

AN ASSESSMENT OF GEOGRAPHIC AWARENESS IN ENTRY-LEVEL COLLEGE
GEOGRAPHY CLASSES FOLLOWING THE PASSAGE OF THE EDUCATIONAL
IMPROVEMENT ACT OF 1993

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APPROVAL

This is to certify that the Graduate Committee of

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25th day of March, 1997.

The committee read and examined his thesis, supervised this defense of it in an oral examination, and decided to recommend that his study be submitted to the Graduate Council, in partial fulfillment of the requirement for the degree of Master of Arts in Geography.

Chair, Graduate Committee

Signed on behalf of
the Graduate Council

Interim Dean, School of Graduate Studies

ABSTRACT

AN ASSESSMENT OF GEOGRAPHIC AWARENESS IN ENTRY-LEVEL COLLEGE GEOGRAPHY CLASSES FOLLOWING THE PASSAGE OF THE EDUCATIONAL IMPROVEMENT ACT OF 1993

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Geographic education in primary and secondary schools has declined over the last fifty years. This study was undertaken to ascertain the geographic awareness of students taking geography for the first time in a post-secondary setting in both private and public institutions. Students were given a series of questions pertaining to world and U.S. geography.

The results showed increases in geographic awareness among students at Milligan College, a private institution, and a decrease in geographic awareness among students at East Tennessee State University, a public institution. However, the data collected show that geographic knowledge is lacking at both local institutions and the enhancement of geographic awareness is a must for the state of Tennessee.

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CHAPTER 1

INTRODUCTION

Human need for geographic awareness has been exhibited for thousands of years. From their primeval existence, a need for shelter, for food, and an inherent desire for survival, forced early humans to develop an understanding of their geographic surroundings. As they became more advanced, their longing to learn also increased.

Early Grecian history is inundated by geography and its importance to Greek lives. The classical philosophers speculated upon the connection between peoples and their environments, and the histories of Herodotus and Thucydides are infused with geographical descriptions and considerations (Darby, 1967, 30). Herodotus, the “Father of Geography,” gave early descriptions of man and his desire to explain his being by his surroundings. Strabo, a main representative of ancient Roman geography, expanded the views of Herodotus and studied geography’s relations with other sciences (Fischer, Campbell, Miller, 1967, 15).

It wasn’t, however, until the explosion of global exploration that geography blossomed on a world scale. Marco Polo’s documented journeys to China led to the involvement of Spanish and Portuguese explorers to find a faster route to Asia. Not to be excluded, the French, Dutch, and English also became involved in global expansion before the end of the Renaissance period in the 16th century (Fischer, Campbell, Miller, 1967, 39).

This desire to explore led to the introduction of geographic studies in schools beginning in the 1700s (Niemz, 1995-1996, 42). Ironically, it was secondary schools, not universities, that led the way in geographic education (Niemz, 1995-1996, 42). A.J. Franche, a representative of the Lutheran Church, introduced geography in his school for orphans in Germany in the early 1700s (Niemz, 1995-1996, 42). The first known university instruction in geography was done by Immanuel Kant, prior to 1757, also in Germany. Kant taught that a knowledge of physical geography was essential for an understanding of man's perception of the world.

The modern stages of geography had its roots with German geographers as well. Karl Ritter, the "Founder of Modern Geography," and Alexander Von Humboldt wrote and taught of the importance of geography (Fischer, Campbell, Miller, 1967, 61). This emphasis was brought to America by Arnold Guyot, who studied under Ritter and taught at Princeton, as global expansion of geographic awareness continued (Fischer, Campbell, Miller, 1967, 363).

Geography, as a separate subject, began losing its prominence in the secondary school curriculum in America following the Korean War in the early 1950s (Stoltman, 1989, 9). By the early 1980s, American society was informed of its lack of geographic knowledge. Legislation by Congress and by individual states has, in the past few years, helped to somewhat abate the tide of geographic ignorance. As geography exits an educational tunnel to a new millennium, hopefully, this increased trend for geographic awareness will continue.

Problem Statement

The last half of the twentieth century has seen many changes in our lives. We have ventured from driving on the two-lane highway to surfing the “Information super-highway.” We have progressed from a climb of Mount Everest to a walk on the moon. Yet, sadly, we have digressed from being geographically aware to a point of being almost geographically illiterate. As Hartshorne stated in 1937, “We teach geography in order that geography may be learned. The first great objective is bluntly and purely the imparting and acquiring of geographical information” (Hartshorne, 1937, 166). Hartshorne, as others, could not envision the diminution of geography a half-century later.

When the Guidelines for Geographic Education were published in 1984 an alarming trend was discovered. Fewer students were enrolling in geography classes in secondary schools and fewer teachers were majoring in geography at the undergraduate level (Natoli, 1994, 2). One reason for this lack of geographic participation could be attributed to social studies. Social studies is the generic field that includes not only geography, but history, government, economics, psychology, sociology, and law. Since the mid-1960s more students enrolled in these other subjects, instead of geography, because they found geography “dull and boring” (Solorzano, 1985, 50). This, along with the fact that other leading world countries were already making changes in their educational systems (Niemz, 1995-1996, 42; Brook and Brook 1980, 60), invoked an outcry for academic reform here in America.

