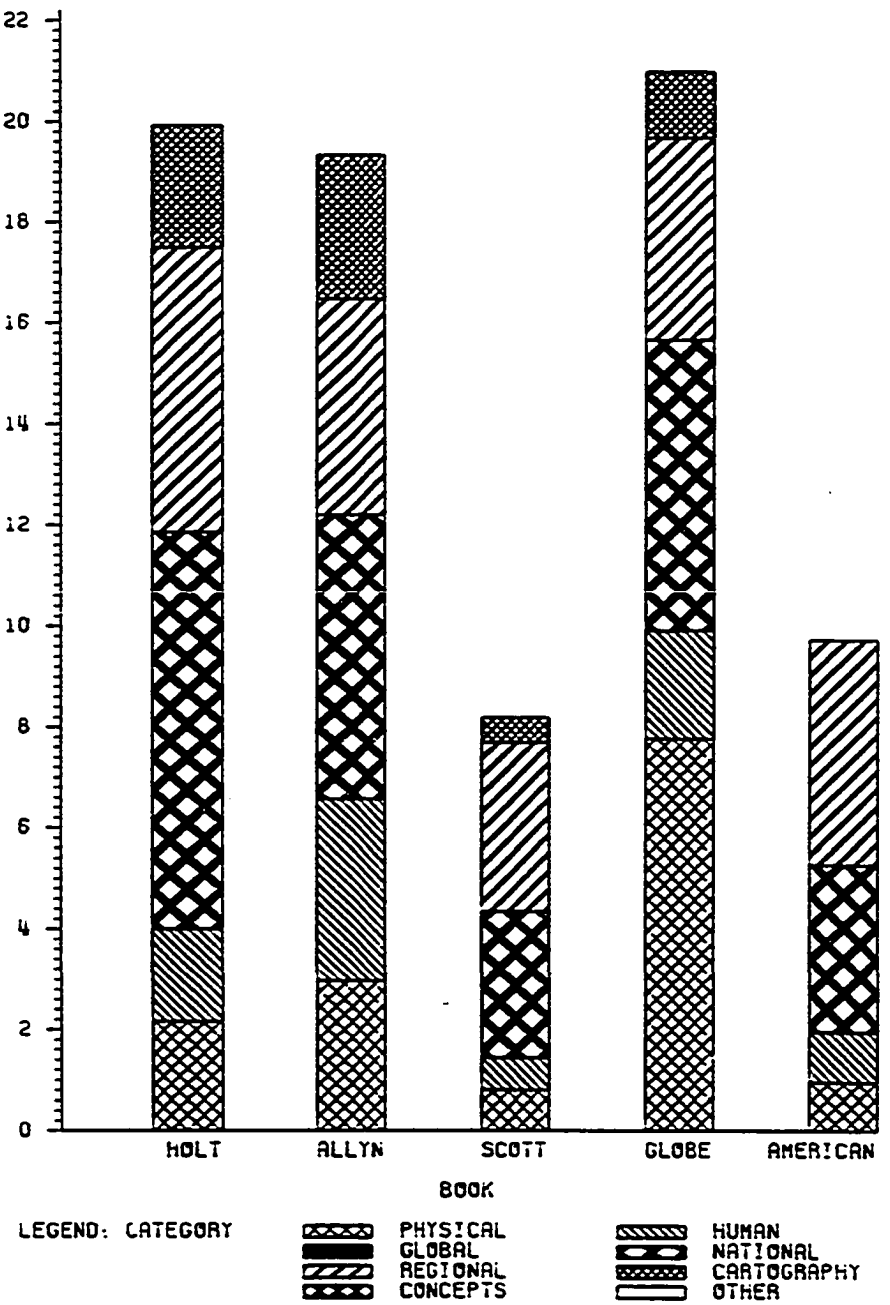


TABLE 31
NUMBER OF FACTUAL EXAMPLES RELATED TO SELECTED SPECIFIC POINTS WITHIN FOUR CATEGORIES COMBINED (PHYSICAL, HUMAN, NATIONAL, AND REGIONAL GEOGRAPHY), AND WITHIN THE CATEGORY OF CARTOGRAPHY

Specific point:	Holt	Allyn	Scott	Globe	American
Locations of landforms	264	138	128	62	77
Places with continuous changes	12	0	10	0	2
Locations of climatic zones	82	101	56	83	35
Locations of types of soil	12	8	10	6	4
Locations of types of vegetation	41	33	13	15	35
Locations of water resources	96	51	29	49	20
Locations of minerals and energy resources	151	197	57	97	47
Uses of Minerals and Energy resources	7	8	0	6	15
Examples of population growth	3	18	8	5	15
Examples of population density	13	25	35	6	25
Examples of population movement	4	0	7	0	7
Locations of economic activities	416	418	119	138	158
Examples of economic problems	49	30	29	18	15
Major routes and networks	49	37	16	20	30
Examples of urban centers	162	47	51	25	76
Examples of urban problems	18	2	5	10	8
Examples of urban projections	5	8	5	5	0
Examples of maps' users	3	2	1	3	0
Examples of advantages of each type	9	10	3	5	0
Total	1396	1133	582	553	569

conclusions. First, Holt's text provided factual examples of all the specific points mentioned in table 31. Second, most of the largest numbers of factual examples were found in Holt's and Allyn's textbooks. Third, both Allyn's and Globe's textbooks did not provide examples of places with continuous change of landforms, nor of population movements. Finally, American Company's textbook did not provide examples of the specific points within the category of Cartography.

In summary, comparison of data presented in this section to data presented in the previous sections, concerning coverage of selected concepts, relationships, and related details, revealed that numbers of factual examples in each textbook were larger than those of all the other three format categories, both separate and combined. Also, despite the limited number of selected facts analyzed in this study, the average number of selected facts per page analyzed was relatively large across all five texts (ranging from 2.2 to 5.6 per page).

All five texts provided most of their factual examples within the categories of Regional and National geography and the least within the categories of Human geography and Cartography. Also, in all five texts these were the specific points that were supported by factual examples: location of types of landforms, of mineral and energy resources, of economic activities, of major transportation routes and networks, and of urban centers. Points that were not as much supported by factual examples as were the others, were: examples of places with continuously changing landforms, of uses of mineral and energy resources, of population growth and movements, and of maps' users.

In terms of each textbook's use of factual examples, Holt's

text offered many examples within the categories of Regional and National geography, but did not provide a relatively similar number of facts within the category of Human geography. However, Holt's text had the largest average number of facts per page analyzed among the five textbooks. Allyn's text provided almost as many factual examples as did Holt's within the categories of Regional and National geography, as well as within the category of Physical geography. Scott's text did not surpass any other text in this regard. Its figures were average, compared to all five texts'. Globe's text surpassed other textbooks in providing factual examples related to the category of Physical geography, but did not use any factual examples to describe continuous changes in landforms, or population movements. American Company's text provided many factual examples within the category of Human geography, but did not provide any of the selected facts within the category of Cartography. American Company's text had a small average number of selected facts per page analyzed.

Finally, Holt's textbook was ranked first among the five selected geography textbooks, in terms of coverage of the selected facts analyzed in this section. Allyn's text was ranked second, after Holt's text. American Company's text was ranked fifth in this regard.

Inclusion or Omission of Selected Topics

Within five of the seven content categories developed in this study, there were some specific points that the researcher sought to examine on the basis of their inclusion or omission in each textbook. These specific points were listed in table 32 in relation to the

textbook(s) in which they appeared.

Within the category of Physical geography, only one topic was discussed and explained in all textbooks: continuous changes in shapes of landforms. Within the category of Human geography, description of history of urbanization was found only in Scott's and in American Company's textbooks.

TABLE 32
INCLUSION/OR OMISSION OF SOME SELECTED TOPICS IN THE FIVE TEXTBOOKS*

Topic:	Holt	Allyn	Scott	Globe	American
Continuous changes of shapes of landforms	X	X	X	X	X
The water cycle	—	—	—	—	X
History of urbanization	—	—	X	—	X
Functioning of the solar system	—	X	X	—	—
Global shape of the Earth	X	X	X	—	X
Location of the U.S.	X	—	X	X	X
Location of each of the U.S. regions	X	X	X	—	—
List of the States included in each region of the U.S.	X	X	—	—	—
Location of Europe	—	X	X	X	—
Location of Latin America	X	X	X	X	X

*X = included; — = omitted

Within the category of Global geography, the shape of the Earth was described in all—but Globe's—textbooks. Within the category of National geography, Allyn's text did not provide descriptions of the

location of the United States and Holt's and Allyn's texts listed the different states included in each region of the U.S. Globe's text, which was one of the three texts that did not list the states included in each U.S. subregion, did not divide the U.S. into different regions, contrarily to all other four textbooks analyzed.

Within the category of Regional geography, all five textbooks defined the location of Latin America, as a whole region. Holt's and American Company's texts did not describe the location of Europe, but the other three texts did.

In summary, all five texts included and described these two topics: continuous changes in shapes of landforms and location of Latin America. Other topics were found in four of the five selected textbooks, such as the global shape of the Earth (in all texts but Globe's) and location of the U.S. (in all texts but Allyn's). The water cycle phenomenon was described in one text: American Company's text. States included in each region of the U.S. were mentioned and listed in two texts: Holt's and Allyn's.

In terms of each textbook's inclusion of these topics, Holt's text discussed six of the ten topics searched for, but did not describe the location of Europe. Allyn's textbook included seven of the ten topics, but did not describe the location of the U.S. Scott's text included most of these topics (eight of them), but did not list the states included in each region of the U.S. Globe's textbook included few of these topics (only four) and most of the topics described dealt with locations of areas under study. American Company's text discussed six of the ten selected topics, but did not describe the location of

Europe, and did not list states included in each region of the U.S. Therefore, Scott's textbook was ranked first among the five selected geography textbooks, in terms of including the selected topics analyzed in this section. Globe's text was ranked fifth in this regard.

Frequency of Summary Statements

Throughout the content analysis of the five selected geography textbooks, the researcher located and counted all summary statements related to the content categories used in this study (except for the category of Concepts and Relationships). Not all units' and chapters' summary paragraphs or sentences were counted. Only those in which there was a direct indication of the selected concepts, relationships, and topics analyzed in this study were counted. For example, the following was a summary paragraph from American Company's textbook and dealt with the category of Physical geography (page 54):

> Climate is the pattern of weather for a particular place over a long period of time. It is primarily the result of the relationship between heat and moisture . . . Other factors determine the distribution of heat and moisture throughout the world. These include wind, ocean currents, the nearness of land to water, and elevation. . . . All the regions of the world can be divided into six major climate groups. These are humid tropical, dry, subtropical, humid cold, cold polar, and highland climates.