The Geographic Education National Implementation Project (GENIP) was established in 1985 to carry forward the recommendations of the Guidelines. Five fundamental themes provided teachers with a base for, once again, reorganizing geography in schools. These five themes - Location, Place, Relationships within Places, Relationships between Places, and Regions: How they form and change -- gave teachers guidelines to help increase geographic awareness (Natoli, 1994, 5). Even with the help of federal guidelines it would take a “grassroots” effort by states to set the course for geographic resurgence in this country (Grosvenor, 1995, 411).

During this last decade of the twentieth century, interest for geographic learning has swelled. “America 2000,” an education reform plan promoted by President George Bush and Secretary of Education Lamar Alexander, enacted in 1991, helped to expedite this awareness (Doyle, 1991, 186). “America 2000’s” goal was to have American students in grades 4, 8, and 12 competent in English, mathematics, science, history, and geography by the year 2000 (Grosvenor, 1995, 413). President William Clinton continued the educational reforms with the Congressional passage of “Goals 2000: The Educate America Act of 1993” (Wilbankes, 1994, 44).

These reforms are the first steps in a nationwide educational effort that is designed to stimulate better teaching and learning of a specific subject matter (de Souza, 1994, 46). As Hartshorne stated more than fifty years ago: “A teacher’s first function is to bring students to an acquaintance with the nature of the different regions of the world...” (Hartshorne, 1937, 166). It is with this first function of bringing students to a deeper

understanding of geography in this decade of geographic reformation that this research project takes place.

Purpose of the Study

In 1984 a basic geography exam was given to 1,875 North Carolina college students. Unbelievably, ninety-five percent of those students failed (Pabst, 1986, 23). The reason for the students' lack of geographic knowledge signaled a country-wide problem: seventy-one percent were never taught geography in elementary school; sixty-five percent never had a geography class in junior high; and seventy-three percent had no geography in high school (Grosvenor, 1995, 410).

This research will determine if geographic knowledge has increased among students taking a post-secondary geography class for the first time following the passage of educational reform acts of the early 1990s. It will also show any differences in geographic awareness between students enrolled in public and private post-secondary institutions.

Research for this report was conducted at two post-secondary institutions in northeast Tennessee. Milligan College is a private, four-year liberal arts college, located in Carter County. Milligan College has an enrollment of approximately 850 students and offers two classes in geography. East Tennessee State University is a public, four-year comprehensive institution located in Johnson City, Washington County. East Tennessee State University (ETSU) has an enrollment of approximately 11,750 students and offers an undergraduate degree in geography. ETSU no longer offers a graduate degree in

geography; in June 1995 that program was dropped even in light of increased enrollment (Marchioni, 1997).

Hypothesis

The hypothesis of this research project is that geographic awareness did increase in both world geography and United States geography in both private and public post-secondary institutions following the Education Improvement Act of 1993.

Methodology

The data for this research project were collected by testing students at Milligan College and students at ETSU. Only students enrolled in geography classes during the semester that testing was conducted were included in the study. The testing was conducted on three separate occasions, once in the spring of 1993 at both institutions, and again, three years later, in the fall of 1996 at ETSU and in the spring of 1997 at Milligan College.

The four groups (two at Milligan College; two at ETSU) were given the same test (see Appendix A) three years apart. The author oversaw and administered all testing sessions. Both testing sessions were conducted in the same manner.

The guidelines for the testing were few and simple:

1. Each group was told why the testing was being conducted.
2. Each group of students was informed that their grades would not be affected in any manner by this research project.

3. Testing would be taken on a voluntary basis only. No incentives (money, grade points, etc.) were offered.
4. The test was to be conducted with complete anonymity. Names were not required for this testing and no grade (A, B, C, D, F) would be given.
5. Students volunteering to take the exam were asked to put their grade classification (freshman, sophomore, junior, senior, other) and the location of the high school they attended so further analysis could be done.

Students were tested within the first week of the semester and in the same classroom in which their regular geography classes were taught. No time restraints were placed upon the students for this testing; however, most students completed the test in 45 minutes or less. Students were asked to do their own work and to answer each question to the best of their abilities.

The tests given to the 1993 and 1996 ETSU students were given in two different sections of Cultural Geography classes in the fall semester of each academic year. Since classes are larger at ETSU than at Milligan College, a greater number of ETSU students participated in the testing. The 1993 and 1997 Milligan College tests were conducted in only one section of Developed World Geography each year.

CHAPTER 2

REVIEW OF LITERATURE

As previously noted in the Problem Statement, several world countries were developing new educational standards during the same period as the United States. Germany, one of the early leaders in the teaching of geography, and England both sought educational reform in the 1970s and 1980s. It should be noted that students in both countries received considerably more geographic instruction than the American student, yet both suffered a decline in geographic awareness in the late 1970s and 1980s (Dumas, 1977, 84; Brook and Brook 1980, 60).