This paragraph was counted as one occurrence of summary statements for the subdivision of climate, within the category of Physical geography. Accordingly, all textbooks were checked for their provision of similar summary statements. Frequency of summary statements within each category across the five selected textbooks was shown and illustrated in table 33 and in figure 23:

TABLE 33
FREQUENCY OF SUMMARY STATEMENTS WITHIN EACH CATEGORY

	Holt	Allyn	Scott	Globe	American
Physical geography	1	0	0	3	4
Human geography	0	2	1	2	4
Global geography	0	0	0	0	0
National geography	1	0	0	0	2
Regional geography	2	0	0	0	2
Cartography	1	0	0	1	0
Total	5	2	1	6	12

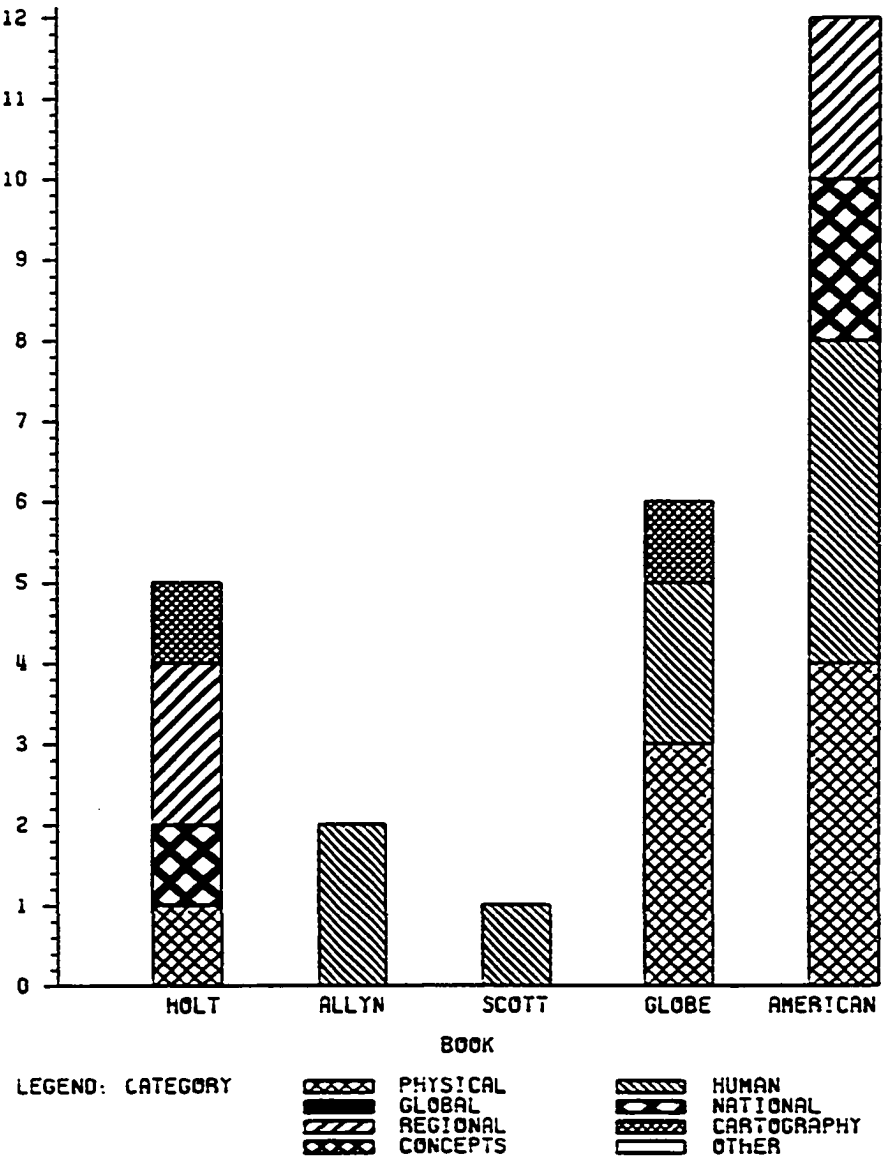
As shown in this table, American Company's text had a large frequency of summary statements. Scott's and Allyn's texts had used summary statements only in one category (Human geography) and their occurrences were very limited. Comparing the distribution pattern of the five textbooks in Oklahoma's public high schools to the pattern of their use of summary statements revealed that the first three texts, that were (by assumption) widely used in Oklahoma's high schools, provided less summary statements than did the last two texts (Globe's and American Company's).

Provision of Additional (Unique) Points

The researcher intended that the categorization system of this study be as comprehensive as it could. Subdivisions and their specific points within each category helped organize the general pattern of

FIGURE 23

FREQUENCY OF SUMMARY STATEMENTS RELATED TO EACH CATEGORY
ACROSS THE FIVE SELECTED GEOGRAPHY TEXTBOOKS



the analysis of content of the five textbooks. However, during the process of counting and recording, the researcher encountered the presence of different topics, concepts, and relationships in one (or more) textbook(s). These points were not included within any of the seven content categories of this study. For a complete content analysis of the five selected textbooks, examination of provision of additional (unique) points became necessary and important. These additional points, with reference to the textbook(s) in which they appeared were listed in table 34:

TABLE 34
ADDITIONAL (UNIQUE) POINTS PROVIDED IN EACH TEXTBOOK*

	Holt	Allyn	Scott	Globe	American
A. Physical geography:					
Tectonic theories	—	—	X	—	X
Heat budget	X	—	—	—	X
Changing climate	X	—	X	—	—
Changes in plants in one area	—	—	—	—	X
Beginning of agriculture	X	—	X	—	—
Water supply	X	—	—	—	—
Water pollution	X	—	—	—	—
Water disasters	X	—	—	—	—
Water budget	—	—	—	—	X
Water uses	X	X	—	X	X
Management of resources	—	X	—	X	X

TABLE 34-continued

	Holt	Allyn	Scott	Globe	American
B. Human geography:					
Land ownership	—	—	X	—	X
Effects of environment on economic activities	—	—	—	—	X
History of agriculture and industry	X	—	—	—	—
"Culture region" concept	—	X	—	X	—
Effects of environment on cultural differences	X	—	—	X	—
Difference between race and culture	—	—	X	X	—
Types of human races	—	—	X	—	—
"Time-distance" concept	—	X	—	—	—
"Linkage" concept	—	—	—	—	X
Metropolis and Megalopolis	—	—	—	—	X
Site, situation, and hinderlands	—	—	X	—	—
Types of cities	—	—	—	—	X
C. Global geography:					
Definition of the "Universe"	X	X	X	—	—
Definition of "Galaxy"	X	X	X	—	—
Size of the Earth	—	X	X	—	—
History of the Earth	—	—	X	—	—
D. National geography:					
History of population settlement	X	X	—	X	X

TABLE 34-continued

	Holt	Allyn	Scott	Globe	American
U.S. economic and social assets	X	X	---	X	---
U.S. political system	X	X	---	X	---
"Capitalism" concept	---	---	---	X	---
Arrangement of landscape	---	---	X	---	---
E. Regional geography:					
Latin America and the U.S.	X	X	X	X	---
Europe compared to the U.S.	X	X	X	X	X
Living standards in Europe	X	X	---	X	X
F. Cartography:					
Latitudes and longitudes	X	X	X	X	X
Total number of points	18	12	15	14	15

*X = provided; --- = not provided

A special pattern of distribution of these additional points across the five textbooks was found, with regard to the categories to which topics were related. For example, within the category of Physical geography, most of these points were found in Holt's, Scott's, and American Company's textbooks. Within the category of Human geography, the additional points were dispersed across all five textbooks and no single point in this category was located in more than two texts. Within the category of Global geography, Globe's and American Company's textbooks did not offer any unique points, as did the other three texts. Within the category of National geography,

Holt's, Allyn's, and Globe's textbooks discussed most of the additional points listed within this category. Within the categories of Regional geography and of Cartography, almost all five textbooks discussed the mentioned additional points in these two categories.

Numbers of these additional (unique) points in each textbook did not variate from one text to another and the range was only six points, with Holt's text offering the most (18 points) and Allyn's text offering the least (12 points). Qualitatively, most of these additional points were concepts, relationships, interactions, and theories. A number of these points were simply titles of a large amount of content that could (and in some cases did) reach the size of a whole chapter.

In terms of each textbook's inclusion of these additional points, Holt's text discussed most of them (18 from 36) and focused on topics such as: water supply, pollution, and disasters, and history of agriculture. Allyn's text provided few of these points (12 from 36), among which was the concept of "time-distance". Scott's text included 15 of the 36 additional points, among which were the following: description of the different types of race in the world, clarification of terms "site", "situation", and "hinterlands" (of cities), description of the history of the Earth, and description of the different types of landscape arrangement. Globe's textbook included 14 points and specifically described the concept of "capitalism". American Company's text included 15 of the 36 additional points and focused in particular on: changes in plants, water budget, effects of environment on economic activities, the "linkage" concept, Metropolis and

Megalopolis' concepts, and different types of cities.

Finally, Holt's text was ranked first among the five selected geography textbooks, in terms of providing additional (unique) points. Allyn's text was ranked fifth in this regard.

Frequency of Figures and Tables Related to Topics Studied

The frequency and types of figures and tables were analyzed in each textbook, in relation to the seven content categories used in this study. In addition to tables, different types of figures were located and identified in each textbook. These were: maps, pictures, landsat images (from satellites), graphs, and drawings. Maps, in particular, played an important role in teaching and learning geography, at all levels. But, McFarren commented "(maps') presence and use . . . means neither that these materials are being used correctly nor effectively"[99]. McFarren did not believe that maps offered in geography textbooks were "sufficient for effective geography teaching and learning. Globes and wall maps are essential components of every geography classroom"[100].

For the scope of this study, maps and other types of figures were not evaluated qualitatively: only in terms of their appropriate use within each content category. The number of figures and tables found in each textbook was shown and illustrated in table 35 and in figure 24:

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[99]McFarren, p. 31.

[100]Ibid.