German Education of Geography

Following World War II, the educational system in Germany developed much differently than in America. Germany developed a four-tier system for education. The primary school was grades 1 - 4. "Hauptschule" was comprised of grades 5 - 10, and served as qualifying for all less-skilled jobs. "Realschule," grades 5 - 10, served as qualifying for non-academic jobs, and Gymnasium served grades 5 - 13 for all students qualifying for university level studies (Birkenhauer and Marsden 1992, x).

After World War II radical changes occurred in the German educational system. Programs designed to cover fewer content areas in school education were developed, class time became reallocated, and many subjects were placed under one general topic heading. Social Studies resulted in less teaching time in geography and increased time for more

topical-related subjects. By the late 1970s Germans became aware of the declining geographic awareness in the school systems (Niemz, 1995-1996, 46). This became even more apparent following the collapse of the Iron Curtain in the late 1980s.

The former East Germany had only one school system and twelve grades. Regional geography was stressed in East Germany's school system, and was divided between teaching the differences in socialist and capitalist countries. The teaching objective was to show the superiority of the socialist system (Niemz, 1995-1996, 48). West German schools taught topical geography and how it applied to everyday life. When geography tests were given to students following the reunification of Germany in 1990, students from the former East Germany scored higher in all areas, except one, than the students from the West (Niemz, 1995-1996, 49). The former East German students scored higher on place location, physical geography, geographic skills, regional geography, and geography of Germany (Niemz, 1995-1996, 49). The only section in which students from the former western *Länder* (states) scored higher was in human geography (Niemz, 1995-1996, 49).

The reunification of Germany brought change to the German educational system. States in the eastern section of Germany increased to two, and in some cases three, types of school systems. States in the west are planned to reduce the length of primary and secondary education to twelve years (Niemz, 1995-1996, 50). Those in favor of the reduction argue that German students are too old when they enter the university at nineteen, twenty, or twenty-one (Niemz, 1995-1996, 50). It is believed they are far too

old when they take up a profession after having been graduated from the university between the ages of twenty-five to thirty (Niemz, 1995-1996, 50). This late matriculation is viewed as an enormous disadvantage within the European Community. In other member countries the students in universities finish their education much earlier. Those opposed to the reduction to twelve years of schooling fear a considerable loss in quality of achievement.

In connection with the reduction of school years is the centralized final exam system. Each state will adopt an examination standard to assure quality in education, although there are strong objections in some states from teachers and politicians.

The geography curriculum and the teaching objectives are changing. The trend was to combine regional and topical geography. The main components of the curriculum refer to regions, countries, and continents, and within each component there will be themes of topical geography that are essential to understanding or characteristics for those areas (Niemz, 1995-1996, 50). Geography is not taught during the first two years of school. Third and fourth grade students will study the home area and basic geographic information about the home and school, city, traffic, food supply, and get their first glimpse of the world (continents, countries, oceans), climate, and map introduction (Niemz, 1995-1996, 51). Fifth graders will study Germany and its major regions. Sixth grade students will study Europe with an emphasis on the European Community, its main regions, population, economy, and problems facing Europe today. Seventh and eighth graders will study physical geography: landforms, soils, weather, natural hazards, and

environmental concerns. Ninth and tenth graders will study the United States, Russia, Japan, China, and some developing countries in Asia, Africa, Central America, and South America. The final two years of geographic education would be on the European Community with selected topics on environmental protection, economic cooperation, immigration problems, and world economy and world population (Niemz, 1995-1996, 51).

It should be noted that about 60% of the students in Germany leave school after the tenth grade at the age of sixteen. The objective for students will remain that of acquiring and applying geographic knowledge and attaining a certificate of secondary education (Niemz, 1995-1996, 50).

English Education of Geography

England sought to provide secondary education for all British children under the Education Act of 1944. The education system provided three types of schools: grammar (college preparation), secondary modern, and technical. Students were placed in grammar or secondary modern schools on the basis of their scores on the 11-plus examination taken in the final year of primary school (Brook and Brook 1980, 60). By the mid-1960s schools in many areas had changed to a comprehensive system. The passage of the Education Act of 1970 provided for the nationwide transfer of schools to a comprehensive system (Brook and Brook 1980, 60).

England, which did not have a history of national testing, shifted abruptly in the wake of the Education Reform Act of 1988. The program was designed to improve education and make schools more accountable for what students learned. One of the

provisions in the reform act was that all pupils between the ages of five and sixteen study three core areas (math, science, and English) and seven foundation subjects, one of those being geography (Freeland, 1992, 18). Each student would be tested at four stages: ages seven, eleven, fourteen, and sixteen. It is important to note that teachers in primary schools in England integrate history and geography, whereas secondary schools treat them as separate subjects (Freeland, 1992, 18). Each subject was broken into areas of knowledge and skills called attainment areas. There were ten levels, with each level becoming progressively more difficult, for each of the attainment areas.

For geography there were five attainment areas: Attainment One dealt with geographic skills. Students could reach level one by following directions and observing and talking about a familiar place and could reach level ten by reading and evaluating the effectiveness of a composite thematic map as a Geographical Information System (Freeland, 1992, 21). Attainment Two focused on knowledge and understanding of place. Level one could be reached by naming familiar features of the area, identifying activities carried out by people in a local area or state. Level ten could be reached by evaluating government policies, economic development, and analysis of international trade. Attainment Three was physical geography. To reach level one students needed to recognize rocks, soil, and water and understand that they are part of the environment. Level ten in this area could be reached by a student explaining how landforms could change areas and how desertification of semiarid lands may result from physical processes and human activities. Attainment Four focused on human geography. To reach level one

students would need to recognize that buildings are used for different purposes, to describe the ways in which people make journeys, and to recognize that adults do different kinds of work. Level ten could be attained by examining international strategies for improving quality of life in developing countries. The final target was Attainment Five, environmental geography. Level one was reached by identifying and naming materials obtained from natural resources and by expressing personal likes and dislikes about features of the local area. Level ten was reached by examining concepts of sustainable development and conservation. (Freeland, 1992, 21).

In 1995 England revised its national geography curriculum. This revision was known as the 1995 Geographic Order. The program of study contained mandatory and distinctive content requirements for each stage in terms of understanding. Geography inquiry skills are designed to be an integral part of geographic studies. Progression in topics and skills to be taught are now itemized in the program. Most significantly, the 1995 Geography Order is clearly a minimum framework requiring considerable professional contributions in order to turn it into courses, schemes of work, and assessment instruments appropriate for individual schools and students. In addition there is growing concern regarding geography's position in grades nine and ten, where schools have complete flexibility beyond a core of English, math, science, modern foreign language, and technology. Geography is now optional and must compete with a range of other subjects such as history, economics, and a variety of vocational courses. The need to stress geography's links with other subjects contributes to cross-curricular initiatives.

Geography's high profile in information technology is proving useful in this respect (Rawling, 1995-1996, 17).

American Education of Geography

Cornell University professor O.D. von Engel wrote: "Geography is notoriously the most poorly taught subject in our schools, both lower and upper. One reason for this low and backward state of the science is found in the position of its instructors - in their general lack of geographical training. But the prime difficulty does not lie with the teachers. Their position and attitude only reflect the general public apathy toward geography" (von Engel, 1919, 28).

These prophetic words presented by Professor von Engel in 1919, writing for the Journal of Geography, could have easily been spoken in the 1960s, 1970s, 1980s, and the 1990s. The last 40 years of the twentieth century have been a struggle for geography in our nations' educational system.

As noted in Chapter 1, geography began losing its prominence in the secondary school curriculum in the period immediately following the Korean War. Reasons given for geography's diminished role in the curriculum were:

1. The curriculum was becoming too crowded, and it was necessary to eliminate some subjects or consolidate them into the social studies.
2. There were too few qualified geography teachers.
3. Better geography textbooks were needed.

4. The elementary school was not preparing students to study geography as a secondary school subject.
5. Few school administrators understood the importance of or were knowledgeable about geography.
6. Geography was no longer a requirement of college admissions (Stoltman, 1989, 9-10).

Another study conducted in 1964 offered the following points on the status of geography in the secondary curriculum:

1. Physical geography has been neglected completely.
2. Human geography offerings are sparse.
3. In the social studies, geography is not given equal time with history or other social studies.
4. Geography is rarely found in the high school, and is increasingly left out of the junior high school curriculum.
5. Geography teachers usually have an academic background in history.
6. The chronological approach is favored over the spatial approach to social studies.
7. Administrators and teachers lack an understanding of what geography is and what it should be encompass.
8. There is not enough time in the curriculum for both history and geography on an equal basis (Stoltman, 1989, 9-10).

In January 1963, Cramer and Gritzner stated:

...it is the failure of school administrators, teachers, and the general public to understand the vital role that geography plays in the over-all educational program. They appear unaware of the need for geography in everyday living and continuously blind to the emphasis placed upon geographic education in a majority of countries outside the United States (Cramer and Gritzner, 1963, 3).

The authors continued by quoting columnist George Sokolsky who noted that when he talked to young people, he discovered they had a total lack of knowledge of geography (Cramer and Gritzner, 1963, 3). Cramer and Gritzner went on to say that when a layman can see this problem, then maybe the tide was turning. Unfortunately, the authors said, the sale of the geography program had been slowed by lack of faith in geographic education, or more often, leaders in the field of geography were so engrossed in strictly academic research that they failed to support basic geographic education programs (Cramer and Gritzner, 1963, 3). The public also must be made aware of what they missed by not subscribing to geography. In order to achieve this, geographers need to undertake a thoughtful, carefully-executed sales promotion program (Cramer and Gritzner, 1963, 3).