TABLE 35
NUMBER OF FIGURES AND TABLES FOUND IN EACH TEXTBOOK, IN RELATION TO ALL CATEGORIES

	Holt	Allyn	Scott	Globe	American
Number of figures and tables	216	259	188	166	349

Not all figures and tables in each textbook were counted and recorded. Only those related to the content categories of this study were analyzed. Therefore, within the category of Regional geography, for example, only the figures and tables related to the study of Europe and Latin America were counted. As shown in table 35, American Company's textbook ranked first in terms of using figures and tables throughout its content, while Globe's text ranked fifth in this regard. But when average numbers of figures per page analyzed were calculated, Globe's and American Company's texts ranked first. The distribution of the five selected geography textbooks according to these averages was shown and illustrated in table 36 and in figure 25:

TABLE 36
AVERAGE NUMBER OF FIGURES AND TABLES PER PAGE ANALYZED IN EACH TEXTBOOK

	Holt	Allyn	Scott	Globe	American
Average/page analyzed	.87	.99	.78	1.36	1.36

The patterns of distribution of figures and tables within the first three texts were similar in terms of both frequencies and

FIGURE 24

NUMBER OF FIGURES AND TABLES RELATED TO ALL CATEGORIES
IN THE FIVE SELECTED GEOGRAPHY TEXTBOOKS

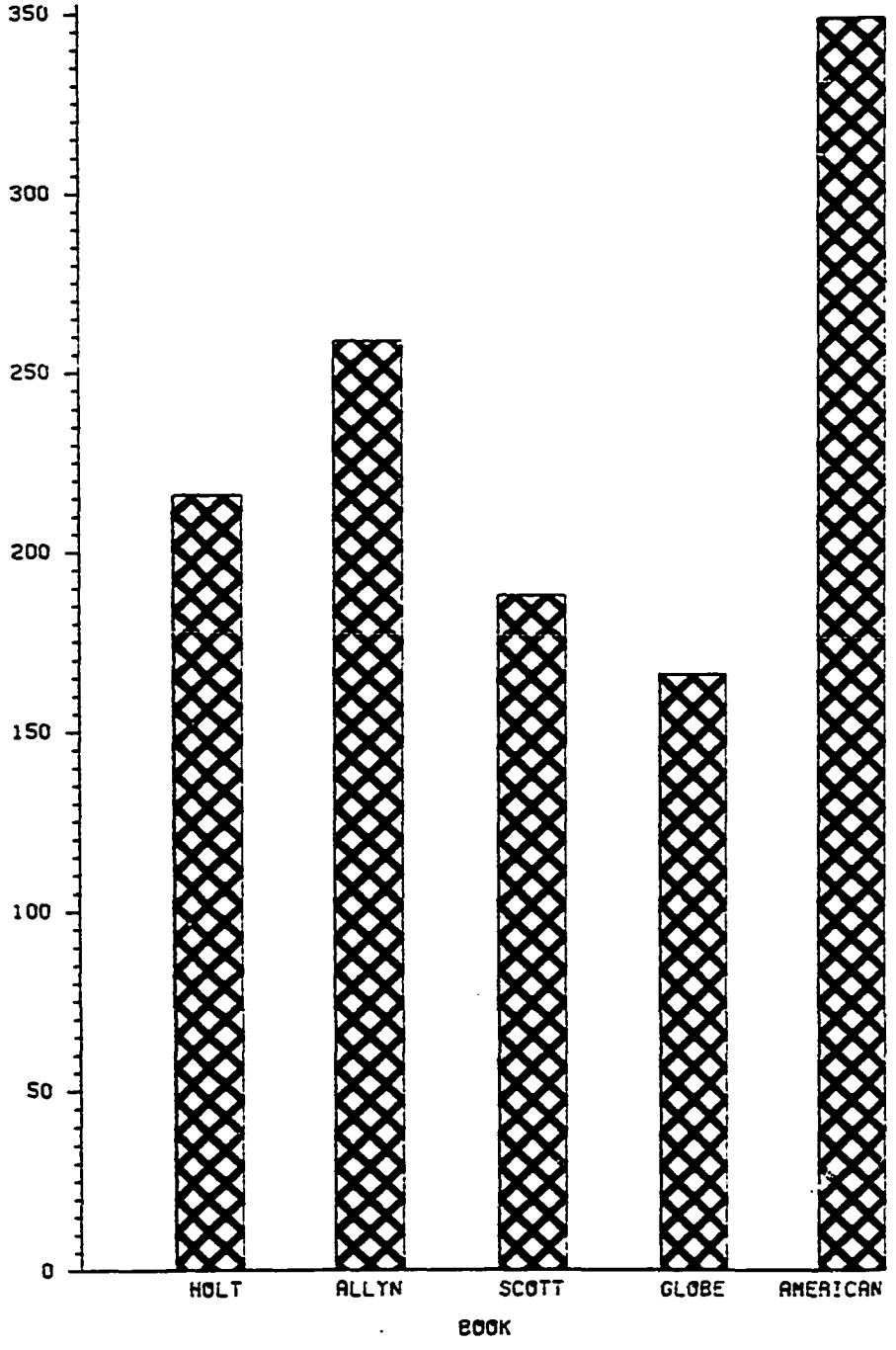
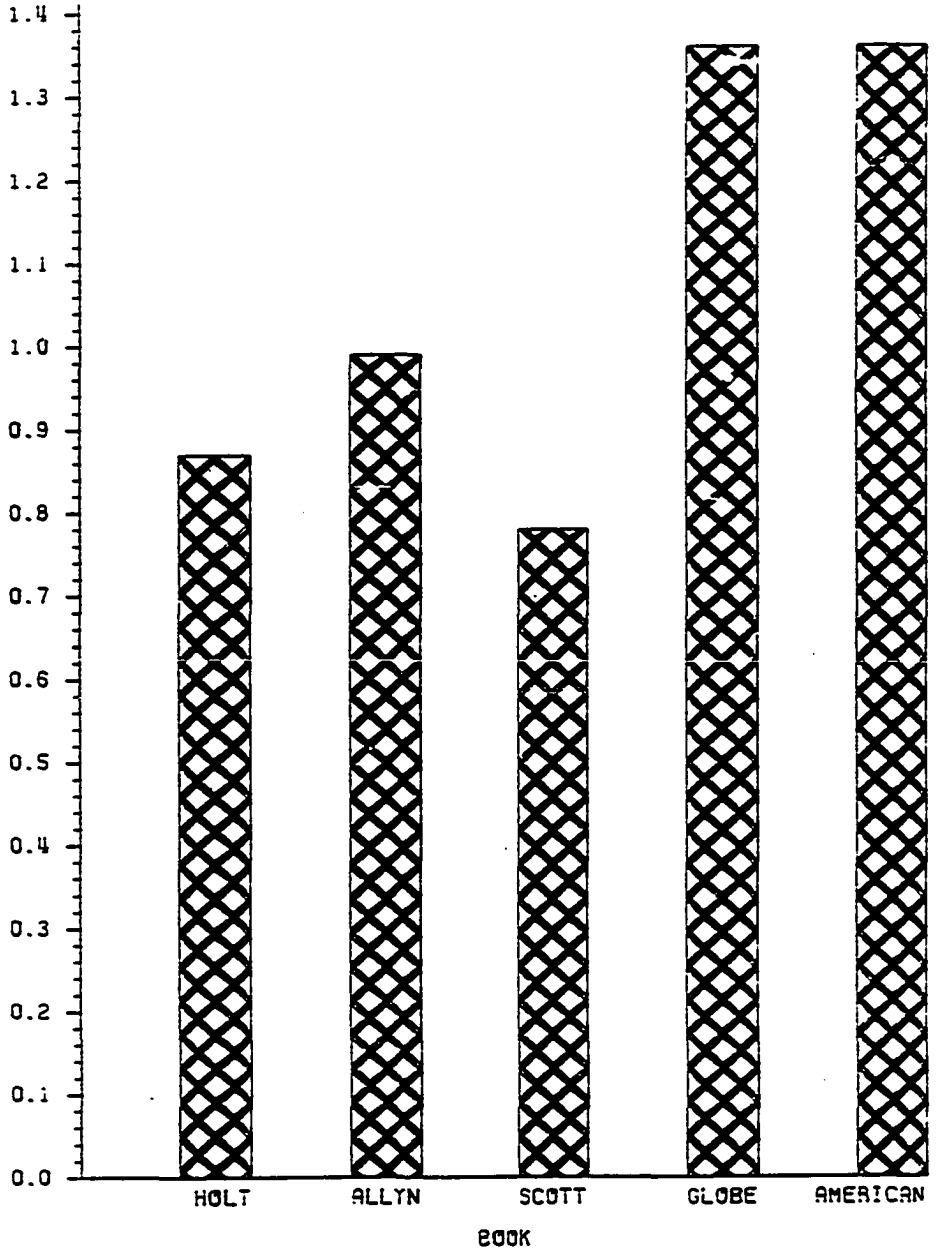


FIGURE 25

AVERAGE NUMBER OF FIGURES AND TABLES PER PAGE

IN THE FIVE SELECTED GEOGRAPHY TEXTBOOKS



ALL THESE FIGURES WERE AVERAGED USING THE NUMBER OF PAGES ACTUALLY ANALYZED IN THIS STUDY

averages (see tables 35 and 36, and figures 24 and 25). Also, the small number of pages analyzed in Globe's text accounted for the change in ranking of this text, between tables 35 and 36. Distribution of types of figures, within each textbook, was shown and illustrated in table 37 and in figure 26:

TABLE 37
NUMBER OF TYPES OF FIGURES AND TABLES FOUND RELATED TO ALL CATEGORIES, IN EACH TEXTBOOK

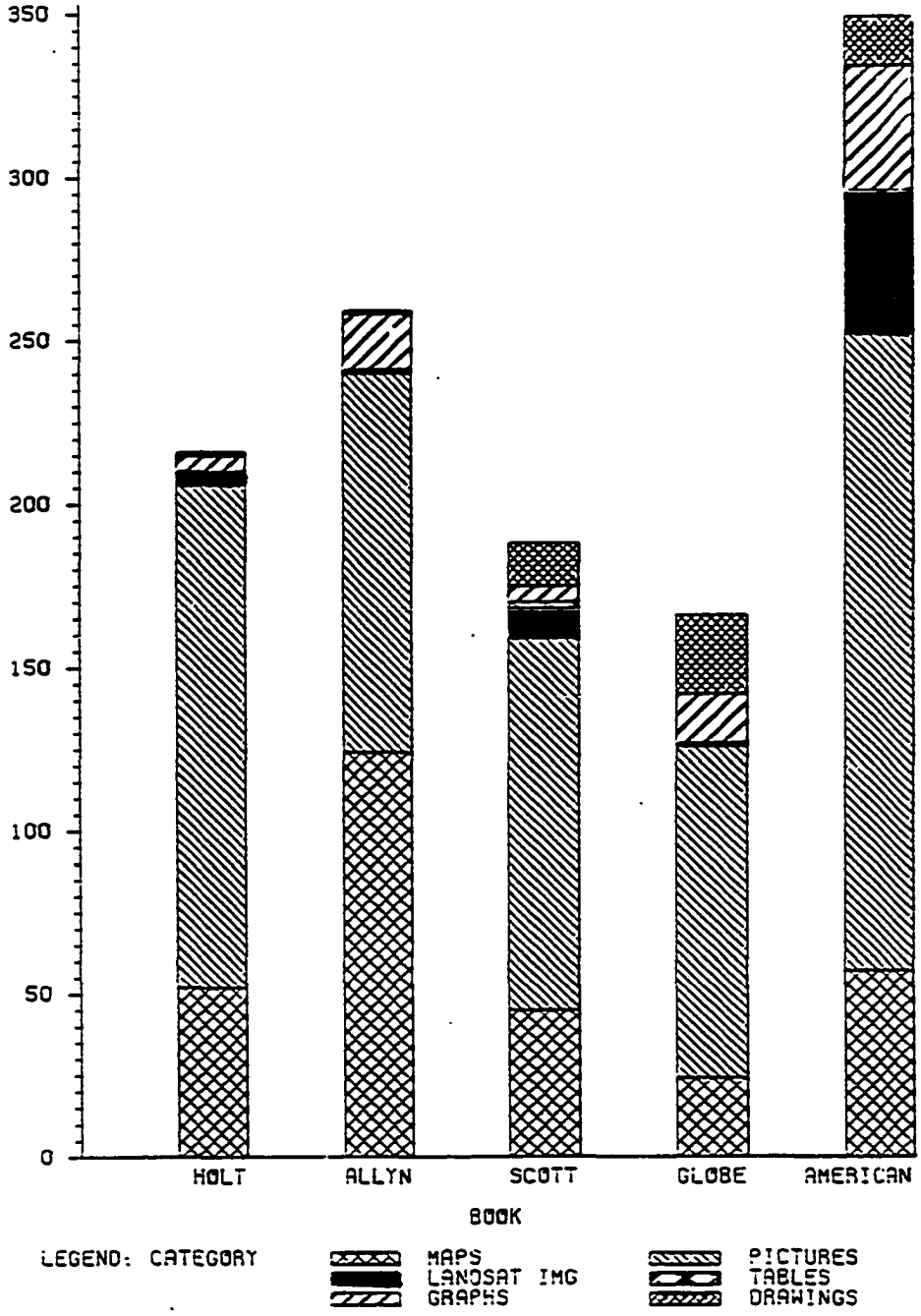
	Holt	Allyn	Scott	Globe	American
Maps	52	124	45	24	57
Pictures	154	116	114	102	195
Landsat images	4	0	9	0	43
Tables	0	1	2	1	1
Graphs	5	17	5	15	38
Drawings	1	1	13	24	15
Total	216	259	188	166	349

As shown in this table, there were few instances where tables were offered, across all five textbooks. Also, the most frequent type of figures used across all texts was pictures. Maps ranked second, after pictures, except in Allyn's textbook where the number of maps exceeded the number of pictures provided and was more than twice as much as in any other text.

The distribution of tables and figures across all five textbooks in relation to the seven content categories developed for this

FIGURE 26

NUMBER OF FIGURES AND TABLES RELATED TO EACH CATEGORY
IN THE FIVE SELECTED GEOGRAPHY TEXTBOOKS



study was shown in table 38. Maps were mostly used in contents related to the categories of National and Regional geography, and Cartography. Pictures were widely used in almost all categories (except within Global geography and Cartography). Landsat images and tables could not be associated with any particular category, because of their scarcity across all five texts, except in American Company's text, where landsat images were frequently used in contents related to two categories: Physical geography and Concepts and Relationships. Graphs were mostly found in contents related to the categories of Physical, Global, National, and Regional geography. Drawings were dispersed in all five texts, within most of the categories (except for Concepts and Relationships):

TABLE 38
NUMBER OF TYPES OF FIGURES AND TABLES FOUND WITHIN EACH CATEGORY, IN ALL FIVE TEXTBOOKS

Category and Types of Illustration:	Textbook by:				
	Holt	Allyn	Scott	Globe	American
A. Physical Geography:					
Maps	2	5	5	2	13
Pictures	10	17	10	11	62
Landsat images	1	—	—	—	34
Tables	—	—	—	—	1
Graphs	4	5	2	6	26
Drawings	1	—	2	2	2

TABLE 38-continued

Category and Types of Illustration:	Textbook by: Holt	Allyn	Scott	Globe	American
B. Human Geography:					
Maps	1	3	3	2	11
Pictures	3	2	12	9	45
Landsat images	—	—	—	—	1
Tables	—	—	1	—	—
Graphs	—	—	—	1	8
Drawings	—	—	—	1	6
C. Global Geography:					
Maps	1	—	—	2	—
Pictures	—	—	2	—	—
Landsat images	1	—	6	—	1
Tables	—	1	—	—	—
Graphs	—	2	3	2	2
Drawings	—	—	1	1	
D. National Geography:					
Maps	19	39	11	5	7
Pictures	42	36	23	23	14
Landsat images	—	—	—	—	—
Tables	—	—	1	1	—
Graphs	—	6	—	5	—
Drawings	—	1	3	2	2

TABLE 38-continued

Category and Types of Illustration:	Textbook by: Holt	Allyn	Scott	Globe	American
E. Regional Geography:					
Maps	23	66	16	4	22
Pictures	94	54	59	58	55
Landsat images	—	—	1	—	—
Tables	—	—	—	—	—
Graphs	1	3	—	1	—
Drawings	—	—	4	14	5
F. Cartography					
Maps	6	10	10	9	2
Pictures	—	2	3	—	—
Landsat images	1	—	2	—	—
Tables	—	—	—	—	—
Graphs	—	1	—	—	2
Drawings	—	—	3	4	
G. Concepts and Relationships:					
Maps	—	1	—	—	2
Pictures	5	5	5	1	19
Landsat images	1	—	—	—	7
Tables	—	—	—	—	—
Graphs	—	—	—	—	—
Drawings	—	—	—	—	—

In summary, all five textbooks used tables and different types of figures frequently. Their numbers ranged from 166 in Globe's text, to 349 in American Company's text. An average of one figure per page analyzed was found, across all five texts. Two types of figures were frequently located: pictures and maps.

In terms of each textbook's use of these types of figures, Holt's text relied most on pictures, but did not provide any tables in the pages analyzed. In Allyn's textbook, the number of maps used was larger than the number of pictures or of any other type of figures. Allyn's text did not use or provide any landsat images. Scott's text used different types of figures and, in comparison to the other four texts, was average in terms of the frequency of figures provided. Scott's text surpassed all other texts in providing two tables, while the rest either provided one or none at all. Globe's text provided few pictures and maps in its content, but relied more on graphs and drawings. In fact, Globe's text had the largest number of drawings among all five texts and did not provide any landsat images in its content. In comparison to the other four texts, American Company's textbook ranked highest on the frequency of use of three types of figures: pictures, landsat images, and graphs.

Finally, American Company's textbook was ranked first among the five selected geography textbooks, in terms of using and providing different types of figures. Globe's text was ranked fifth in this regard.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary of the Study

The goals of this study were to accomplish a content analysis of five selected high school world geography textbooks used in Oklahoma, to describe the type(s) of content that constituted the scope of each textbook, and to compare that to what geographers and educators recommended to include in a geography course and/or textbook. The researcher's intention was that the analysis of the five selected textbooks would encourage teachers and educators to reexamine their classroom's goals and objectives and that both content and format categories developed in this study could be used as the basis for a textbook selection criteria instrument. The main objective of this study was to do a content analysis of the five geography textbooks that were purchased most and perhaps (but not necessarily) most widely used in Oklahoma's public high schools during the fiscal years 1977-83.

Review of literature revealed that textbooks were influential in teaching and learning processes and that most of schools' instruction was tied to the use of textbooks. Literature reviewed by the researcher also revealed different changes and trends in school geography during the last few decades. The new directions emphasized

by many geographers, educators, and professional groups or councils, stressed the use of concepts and relationships. In particular, concepts--such as humans-environments' and humans' interactions--constituted the "fundamental themes in geography" proposed by The Joint Committee on Geographic Education of the National Council for Geographic Education (NCGE) and the Association of American Geographers (AAG).

For this study, the five most purchased high school geography textbooks were selected from the nine approved geography textbooks on the adoption list of The State Department of Education in Oklahoma. The publishers of these five textbooks were: 1) Holt, Rinehart, and Winston, 2) Allyn and Bacon, 3) Scott, Foresman, 4) Globe, and 5) American Book Co. The following seven content categories were developed, each of which included one or more subdivision(s) and several specific points to analyze in each textbook: Physical, Human, Global, National, and Regional geography, Cartography, and Concepts and Relationships. Data were recorded and, then, re-sorted using the following nine format categories: 1) coverage of the seven content categories, 2) coverage of selected concepts, 3) inclusion of details of selected topics and concepts, 4) coverage of selected relationships, 5) coverage of selected facts, 6) inclusion of selected topics, 7) frequency of summary statements, 8) provision of additional (unique) points, and 9) frequency of figures and tables. Each textbook was analyzed, quantitatively, in terms of the frequency of occurrence of the specific points and, qualitatively, in terms of forms of content used to present these points.

Summary of the Findings

Analysis of the five selected geography textbooks revealed the following common characteristics:

1. A large amount of content was devoted to the categories of National and Regional geography. The largest section in each textbook was related to the category of Regional geography (study of World's regions and countries)

2. There was a small amount of content related to topics and concepts such as natural resources and cultures. Almost none of the selected concepts that the researcher intended to analyze within the content category of Concepts and Relationships were found. An average of one example of the concepts listed within the other content categories was found in every two to four pages analyzed

3. An average of one definition of the analyzed concepts was found in every 20 to 30 pages, with an average of 16 to 23 words per definition

4. Most of the details of the selected topics and concepts were found related to the category of Physical geography, especially, types of landforms and of climatic zones. Other details, such as types of cultures, types of economic interactions, and reasons for regional division of the U.S., were not provided in, at least, four of the five selected texts

5. All five textbooks included some of the basic geographical relationships, such as humans-environment relationships and interactions and effects of different environments on population growth, density, and movements. As was the case with frequency of provision of

examples of selected concepts, an average of one example of selected relationships was found in every two to four pages analyzed, across all five texts

6. Other relationships and interactions related to the new trends in geography were not offered or discussed. These relationships were: effects of transportation on communication and interaction, rural-urban and urban-urban interactions, and effects of changing the scale of investigation on drawing conclusions regarding phenomenon under study

7. The number of selected factual examples, across all five textbooks, was larger than that of the other three format categories (concepts', details', and relationships'), both separate and combined. An average of two to six examples of selected facts per page analyzed was found

8. Almost all five textbooks discussed or described the following topics: continuous changes in shapes of landforms, the global shape of the Earth, location of the U.S., and location of Latin America (one of the two regions that were analyzed in this study)

9. Summary statements were less frequent in Holt's, Allyn's, and Scott's textbooks than they were in Globe's and American Company's texts

10. Each textbook provided a number of points which were not included within the category system of this study. These additional (unique) points were mostly concepts, relationships, interactions, and theories

11. Different types of figures were used in the five selected

textbooks, but the two most frequently used types were pictures and maps. An average of one figure per page analyzed was found across all five texts. Tables and landsat images were rarely provided in almost all five textbooks. Drawings and graphs were used frequently, although there were some variations in their frequencies within the five texts.