Frick wrote that educators and geographers, as well as many laymen, were generally in agreement that an increased emphasis on geography was essential in a world where interdependence of nations demanded a knowledge of national and international problems (Frick, 1965, 317). According to Frick there could be little grasp of the

significance of present problems or future needs without a prior knowledge of the land and its people (Frick, 1965, 317).

As a discipline that dealt with both land and cultures and that bridged the gap between the natural sciences and the social sciences, geography received renewed attention during the widespread reappraisal of America's educational system, its goals, and its methods (Frick, 1965, 317). This was especially true with regard to geography in the high school. In March 1961 a survey showed approximately two-thirds of the high schools in America offered at least one course in geography. Raw statistics, however, could be misleading. The availability of geography did not guarantee its inclusion in each student's curriculum. Further investigation indicated that more often than not geography was offered as an elective, rather than the requirement (Frick, 1965, 317).

Largely as a result of the continued efforts of many geographers dedicated to the interests of their discipline at the precollegiate level, advanced academic training for geography teachers was authorized under Title IX of the National Defense Education Act of 1964 (Anderson, 1966, 103). Equally as important, the High School Geography Project (HSGP) received a grant from the National Science Foundation to expand its program in curriculum revision and development (Anderson, 1966, 103).

The fact remained that secondary school geography had seldom sparked much interest and intellectual insight among students and teachers in past years. The HSGP began with the recognition that if geographic ideas were to be taught more widely it would be necessary to draw upon teachers who had little or no formal preparation for the

task. The inexperienced teacher could supposedly gain confidence from student materials and teacher's guides to move ahead with classroom activities that helped inspire student thinking (Glowacki, 1973, 131).

The HSGP, however, failed to provide the necessary results needed to help stop the downward spiral of geographic knowledge. Given the potentials for the enhancement of geographic knowledge and global understanding, most Americans, had but a "Stone Age" awareness of the world in which they live.

To individuals lacking a "mental global map," the world must have been little more than a confusing hodgepodge: places without location or quality: people and cultures void of detail, character, or meaning. It stood as a rather sad and inexplicable indictment of the American educational system and public priority that among the world's "educated" industrial nations, we ranked among the least literate in a geographical sense. (Gritzner, 1981, 264).

Geographers were reminded constantly of the relatively low level of public interest in and awareness of geographic matters. Several of those examples that cast a shadow over the discipline and geographic education came to the attention of Charles F. Gritzner.

Gritzner writes:

1. Several well-established academic programs in geography have been terminated, and an alarming number of other departments have been, or continue to be, closely scrutinized by budget conscious legislatures, governing boards, and campus administrations.

2. A recent report disclosed that Americans' knowledge of other countries is "scandalous and it's becoming worse."
3. A survey of Chinese high school students and a sample group in the United States, conducted in the late 1970s, disclosed that American students did considerably better in most subjects than did their Oriental counterparts, but received lower scores in geography than did the Chinese students.
4. A recently conducted Educational Testing Service survey of global awareness received widespread publicity. The article noted that the vast majority of today's college and university students do not know enough about international affairs to live and work effectively in a world where countries are increasingly interdependent...(Gritzner, 1981, 264).

In 1981, the percentage of junior high and middle school students taking geography had dropped to a fifty year low (Manson, 1981, 244). The decline was largely attributed to the rise of interdisciplinary social studies courses, which enrolled virtually all seventh grade students and many eighth grade students. Of course, some social studies courses contained geographic content, and some courses laden with geographic content undoubtedly were recorded as social studies courses. Nonetheless, the position of geography in the junior high and middle school clearly diminished (Manson, 1981, 244).

According to the Guidelines for Geographic Education of the Association of American Geographers, geographic education alone can neither completely remedy the deficiencies of geographic ignorance nor can it resolve important international issues.

Training in geography, however, can provide a unique perspective about places and their relationships to each other over time, a perspective which is an essential ingredient in the total process of educating informed citizens. Americans' ignorance of their own country and of the world can have dire consequences for their nation's welfare, strength, and global interdependence and for the effects they had on people in other nations (Association of American Geographers, 1984, Preface). Geographic education is, therefore, vital in correcting geographic ignorance and in giving future generations the knowledge and understanding they need to manage the earth's resources wisely (Association of American Geographers, 1984, Preface).

Problems for geographic education continued even after the publication of Guidelines for Geographic Education. Geography taught as a separate course was the exception rather than the rule and seldom was it required. Instead geography continued to be lumped into the social studies curriculum where it was squeezed out by the demands of other studies. It was usually dependent on a teacher's training and interest.

Unfortunately for geographic education, most social studies teachers majored in history. They often had little geography in college or in their teacher training and many found themselves unprepared to teach geography. At ETSU, almost forty percent of the students enrolled in introductory cultural geography classes are education majors (Marchioni, 1997). Most high school geography teachers had the same title: "Coach" (Marchioni, 1996).