All of these findings were generally applicable to the five selected geography textbooks. But, each textbook emphasized some topics and concepts more than did the others. In the following list, some of the points of agreement and disagreement between the content of each textbook and the researcher's criteria specified in both content and format categories were summarized:

In Holt's textbook: the major points of agreement were:

1. Many pages were devoted to contents related to the category of Regional geography

2. Many concepts were clarified by examples and defined explicitly

3. Some selected points were described in detail, such as types of vegetation and types of cultures

4. Some examples of relationships and interactions between humans and environment were provided

5. States that were studied in each region of the U.S. were all specified and included

6. Half of the additional (unique) points located in all five textbooks were provided, especially, history of agriculture and water supply, pollution, and disasters.

The major points of disagreement were:

1. Provision of more of the selected factual examples in this text than in the other four texts. Consequently, this text had a large average number of selected facts per page analyzed

2. Location of Europe was not described

3. Pictures constituted the type of figures that was most frequently used throughout the text and no tables were provided.

In Allyn's textbook: the major points of agreement were:

1. Many pages were devoted to the category of National geography—the study of the U.S.

2. Many examples of the selected concepts were provided

3. Some reasons for regional division of the U.S. were elaborated

4. Focus was on continents, rather than on individual countries, when describing the different regions of the world

5. Many examples of the selected relationships were provided, particularly, the effects of climate on humans

6. The number of maps included surpassed the number of other types of figures used in this text as well as the number of maps provided in any of the other four texts.

The major points of disagreement were:

1. The number of selected concepts and definitions analyzed was small

2. Definitions related to the categories of Human geography, Cartography, and Concepts and Relationships were not provided

3. Many of the selected factual examples within the content

categories of Regional and National geography were provided

4. Location of the U.S. was not described

5. Summary statements were used in two instances only (both were found within the category of Human geography)

6. Few additional (unique) points were provided throughout its content. However, a description of the concept of "time-distance" was provided

7. No landsat images were provided.

In Scott's textbook: the major points of agreement were:

1. Many pages were devoted to the content categories of Global geography and of Cartography

2. Many of the selected concepts were defined and described, especially the concept of "region"

3. Different types of soil were described in this text

4. Some relationships such as the effects of different environments on population growth, density, and movements were described

5. Few of the selected factual examples analyzed in this study were provided

6. Most of the ten topics that were analyzed for their existence only were provided

7. Some of the additional (unique) points that this text provided were: types of human races in the world and clarification of the concepts "site", "situation", and "hinterlands"

8. Different types of figures were included, as well as two tables (more than what was found in any other text).

The major points of disagreement were:

1. Few examples of the selected concepts were provided (an average of one example in every four pages)

2. Few details of selected topics and concepts were provided, especially within the content category of Human geography. States included in each region of the U.S. were not listed or defined

3. Few examples of the selected relationships within the categories of Physical, Human, and Regional geography were provided

4. Only one summary statement was provided (within the category of Human geography).

In Globe's textbook: the major points of agreement were:

1. A description of the effects of landforms, climate, and soil on humans was provided

2. Locations of the U.S., Europe, and Latin America were described.

The major points of disagreement were:

1. Few pages were devoted to each of the seven content categories. A large number and percentage of pages were classified as "other" and, consequently, the percentage of pages that were related to the seven content categories of this study was small

2. Few examples and definitions of the selected concepts were provided

3. Few details of the selected topics and concepts analyzed within all categories were provided

4. Few examples of the selected relationships within the category of Concepts and Relationships were provided

5. Many of the selected factual examples were provided within the category of Physical geography

6. Few examples to describe continuous changes in landforms and population movements were provided

7. All of the summary statements provided within this textbook were related to the categories of general geography

8. Only one additional (unique) point was described: the concept of "capitalism"

9. More drawings and less maps and pictures were used in this text than in the other texts.

In American Company's textbook: the major points of agreement were:

1. More pages were devoted to the general categories of Physical and Human geography

2. A large number of the selected concepts were clarified by examples. Some other concepts, such as population growth, density, and movements, were defined in this text.

3. Many details of the selected topics and concepts were provided, especially the different types of vegetation and of mineral and energy resources

4. Many examples of the selected relationships were provided within the category of Human geography

5. A small average number of selected facts per page analyzed was found

6. Summary statements throughout the content of this textbook were frequent

7. Several additional (unique) points were provided, some of which were: changes in plants in one area, water budget, and effects of environment on economic activities

8. Different types of figures, especially pictures, landsat images, and graphs, were used throughout this text.

The major points of disagreement were:

1. Few examples of the selected relationships within the categories of Global and National geography were provided

2. Many of the selected factual examples within the category of Human geography were provided

3. Location of Europe and states included within each region of the U.S. were not described.

When comparing the rankings of the five textbooks in terms of some of the format categories of this study, this author concluded the following:

1. As shown in table 39, Holt's and Scott's textbooks were most frequently ranked first among the selected geography textbooks in terms of description, definition, clarification by examples, and provision of selected concepts within all content categories:

TABLE 39
FREQUENCY OF THE RANK ORDER OF EACH TEXTBOOK IN RELATION TO:
COVERAGE OF SELECTED CONCEPTS

Frenquency of being ranked:	Holt	Allyn	Scott	Globe	American
First	8	1	5	2	3
Second	4	3	2	6	3
Third	2	4	6	2	2
Fourth	2	1	1	5	6
Fifth	0	6	2	1	2

2. As shown in table 40, Holt's and American Company's textbooks were most frequently ranked first among the five selected geography textbooks in terms of provision of details of selected topics and concepts within all content categories:

TABLE 40
FREQUENCY OF THE RANK ORDER OF EACH TEXTBOOK IN RELATION TO: INCLUSION OF DETAILS OF SELECTED TOPICS AND CONCEPTS

Frequency of being ranked:	Holt	Allyn	Scott	Globe	American
First	3	1	1	0	2
Second	2	4	1	1	0
Third	1	0	1	1	3
Fourth	1	1	3	2	1
Fifth	0	5	1	3	1

3. As shown in table 41, Globe's and Allyn's textbooks were most frequently ranked first among the five selected geography textbooks in terms of provision of examples of selected relationships within all content categories:

TABLE 41
FREQUENCY OF THE RANK ORDER OF EACH TEXTBOOK IN RELATION TO: COVERAGE OF SELECTED RELATIONSHIPS AND INTERACTIONS

Frequency of being ranked:	Holt	Allyn	Scott	Globe	American
First	0	2	0	4	1
Second	4	3	1	0	0
Third	3	0	2	0	1
Fourth	0	1	0	2	4
Fifth	0	0	4	1	1

4. As shown in table 42, Holt's textbook was most frequently ranked first (and Allyn's textbook was second) among the five selected geography textbooks in terms of providing factual examples of selected concepts, details, and relationships, within all content categories:

TABLE 42
FREQUENCY OF THE RANK ORDER OF EACH TEXTBOOK IN RELATION TO: COVERAGE OF SELECTED FACTS

Frequency of being ranked:	Holt	Allyn	Scott	Globe	American
First	4	1	0	1	1
Second	1	5	0	1	0
Third	0	1	3	2	1
Fourth	2	0	2	1	2
Fifth	0	0	2	2	3

5. As shown in table 43, American Company's textbook was most frequently ranked first among the five selected geography textbooks in terms of provision of different types of figures and of tables:

TABLE 43
FREQUENCY OF THE RANK ORDER OF EACH TEXTBOOK IN RELATION TO: FREQUENCY OF FIGURES AND TABLES

Frequency of being ranked:	Holt	Allyn	Scott	Globe	American
First	0	1	1	2	5
Second	1	3	1	1	3
Third	2	2	1	1	0
Fourth	3	2	4	1	0
Fifth	1	0	1	3	0

6. As shown in table 44, the overall comparison of the five selected geography textbooks, using 65 five areas of comparison[101] drawn from all tables presented in chapter four of this study, indicated that American Company's and Holt's textbooks were most frequently ranked first among the five texts in almost one-third of these 65 areas of comparison. But, when compared in terms of their frequencies of being ranked first, second, or third, Holt's and Allyn's textbooks surpassed the other three textbooks. American Company's textbook was frequently ranked third and Scott's and Globe's textbooks were ranked fourth and fifth:

TABLE 44
FREQUENCY OF THE RANK ORDER OF EACH TEXTBOOK
IN RELATION TO 65 AREAS OF COMPARISON

Frequency of being ranked:	Holt	Allyn	Scott	Globe	American
First	19	11	10	10	20
Second	16	24	7	13	9
Third	17	12	19	9	11
Fourth	10	7	17	12	14
Fifth	3	11	12	21	9
First or second	35	35	17	23	29
First, second, or third	52	47	36	32	40

[101]See appendix B.