When the nation's governors gathered in South Carolina in the summer of 1985 for their annual conference, education was high on their agenda. So when Gilbert Grosvenor, president of the National Geographic Society, arose to address the group on an aspect of education that holds special meaning for him, there was keen interest in what he had to say. What Grosvenor described was one reform effort that has begun to take on a life of its own: a push to restore geography to a central place in the curriculum of America's schools (Pabst, 1986, 22).

The National Geographic Society recognized the need for teacher education. The Geographic Alliance Network, the cornerstone of the NGS Geography Education Program, brought together geography professors and teachers to set their ideas and plans in motion. The Society, working through a network of state alliances, would work with teachers of outstanding leadership ability who would carry the message back to their colleagues, school districts, and home states. The National Geographic Society would provide financial support, educational materials, and teacher training (Grosvenor, 1995, 411).

For four weeks in July 1985, teachers from across the country met at the Society's headquarters in Washington, D.C., for daily lectures on world geography. This was to become a full-fledged national campaign by the National Geographic Society to improve geography education from kindergarten through high school (Pabst, 1986, 22).

In August of 1986, the National Governor's Association voted to help support the National Geographic Society and its challenge to put geography back in the classroom. At

the 1989 Education Summit in Charlottesville, Virginia, President George Bush determined geography should be one of five subjects (English, history, mathematics, geography, and science) taught in kindergarten through 12th grade. In 1990, those subjects were officially adopted as part of our National Education Goals (Grosvenor, 1995, 413).

April 1990 brought new change and a new reform to America's educational system. Secretary of Education, and former governor of Tennessee, Lamar Alexander, announced a complex federal education strategy that would take America into the next century. The National Education Goals - 1990, or "America 2000," was devised on the premise that the national government has a major responsibility to improve the quality of elementary and secondary education (Clinchy, 1991, 210).

Since the original five subjects were chosen for the "America 2000" education reform plan, a new administration has come to Washington, D.C. The new reform effort by the Clinton administration was called Goals 2000 and the number of core subjects grew to seven. One of the ways that geography had begun to capitalize on its opportunity was the on-going effort to develop standards for K-12 geography. Developing a consensus among individuals with so many different perspectives was not easy. Nevertheless, a Standards Project produced a rough draft in 1993. The Standards were voluntary and were left up to each state for implementation (Bednarz and Peterson 1994, 63).

In 1993, the Education Improvement Act upgraded Tennessee's educational system. It developed guidelines for students beginning the ninth grade in the Fall of 1995.

A core of classes was developed, with students required to take at least three credits in social studies. These included U.S. History, World History/Geography, Economics, Government, and Diverse Cultures. Before students graduate, they must pass these core classes, as well as a proficiency test (Tennessee State Board of Education, 1993, Ed.). The proficiency tests are given to students in the ninth and twelfth grades. Beginning in 1995, any student entering the University of Tennessee's system was required to have geography as a pre-admission requirement (Tennessee State Board of Education, 1993, Ed.).

For geographic ignorance to be erased certain goals must be met. Geography must be taught as an independent subject in every American school and at all levels -- kindergarten to high school. Teachers must be well-prepared and supported in their efforts to teach geography. There must be continued support for teacher training into the next century. Finally, geographic alliances must be welcomed, supported, and used as these goals become ever more significant over the next 30 to 40 years (Grosvenor, 1995, 418).

O.D. von Engeln wrote in 1919:

...The whole world is agog with problems of reconstruction, and these can be safely solved only on a geographic basis. The future for our country in international trade and relations looms large; to understand the possibilities before us wide geographic knowledge is essential.

What geography needs is that its studies be directed, that it be taught with vision, and that interest in it be stimulated throughout the length and breadth of the land. If the last can be accomplished, if the business man, the professional man, and the mechanic can all be made to feel that broad and sure geographic training is vital to a sound education, the first two needs will be filled as a consequence. The teacher who feels that pupils need geography will develop that interest and comprehension which is required for purposeful instruction. Under the stimulus of a widened and quickened public interest the textbook puzzles will be solved, the essential concepts and the kind of drill will become more and more apparent.

Hence my plea of a campaign for geography...(von Engel, 1919, 225).

Although he would probably tell you he was a geographer, not a visionary, his words still ring true today.

CHAPTER 3

DATA ACQUISITION AND ANALYSIS

This research project was designed to measure the geographic awareness of students taking a geography class for the first time at a post-secondary institution. The study also provided a comparative assessment of geographic awareness between students in a public and in a private institution.

The data for this study were collected by surveying students at Milligan College, a private, four-year, Christian, liberal-arts institution, and students at East Tennessee State University, a public, four-year, comprehensive, state-supported institution. The initial survey was conducted in the spring of 1993 at both ETSU and Milligan College. Follow-up study was conducted in the Fall 1996 semester at ETSU and in the Spring 1997 semester at Milligan College.

The writer designed a twenty-six item questionnaire comprised of both world and U.S. geography questions (Appendix A). The questions tested basic geographic knowledge. The sample was students enrolled in a geography class for the first time in a post-secondary institution. Each questionnaire was completed on a voluntary basis. The students involved in the survey received no incentive to participate in the study. Students were given one questionnaire each by the writer and were told to complete the work on their own and to the best of their abilities. The questionnaire results were compiled into the tables that follow.