Conclusions

A. None of the five selected high school geography textbooks should be used as the only instructional material for a geography course taught at the high school level. Both the contents of each textbook analyzed and the format used to present such contents were neither adequate nor representative of the guidelines and recommendations of geographers and educators from several points of view:

1. The way these textbooks approached the study of regions of the World, as judged by Hannaire's categories of textbooks, would classify all five texts as being "conventional" rather than practical, reflective, and analytical. Also, as judged by Roberts' criteria, the five selected textbooks would be considered "traditional" rather than conceptual or interdisciplinary. Therefore, they should be used only as reference manuals in classrooms

2. Among the three approaches identified by Clark for teaching geography (topical, regional, and conceptual), only the regional approach was used and applied in all five texts. Also, among the seven concepts recommended by Bennetts to include in a geography course (see page 37), only the concept of cultural appraisal of resources was described. Therefore, teachers should build the scope and sequence of their geography courses on many approaches (not only the regional approach used in these five texts)

3. Different approaches for regional division of the World were used among and within each of the five textbooks. The study of different regions and countries of the World was based, for example, on continents' division in the study of Europe or Africa, on cultural

differentiation in the study of Latin America, and on social and political forms of governments in the study of the Soviet Union and countries of Eastern Europe. However, the way the Joint Committee of NCGE and AAG recommended to approach World regional geography by focusing on specific topics, concepts, and relationships was not followed in all five textbooks. Also, none of these five texts explained the basis for regional division of the World or even of the U.S. Therefore, these textbooks inadequately described the concept of "region" and its formation

4. Among the four traditions in geography discussed by Pattison, only two were found related to the contents analyzed in the five selected texts: the man-land tradition and the area studies tradition. The other two traditions--the spatial tradition and the Earth-science tradition--were not related to the contents analyzed in the five selected textbooks. Therefore, these five textbooks should not be used for a general geography course because of their lack of description of these two traditions

5. For Gunn's list of differences between old and new geography, all five texts would be classified within the "old geography" because they promoted memorization (not inquiry), relied more on facts (not on concepts or general principles), and associated geography primarily with history (not with other physical and biological sciences). Therefore, teachers who would be using the inquiry method of teaching should not rely solely on these textbooks

6. For Ambrose who, in the 1970's, advocated a systematic, interdisciplinary, and quantitative approach for school geography based

on concepts and values clarification, all five textbooks would represent the contrary: all had factually-based contents, used the regional approach, and did not use (or promote the use of) any quantitative analysis methods. Therefore, these five textbooks should be used as references and not as the only curriculum materials for students (and for teachers too) to read

7. In the guidelines proposed by the Joint Committee of NCGE and AAG, there was an emphasis on the application of the following five themes suggested by this Committee for the study of regions:

a) Location: described from two perspectives: absolute and relative. These were not defined nor explained in any of the five analyzed textbooks

b) Place: for which interactions among the physical and human characteristics should be considered in the study of regions and in the interpretation of interactions between people and their environment. In the five textbooks, only the observed characteristics were provided (facts) and not their interactions

c) Relationships within places: based on complex and mutual interactions between cultural and physical environments. All five texts approached the description of these relationships from a simple point of view: causal interaction

d) Movement and relationships between and among places: such as the application of the concepts "spatial interaction" and "spatial differentiation" in the study of regions. In all five texts, such terms were not mentioned or described

e) Regions and their formation and change: except in Scott's

textbook, there was no definition of this concept in all other four texts. Also, criteria used for regional division of the U.S. and of other areas in the World were not identified in all five texts. Therefore, these five texts inadequately accommodated the guidelines proposed by this professional Committee.

In summary, there was a discrepancy between the type and form of contents offered in the five analyzed high school geography textbooks and most of the approaches, guidelines, and recommendations proposed by geographers and educators about what to include in a geography course/or textbook taught/or used at the high school level. In conclusion, all five texts did not represent the kind of curriculum materials that geographers and educators would recommend to use at the high school level.

B. If a textbook had to be selected among the five analyzed in this study, then the following comparisons would be helpful:

1. Holt's and Scott's provided, described, defined, and clarified by examples more of the selected concepts analyzed in this study than did the other three textbooks

2. Holt's and American Company's textbooks provided and described more details of the selected topics and concepts than did the other three textbooks

3. Globe's and Allyn's textbooks provided and described more of the selected relationships than did the other three textbooks

4. Holt's and Allyn's textbooks provided more factual examples of the selected concepts, details, and relationships than did the other three texts

5. American Company's textbook used different types of figures more frequently than did the other four texts.

Finally, when using the ranking of each of the five textbooks in 65 areas of comparison (presented in Appendix B), no single textbook was ranked first in more than 20 of the 65 areas. Holt's and Allyn's textbooks ranked first, second, or third more frequently than did the other three textbooks. American Company's textbook was frequently ranked third and Scott's and Globe's texts were ranked fourth and fifth.

Recommendations

Based on the data analyzed in this study and on this author's personal experiences, several recommendations were suggested:

A. To teachers, administrators, and textbook selection committee members:

1. That textbooks should constitute only one part of the classroom materials that teachers would use. Therefore, teachers should not rely solely on textbooks

2. That geography teachers and educators should refer to curriculum guidelines at both state and nation-wide levels. Guidelines, such as those developed by the Joint Committee of NCGE and AAG (and referred to in this study) were comprehensive and exclusive and should be considered in developing objectives for geography courses, at all levels

3. That inclusion of different geographical concepts and relationships in the textbook to be adopted and/or selected should be

examined carefully. If the textbook were about World geography, application of such concepts and relationships to each region should be evaluated.

B. To authors and publishers of textbooks:

1. That before developing a geography textbook, authors should refer to the different recommendations of geographers and educators about what to include in a geography textbook designed to be used at a particular level

2. That different geographical concepts and relationships should be used and applied throughout the content of any geography textbook and that facts and data should support the study of those concepts and relationships, especially through the use of tables and graphs

3. That, even if the text was about World geography, application of many geographical concepts and relationships should be considered in the study of each region of the world

4. That, when revising an edition of a textbook, up-dating the content should not imply only changing or deleting some facts that were no longer accurate, but also considering the use of other (and probably new) educational approaches for teaching and learning geography. Revising should correspond and follow the new trends occurring in the discipline of geography.

C. To educators and researchers:

1. That a similar study be conducted using a similar method of content analysis, to analyze the four remaining geography textbooks that were on the list of the State Department of Education in Oklahoma,

to compare their contents to the five selected textbooks analyzed in this study, and to assess their inclusion and coverage of the content and format categories developed in this study

2. That a similar study be conducted using geography textbooks used at the middle school/junior high level

3. That a study be conducted to analyze some geography textbooks published by the same publishers (or publishing companies) during the last five or six decades to determine how the patterns of their content would be similar to or different from the five editions used for analysis in this study

4. That a study be conducted using only one of the seven content categories developed for this study, with more specific points within its subdivisions

5. That a study be conducted concerning the use of concepts and/or relationships, especially those related to new directions in the discipline of geography

6. That a study be conducted to assess the degree to which textbooks' contents were influential on geography teachers in developing objectives for geography courses, at the high school level, in the State of Oklahoma

7. That a study be conducted to assess the usefulness and accuracy of the findings of this study, in relation to the use of the content analysis method, as a way to describe and analyze textbooks' contents.

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APPENDIX A

Raw Data

Physical Geography

	Holt	Allyn	Scott	Globe	American
A. Landforms:					
Number of words/definition	37	0	18	0	0
Types of	12	5	4	4	10
Forces generating changes in	6	6	8	8	6
Continuously changing shapes of	X	X	X	X	X
Humans' role in changing	0	1	0	1	0
Their effects on humans	0	6	0	6	0
Geographical locations of	1	34	0	14	17
Summary statement(s)	-	-	-	1	1
Additional point(s): Tectonic theories	0	0	1	0	1
Maps	0	4	3	0	4
Pictures	2	5	5	2	10
Landsat images	0	0	0	0	5
Tables	0	0	0	0	0
Graphs	2	0	2	0	4
Drawing	0	0	0	1	1
B. Climate:					
Number of words/definition	16	26	15	18	14
Number of words/definition of weather	24	19	17	30	13
Differences between climate and weather	0	1	0	0	1

Physical Geography–continued

	Holt	Allyn	Scott	Globe	American
Types of climatic zones	12	11	12	12	10
Examples of their location(s)	21	55	24	44	20
Elements of climate/weather	5	8	0	9	7
Effects of climate on humans	0	3	0	5	0
Summary statement(s)	1	-	-	1	1
Additional points:					
-Heat budget	X	-	-	-	X
-Changing climate	X	-	X	-	-
Maps	1	1	2	1	3
Pictures	2	7	4	6	4
Landsat images	1	0	0	0	14
Tables	0	0	0	0	1
Graphs	2	3	0	3	15
Drawings	0	0	2	3	0
C. Vegetation and soil:					
Number of words/definition of soil	0	0	20	0	14
Elements of soil	1	1	8	5	2
Types of soil	0	1	12	4	0
Examples of changes in soil	0	0	0	0	1
Effects of vegetation on soil	1	1	0	0	1
Types of vegetation	9	0	0	2	10

Physical Geography–continued

	Holt	Allyn	Scott	Globe	American
Effects of soil on humans	0	0	0	1	0
Effects of vegetation on humans	0	0	0	6	1
Effects of humans on soil	10	4	0	0	4
Effects of humans on vegetation	0	1	0	0	3
Location(s) of types of soil	0	3	0	3	0
Location(s) of types of vegetation	11	0	0	9	13
Summary statement(s)	-	-	-	-	1
Additional point(s):					
-Changes in plants in one area	-	-	-	-	X
-Beginning of agriculture	X	-	X	-	-
Maps	1	0	0	0	5
Pictures	4	2	0	0	40
Landsat images	0	0	0	0	12
Tables	0	0	0	0	0
Graphs	0	0	0	1	3
Drawings	1	0	0	1	1
D. Water resources:					
Types of	0	3	0	8	6
Geographical location(s) of types	0	4	0	27	4
Water cycle	-	-	-	-	X

Physical Geography-continued

	Holt	Allyn	Scott	Globe	American
Cultures' adjustment to	0	0	0	0	0
Summary statement(s)	-	-	-	-	-
Additional point(s):					
-Water supply	X	-	-	-	-
-Water pollution	X	-	-	-	-
-Water disasters	X	-	-	-	-
-Water budget	-	-	-	-	X
-Uses of water	1	5	0	6	3
Maps	0	0	0	1	0
Pictures	2	3	0	2	2
Landsat images	0	0	0	0	3
Tables	0	0	0	0	0
Graphs	0	1	0	1	1
Drawings	0	0	0	0	0
E. Mineral and Energy resources:					
Types of	6	5	0	7	18
Geographical location(s) of	14	0	0	37	0
Cultural appraisal of	0	0	4	0	5
Uses of	7	8	0	6	15
Summary statement(s)	-	-	-	1	1
Additional point(s):					
-Management of resources	-	X	-	X	X

Physical Geography-continued

	Holt	Allyn	Scott	Globe	American
Maps	0	0	0	0	1
Pictures	0	0	1	0	6
Landsat images	0	0	0	0	0
Tables	0	0	0	0	0
Graphs	0	1	0	1	3
Drawings	0	0	0	0	0

Human Geography

A. Population:

Words/definition of population density	11	0	15	0	13
Words/definition of population growth	0	0	0	0	31
Words/definition of population movements	0	0	0	0	16
Examples of these concepts	1	17	0	0	9
Effects of physical environment on these concepts	3	6	0	0	5
Effects of cultural environment on these concepts	0	0	0	0	10
Effects of economic environment on these concepts	2	0	0	0	5
Summary statement(s)	-	1	-	-	1
Additional point(s)	-	-	-	-	-
Maps	1	1	0	0	1
Pictures	0	1	0	0	7

Human Geography-continued

	Holt	Allyn	Scott	Globe	American
Landsat images	0	0	0	0	1
Tables	0	0	0	0	0
Graphs	0	0	0	0	6
Drawings	0	0	0	0	0
B. Economy:					
Types of major economic activities	2	0	3	5	6
Examples of geographic location(s)	5	0	0	11	18
Types of economic interactions	0	0	0	0	0
Examples of economic problems	1	0	0	4	0
Summary statement(s)	-	-	-	1	1
Additional point(s):					
-Land ownership	-	-	X	-	X
-Effects of environment and technology on economic activities	-	-	-	-	X
-History of agriculture and industry	X	-	-	-	-
Maps	0	0	1	1	3
Pictures	1	0	3	3	19
Landsat images	0	0	0	0	0
Tables	0	0	0	0	0

Human Geography–continued

	Holt	Allyn	Scott	Globe	American
Graphs	0	0	0	0	1
Drawings	0	0	0	0	1
C. Culture:					
Words/definition	17	0	21	30	0
Types of	3	0	0	0	0
Elements of	8	7	4	5	0
Words/definition of cultural diffusion	18	0	0	16	0
Examples of cultural diffusion	11	0	0	4	0
Summary statement(s)	-	-	1	1	-
Additional point(s):					
-"Culture region" concept	-	X	-	X	-
-Effects of environment on cultural differences	X	-	-	X	-
-Differences between race and culture	-	-	X	X	-
-Types of human races	-	-	X	-	-
Maps	0	1	1	1	0
Pictures	2	0	7	6	0
Landsat images	0	0	0	0	0
Tables	0	0	0	0	0
Graphs	0	0	0	1	0
Drawings	0	0	0	1	0

Human Geography—continued

	Holt	Allyn	Scott	Globe	American
D. Transportation and Communication:					
Modes of transportation	0	8	0	0	7
Modes of communication	0	5	0	0	8
Their effects on global interaction	0	2	0	2	8
Examples of major routes and networks	0	0	0	0	4
Summary statement(s)	-	1	-	-	1
Additional point(s):					
-"Time-distance" concept	-	X	-	-	-
-"Linkage" concept	-	-	-	-	X
Maps	0	1	0	0	5
Pictures	0	1	0	0	10
Landsat images	0	0	0	0	0
Tables	0	0	0	0	0
Graphs	0	0	0	0	0
Drawings	0	0	0	0	2
E. Urbanization:					
History of	-	-	X	-	X
Forces accelerating	0	0	2	0	4
Characteristics of urban life	7	0	4	0	16
Examples of major urban centers	2	0	7	0	29

Human Geography–continued

	Holt	Allyn	Scott	Globe	American
Examples of urban problems	2	0	2	0	4
Examples of rural–urban interactions	1	0	1	0	1
Examples of urban–urban interactions	0	0	0	0	0
Summary statement(s)	–	–	–	–	1
Additional point(s):					
–Metropolis/Megalopolis	–	–	–	–	X
–Site, situation, and hinderlands	–	–	X	–	–
–Types of cities	0	0	0	0	6
Maps	0	0	1	0	2
Pictures	0	0	2	0	9
Landsat images	0	0	0	0	0
Tables	0	0	1	0	0
Graphs	0	0	0	0	1
Drawings	0	0	0	0	3

Global Geography

A. Earth-sun relationships:

Words/definition of solar system	30	0	19	0	0
Words/definition of a star	15	12	0	0	0
Words/definition of a planet	0	22	0	0	0

Global Geography—continued

	Holt	Allyn	Scott	Globe	American
Description of how the system works	-	X	X	-	-
Effects of the sun on people	0	0	0	0	0
Effects of the sun on climate	0	0	1	6	0
Effects of the sun on resources	1	0	1	0	0
Summary statement(s)	-	-	-	-	-
Additional point(s):					
-Words/definition of "Universe"	18	0	11	0	0
-Words/definition of "galaxy"	9	0	18	0	0
Maps	0	0	0	0	0
Pictures	0	0	1	0	0
Landsat images	1	0	5	0	0
Tables	0	1	0	0	0
Graphs	0	1	0	2	0
Drawings	0	0	1	1	0
B. Globalism:					
Description of the shape of the Earth	X	X	X	-	X
Effects of Earth's spinning	1	0	0	1	0
Effects of Earth's rotation	2	2	2	2	2

Global Geography-continued

	Holt	Allyn	Scott	Globe	American
Effects of Earth's axis inclination	6	4	6	6	4
Summary statement(s)	-	-	-	-	-
Additional point(s):					
-Size of the Earth	-	X	X	-	-
-History of the Earth	-	-	X	-	-
Maps	1	0	0	2	0
Pictures	0	0	1	0	0
Landsat images	0	0	1	0	1
Tables	0	0	0	0	0
Graphs	0	1	3	0	2
Drawings	0	0	0	0	0

National Geography

A. Physical Geography of the U.S.:					
Defining U.S. location	X	-	X	X	X
Defining U.S. boundaries	2	0	4	3	2
Types of landforms	8	6	7	8	4
Forces changing landforms	2	3	3	2	1
Examples of places with continuous change	8	0	7	0	1
Examples of effect of humans on landforms	2	3	0	0	0

National Geography–continued

	Holt	Allyn	Scott	Globe	American
Examples of effect of landforms on humans	7	10	2	1	0
Examples of their geographical locations	121	58	64	12	6
Climatic zones in the U.S.	10	7	0	8	6
Examples of their geographical locations	17	12	0	10	6
Examples of effects of climate on humans	7	10	1	6	0
Types of soil	6	4	0	2	1
Examples of their geographical locations	8	5	0	3	1
Examples of role of humans on soil	7	6	0	0	1
Examples of effects of soil on humans	1	0	0	1	0
Types of vegetation	4	1	0	2	5
Examples of their geographical locations	8	17	0	4	3
Examples of effects of vegetation on humans	0	1	0	0	0
Examples of effects of humans on vegetation	2	0	0	0	1
Types of water resources	6	6	0	2	2
Examples of their geographical locations	38	31	0	4	3
Types of mineral and energy resources	20	21	10	15	12

National Geography–continued

	Holt	Allyn	Scott	Globe	American
Examples of their geographical locations	66	84	28	27	15
Summary statement(s)	1	-	-	-	1
Additional point(s)	-	-	-	-	-
Maps	2	15	7	3	3
Pictures	10	4	5	10	3
Landsat images	0	0	0	0	0
Tables	0	0	0	0	0
Graphs	0	1	0	0	0
Drawings	0	0	3	0	2
B. Human Geography of the U.S.:					
Examples of population growth	1	11	3	3	3
Examples of population density	6	0	9	1	3
Examples of population movements	2	0	7	0	1
Effects of physical environment on these concepts	2	3	5	1	0
Effects of social environment on these concepts	3	0	10	0	0
Effects of economic environment on these concepts	5	6	6	1	6
Types of major economic activities	8	9	3	5	8
Examples of their geographical locations	168	193	25	56	28

National Geography–continued

	Holt	Allyn	Scott	Globe	American
Examples of economic problems	14	12	7	1	1
Types of cultures	5	5	0	3	7
Examples of cultural diffusion	1	0	0	1	0
Modes of transportation	8	7	4	3	5
Modes of communication	5	2	0	0	7
Examples of major routes and networks	10	20	2	0	7
Forces accelerating urbanism	6	10	0	4	8
Characteristics of urban life	4	9	17	1	0
Examples of urban centers	70	24	8	14	25
Examples of urban problems	5	0	0	9	0
Examples of rural–urban interactions	0	0	0	0	0
Examples of urban–urban interactions	0	0	0	0	0
Summary statement(s)	–	–	–	–	1
Additional point(s):					
–History of population settlements	X	X	–	X	X
–Economic and social assets	X	X	–	X	–
–Political and administrative system	X	X	–	X	–
–"Capitalism" concept	–	–	–	X	–

National Geography–continued

	Holt	Allyn	Scott	Globe	American
-Arrangement of landscape	-	-	X	-	-
Maps	10	20	4	2	4
Pictures	32	32	18	13	11
Landsat images	0	0	0	0	0
Tables	0	0	1	1	0
Graphs	0	5	0	5	0
Drawings	0	1	0	2	0
C. Regions of the U.S.:					
Basis for regional division	0	3	0	0	0
Number of areas included	7	4	3	0	7
Description of their locations	X	X	X	-	-
Description of their boundaries	-	X	-	-	-
Listing of States included	X	X	-	-	-
Examples of regional inter-dependence and interaction	2	-	-	7	-
Summary statement(s)	-	-	-	-	-
Additional point(s)	-	-	-	-	-
Maps	7	4	0	0	0
Pictures	0	0	0	0	0
Landsat images	0	0	0	0	0
Tables	0	0	0	0	0

National Geography-continued

	Holt	Allyn	Scott	Globe	American
Graphs	0	0	0	0	0
Drawings	0	0	0	0	0
Regional Geography					
A. Latin America:					
Number of countries studied	33	4	14	3	26
Location of Latin America	X	X	X	X	X
Boundaries of that region	2	2	1	1	2
Types of landforms	6	3	6	3	6
Forces changing landforms	1	0	3	0	2
Examples of places with continuous change	2	0	1	0	1
Effects of humans on landforms	0	0	0	0	0
Effects of landforms on humans	6	3	1	4	5
Examples of their geographical locations	46	12	25	6	18
Types of climatic zones	7	7	8	6	5
Examples of their geographical locations	22	19	25	19	6
Effects of climate on humans	1	5	2	7	1
Types of soil	1	0	3	0	1
Examples of their geographical locations	4	0	5	0	2
Effects of humans on soil	0	1	3	0	0

Regional Geography-continued

	Holt	Allyn	Scott	Globe	American
Effect of soil on humans	1	0	1	2	2
Types of vegetation	3	3	7	3	5
Examples of their geographical locations	16	6	11	1	12
Effects of vegetation on humans	1	0	0	3	2
Effects of humans on vegetation	0	0	0	0	0
Types of water resources	5	2	2	2	2
Examples of their geographical locations	12	5	10	2	6
Types of mineral and energy resources	23	19	11	9	16
Examples of their geographical locations	35	39	14	12	18
Examples of population growth	1	6	4	2	5
Examples of population density	5	4	8	1	10
Examples of population movements	1	0	0	0	0
Effects of physical environment on these concepts	7	6	0	5	1
Effects of social environment on these concepts	1	4	0	1	3
Effects of economic environment on these concepts	2	4	2	2	1
Types of major economic activities	5	6	4	5	5