From the data provided by the students, the writer was able to determine the location of the high schools which they attended as well as their grade classification at their current institution. These data were then studied to see if any students came from a state where geography was a requirement for graduation. Sadly, none did, but as previously stated in the literature review, Tennessee made world history/geography a part of its graduation requirement beginning in the Fall of 1996.

Additionally, the writer was able to determine that Milligan College had a greater non-Tennessee enrollment among the tested classes than ETSU. The greatest number of students enrolled in geography at Milligan College in both surveys were from Indiana. Tennessee was second in enrollment followed closely by students from Ohio (Appendix B, Table 27). The overwhelming majority of students enrolled in geography at ETSU were graduates of a Tennessee school system. The state of Virginia was a distant second in student participation in both testing periods at ETSU (Appendix B, Table 28).

Also determined by the collected data was a student's current enrollment classification. The first testing at Milligan College was composed of ten freshmen, nine sophomores, nine juniors, and three seniors. Two students did not list their grade classification. The 1997 survey of Milligan College students consisted of nine freshmen, nine sophomores, seven juniors, and three seniors, with three classifications unknown.

The first testing of ETSU students found 21 freshmen, 18 sophomores, 13 juniors, and 11 seniors participating in the survey. Six students failed to list their classification in

the 1993 survey. The 1996 survey of ETSU students found 39 freshmen, 39 sophomores, 26 juniors, and 7 seniors participating, with six classifications unknown.

The following tables, which correspond to each of the survey questions, are designed so the reader can compare data collected at Milligan College and ETSU in 1993 to data collected in the same institutions in 1996 and 1997. Both the number of respondents, represented by No., and the percentage of responses, represented by %, for each institution and each year are listed in the following tables. The tables allow the reader to cross reference data collected at both schools. A second table, located in Appendix C, corresponds to each survey question and shows the total of Milligan College and ETSU students' 1993 answers compared to those given in 1996-1997. Again, the table shows both the number of respondents and the percentage of responses. The correct answer for each question, in both tables that follow and in Appendix C, is shaded to assist the reader. The tables in which the "Answers Given" column is numeric shows the number of correct responses in questions which have multiple answers. For example, "0" means no answers correct, "1" means one answer correct, "2" means two answers correct, etc.

As Table 1 shows, almost eighty percent of 1997 Milligan College students were able to name all four geographic boundaries of the contiguous United States – an increase from sixty-nine percent in 1993. Fifty-five percent and fifty-six percent of ETSU students were able to name the boundaries in 1993 and 1996, respectively.

Several different and some very unusual answers were given to the question asking the student to name the four geographic boundaries of the contiguous United States. The most known boundaries were the North (Canada), the East (Atlantic Ocean), and the West (Pacific Ocean). The southern boundary was split on the survey between Mexico and the Gulf of Mexico. Incorrect answers given for the southern boundary included: the Pacific Ocean, New Mexico, and Kentucky. Unique answers for the northern boundaries included: Virginia, Maine, land, Maryland, and the Prime Meridian. Incorrect answers given for east and west boundaries included Europe, Russia, Cuba, and the divisions of latitude and longitude.

Correct cumulative responses, of both ETSU and Milligan College students, were about the same: sixty percent for 1993 and sixty-one percent for 1996 -1997 (Appendix C, Table 29).

TABLE 1
GEOGRAPHIC BOUNDARIES OF THE U.S.

Answers Correct	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
	No.	%	No.	%	No.	%	No.	%
0	25	36%	35	30%	6	14%	4	12%
1	0	0%	11	9%	1	2%	0	0%
2	4	6%	1	1%	3	7%	3	9%
3	2	3%	5	4%	3	7%	0	0%
4	38	55%	65	56%	29	69%	26	79%

When asked to name the largest state in area in the entire United States, the correct answer from students at both ETSU and Milligan College declined in 1996 - 1997 (Table 2). The response from 1996 ETSU students dropped sixteen percent from the

response in 1993. Milligan College 1997 responses dropped twelve percent from fifty-two percent, in 1993, to thirty-nine percent. The majority of 1996 - 1997 students at both ETSU and Milligan College selected Texas as the largest U.S. state. The majority of the 1993 students correctly identified Alaska as the largest state. One 1993 ETSU student felt Mississippi was the largest U.S. state and a few students from both institutions chose California as the largest state.

Cumulative totals show that fifty-four percent of the students at ETSU and Milligan College were able to give the correct answer in 1993 as opposed to only 35% in 1996-1997 (Appendix C, Table 30).