Regional Geography-continued

	Holt	Allyn	Scott	Globe	American
Examples of their geographical locations	87	62	24	20	43
Examples of economic interactions	7	0	0	5	4
Examples of economic problems	13	5	18	9	8
Types of culture	6	4	5	8	10
Examples of cultural diffusion	0	17	1	6	3
Modes of transportation	4	5	1	3	4
Modes of Communication	0	0	0	0	0
Examples of major routes and networks	9	7	7	2	4
Forces accelerating urbanism	3	3	1	3	1
Examples of major urban centers	25	6	17	4	5
Examples of urban problems	4	1	3	1	4
Summary statement(s)	1	-	-	-	1
Additional point(s): -Latin America and U.S.	X	X	X	X	-
Maps	9	30	10	4	12
Pictures	38	23	40	27	30
Landsat images	0	0	0	0	0
Tables	0	0	0	0	0
Graphs	1	3	0	1	0

Regional Geography-continued

	Holt	Allyn	Scott	Globe	American
Drawings	0	0	0	8	2
B. Europe:					
Number of countries studied	30	5	24	5	29
Location of continent	-	X	X	X	-
Boundaries of continent	0	3	4	3	0
Types of landforms	15	6	8	8	11
Forces changing landforms	2	1	3	1	2
Places with continuous change	2	0	2	0	0
Effects of humans on landforms	2	2	0	1	2
Effects of landforms on humans	14	7	3	2	2
Examples of their geographical locations	96	34	39	30	36
Types of climatic zones	8	5	5	4	2
Examples of their geographical locations	22	15	7	10	3
Effects of climate on humans	2	5	2	1	1
Types of soil	0	1	5	0	1
Examples of their geographical location	0	0	5	0	1
Effects of humans on soil	2	2	0	2	0
Effects of soil on humans	0	0	2	0	0
Types of vegetation	3	4	4	1	3

Regional Geography-continued

	Holt	Allyn	Scott	Globe	American
Examples of their geographical locations	6	10	2	1	7
Effects of vegetation on humans	0	0	0	0	0
Effects of humans on vegetation	3	2	2	0	1
Types of water resources	4	4	4	4	3
Examples of their geographical locations	46	11	19	16	7
Types of mineral and energy resources	22	19	11	19	6
Examples of their geographical locations	36	74	15	21	14
Examples of population growth	1	1	1	0	1
Examples of population density	1	3	18	4	3
Examples of population movements	1	0	0	0	0
Effects of physical environment on these concepts	3	0	1	0	2
Effects of social environment on these concepts	0	0	0	0	1
Effects of economic environment on these concepts	2	0	3	1	1
Types of major economic activities	7	6	8	8	9
Examples of their geographical locations	156	163	70	51	69

Regional Geography–continued

	Holt	Allyn	Scott	Globe	American
Examples of economic interactions	17	13	4	8	2
Examples of economic problems	21	13	4	4	6
Types of culture	15	15	8	2	8
Examples of cultural diffusion	11	7	4	6	6
Modes of transportation	8	7	5	4	5
Modes of communication	2	1	4	3	0
Examples of major routes and networks	30	10	7	18	15
Forces accelerating urbanism	5	5	3	0	1
Examples of major urban centers	65	17	19	7	17
Examples of urban problems	7	1	0	0	0
Summary statement(s)	1	-	-	-	1
Additional point(s): –Comparison to the U.S.	X	X	X	X	X
–Living standards	X	X	-	X	X
Maps	14	36	6	0	10
Pictures	56	31	19	31	25
Landsat images	0	0	1	0	0
Tables	0	0	0	0	0
Graphs	0	0	0	0	0

Regional Geography–continued

	Holt	Allyn	Scott	Globe	American
Drawings	0	0	4	6	0
Cartography					
A. Map projection:					
Words/definition of	33	0	14	0	0
Elements of	3	4	4	3	4
Words/definition of "Direction"	0	0	0	24	0
Words/definition of "Symbols"	0	0	11	24	0
Words/definition of "Scale	0	0	19	17	15
Words/definition of "Title"	0	0	10	0	9
B. Types of map projection:					
Reasons for differences in	2	0	3	2	0
Different types	4	5	5	5	0
Examples of these types	5	8	5	5	0
C. Application of map projections:					
Examples of users of those types	3	2	1	3	0
Examples of advantages of those types	9	10	3	5	0
Types of maps	9	5	8	6	0
Summary statement(s)	1	-	-	1	-
Additional point(s): -Latitudes and longitudes	X	X	X	X	X
Maps	6	10	10	9	2

Cartography–continued

	Holt	Allyn	Scott	Globe	American
Pictures	0	2	3	0	0
Landsat images	1	0	2	0	0
Tables	0	0	0	0	0
Graphs	0	1	0	0	2
Drawings	0	0	3	4	0

Concepts and Relationships

A. Location:					
Definition of absolute location	–	–	–	–	–
Definition of relative location	–	–	–	–	–
Elements of locational decisions	5	5	8	0	7
Examples of locational decisions	3	6	7	0	16
B. Localization:					
Definition of	–	–	–	–	–
Examples of areas with one major activity	2	3	1	0	1
Examples of other activities attracted	5	8	2	0	2
C. Concept of change:					
Types of change	2	2	1	2	1
Examples from physical geography	28	22	14	4	15

Concepts and Relationships–continued

	Holt	Allyn	Scott	Globe	American
Examples from human geography	27	24	6	25	10
D. Scale of analysis:					
Definition of	-	-	-	-	-
Examples of influence of scales on conclusions	0	0	0	0	0
Examples of cases of appropriate scale	0	0	0	0	6
E. Regional concept:					
Definition of (number of words)	0	0	28	0	0
Examples of ways of defining a region	0	1	3	0	0
Elements of a region	0	9	0	5	0
F. Areal coherence:					
Description of	-	-	-	-	-
Examples from regions studied	0	0	0	0	0
G. Man-Environment relationships:					
Examples of adaptation	10	0	3	1	9
Examples of effects of environment on humans	2	2	0	0	0
Examples of effects of humans on environment	1	3	11	1	7
Suggestions about environment preservation	5	1	4	0	3

Concepts and Relationships-continued

	Holt	Allyn	Scott	Globe	American
Suggestions about environment exploitation	6	8	3	0	1
H. Spatial distribution, differentiation, and interaction:					
Definitions of these concepts	-	-	-	-	-
Examples of these concepts	0	0	0	0	0
Examples of application for explanation	0	0	0	0	0
Examples of interdependence among world regions	22	14	2	6	1
Figures related to all these concepts:					
Maps	0	1	0	0	2
Pictures	5	5	5	1	19
Landsat images	1	0	0	0	7
Tables	0	0	0	0	0
Graphs	0	0	0	0	0
Drawings	0	0	0	0	0

APPENDIX B

Rank Orders of the Five Textbooks in 65 Areas of Comparison

	Holt	Allyn	Scott	Globe	American
Number of pages included in all categories	2	1	4	5	3
Percentage of pages included in all categories	2	1	4	5	3
Number of pages devoted to the category of physical geography	4	2	3	5	1
Number of pages devoted to the category of human geography	4	5	2	3	1
Number of pages devoted to the category of global geography	3	2	1	5	3
Number of pages devoted to the category of national geography	2	1	3	5	4
Number of pages devoted to the category of regional geography	1	2	3	5	4
Number of pages devoted to the category of cartography	3	3	1	2	5
Number of pages classified as "other"*	3	1	4	5	2
Number of pages actually analyzed	3	1	4	5	2
Percentage of pages actually analyzed	3	2	4	5	1
Number of definitions found	2	5	1	4	3
Number of concepts found	3	3	1	5	1
Number of examples of concepts found	1	2	5	4	3
Number of words used in all definitions	1	5	2	3	4

	Holt	Allyn	Scott	Globe	American
Average number of words/ definition	2	3	4	1	5
Average number of examples of concepts/page analyzed	1	3	5	2	4
Average number of pages for locating one definition*	3	5	2	1	4
Number of definitions within the category of physical geography	2	4	1	4	2
Number of definitions within the category of human geography	1	5	3	3	1
Number of definitions within the category of global geography	1	1	3	4	4
Number of definitions within the category of cartography	4	5	1	2	2
Number of definitions within the category of concepts and relationships	2	2	1	2	2
Average number of pages for locating one definition within the category of physical geography*	1	3	3	2	5
Average number of pages for locating one definition within the category of human geography*	1	5	3	2	4
Average number of pages for locating one definition within the category of global geography*	1	2	3	4	4
Average number of pages for locating one definition within the category of cartography*	4	5	3	2	1

	Holt	Allyn	Scott	Globe	American
Number of details provided	1	2	4	5	3
Number of details within the catetory of physical geography	3	5	4	2	1
Number of details within the category of human geography	2	2	4	5	1
Number of details within the category of national geography	1	2	5	4	3
Number of details within the category of regional geography	1	2	3	5	4
Number of details within the category of cartography	2	4	1	3	5
Number of details within the category of concepts and relationships	4	1	2	4	3
Average number of examples of relationships/page analyzed	2	3	5	1	4
Number of examples of relationships within the category of physical geography	3	2	5	1	4
Number of examples of relationships within the category of human geography	3	2	5	4	1
Number of examples of relationships within the category of global geography	2	4	2	1	4
Number of examples of relationships within the category of national geography	2	1	3	4	5
Number of examples of relationships within the category of regional geography	3	2	5	1	4

	Holt	Allyn	Scott	Globe	American
Number of examples of relationships within the category of concepts and relationships	2	1	3	5	3
Average number of factual examples/page analyzed	1	3	4	2	5
Number of factual examples in all categories	1	2	3	5	4
Number of factual examples within the category of physical geography	4	2	5	1	3
Number of factual examples within the category of human geography	4	2	5	3	1
Number of factual examples within the category of national geography	1	2	3	4	5
Number of factual examples within the category of regional geography	1	2	3	5	4
Number of factual examples within the category of cartography	2	1	4	3	5
Number of some selected topics included	3	2	1	5	3
Number of summary statements	3	4	5	2	1
Number of summary statements within the category of physical geography	3	4	4	2	1
Number of summary statements within the category of human geography	5	2	4	2	1

	Holt	Allyn	Scott	Globe	American
Number of summary statements within the category of global geography	5	5	5	5	5
Number of summary statements within the category of national geography	2	3	3	3	1
Number of summary statements within the category of regional geography	1	3	3	3	1
Number of summary statements within the category of cartography	1	3	3	1	3
Number of additional (unique) points	1	5	2	4	2
Average number of figures and tables/page analyzed	4	3	5	1	1
Number of figures and tables	3	2	4	5	1
Number of maps	3	1	4	5	2
Number of pictures	2	3	4	5	1
Number of landsat images	3	4	2	4	1
Number of tables	5	2	1	2	2
Number of graphs	4	2	4	3	1
Number of drawings	4	4	3	1	2

*The rank orders of these points were reversed.