TABLE 2

LARGEST STATE IN AREA IN THE UNITED STATES

Answers Given	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
	No.	%	No.	%	No.	%	No.	%
No Answer	0	0%	5	4%	2	5%	0	0%
Alaska	38	55%	40	34%	22	52%	13	39%
Texas	27	39%	68	58%	17	40%	19	58%
California	3	4%	4	3%	1	2%	1	3%
Mississippi	1	1%	0	0%	0	0%	0	0%

Only five questions on the entire survey showed an overall increase in correct answers from 1993 to 1996-1997. Naming the longest river in the world was the first of these five. Milligan College students correct responses increased fifteen percent, from fifty-five percent in 1993, to seventy percent in 1997. ETSU students stayed about the same for the three year period (Table 3). Cumulative totals for 1993 and 1996-1997

remained close, however, at fifty-nine percent and sixty-two percent, respectively, for 1993 and 1996-1997 (Appendix C, Table 31).

Some world rivers chosen incorrectly were: the Congo River, Rhine River, the Thames River, the Amazon River. Rivers selected from the United States were the Rio Grande River and the Colorado River. One 1996 ETSU student chose the country of the Ukraine as the longest river.

TABLE 3
LONGEST RIVER IN THE WORLD

Answers Given	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
	No.	%	No.	%	No.	%	No.	%
No Answer	3	4%	11	9%	5	12%	1	3%
Mississippi	5	7%	7	6%	4	10%	4	12%
Amazon	16	23%	19	16%	8	19%	4	12%
Nile	42	61%	70	60%	23	55%	23	70%
Euphrates	2	3%	5	4%	0	0%	0	0%
Colorado	0	0%	2	2%	0	0%	0	0%
Others	1	1%	3	3%	2	4%	1	3%

Question four on the survey contained some of the more amusing responses given.

About thirty percent of the students at both institutions knew the correct answer for the highest mountain in the U.S., Mt. McKinley (Table 4). The answer of Mt. LeConte, in the Great Smoky Mountains, was given by one student. Also among the U.S. mountains chosen were Mt. Washington, Mt. Rainier, and the Green Mountains. The Appalachian Mountains and the Rocky Mountains were selected as the highest single mountain in the United States. Mt. Kilimanjaro, highest point in Africa, was given by one respondent.

The most entertaining answer came from a 1996 ETSU student who listed Mt. Vernon, George Washington's home, as the highest U.S. peak.

The results show a slight cumulative drop from thirty-four percent, in 1993, to twenty-nine percent in 1997.

TABLE 4
HIGHEST MOUNTAIN IN THE UNITED STATES

Answers Given	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
	No.	%	No.	%	No.	%	No.	%
Appalachian	0	0%	2	2%	1	2%	0	0%
McKinley	27	39%	33	28%	11	26%	10	30%
No Answer	17	25%	39	33%	14	33%	7	21%
Rockies	1	1%	10	9%	7	17%	5	15%
Everest	16	23%	16	14%	4	10%	2	6%
Mt. St. Helens	3	4%	3	3%	3	7%	3	9%
Pikes Peak	0	0%	2	2%	1	2%	2	6%
Rushmore	1	1%	2	2%	0	0%	1	3%
Mitchell	1	1%	4	3%	0	0%	0	0%
Himalayas	0	0%	3	3%	0	0%	0	0%
Other	3	3%	3	3%	1	2%	3	9%

Table 5 shows, in 1996, students at ETSU showed a sharp decline in listing the correct answer to the question of the lowest dry land point in the United States. This was in contrast to the 1997 Milligan College students who exhibited a twelve percent increase in listing the correct answer.

Several students chose areas in the southwestern United States and southern California as the lowest land point. Answers included the Mojave Desert, New Mexico, the Baja , and Southern California. Other students gave cities or areas of the south as the lowest land point. They included New Orleans, Florida and San Juan, Puerto Rico.

The most unusual answer, given as the lowest land point in the United States by seven 1996 ETSU students, was the Sahara Desert in Africa.

TABLE 5
LOWEST DRY LAND POINT IN THE UNITED STATES

Answers Given	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
	No.	%	No.	%	No.	%	No.	%
No Answer	19	28%	52	44%	17	40%	9	27%
Death Valley	32	46%	40	34%	15	36%	16	48%
Nevada	0	0%	0	0%	1	2%	2	6%
Arizona	3	4%	4	3%	3	7%	1	3%
Grand Canyon	2	3%	5	4%	5	12%	4	12%
Sahara	2	3%	7	6%	0	0%	0	0%
Great Salt Lake	2	3%	3	3%	0	0%	1	3%
Other	9	11%	6	6%	1	2%	0	0%

When asked to name the highest mountain in the world, Milligan College students had an overall increase of thirty percent from 1993 to 1997 (Table 6). This was one of the largest increases to any question asked during the survey. ETSU students' correct responses declined by seven percent from 1993 to 1996. Some students chose mountain ranges while others chose countries. The Himalayas and Alps were selected by some students. Several students responded to the question by naming Mt. Fuji as the highest mountain the world. Others chose Mt. Rushmore, Mt. Mitchell in North Carolina, Mt. St. Helens, and Mt. Ararat in Turkey. Other students said the highest mountain in the world was Peru, China, or Zaire. Also chosen as the highest mountain on earth were Tibet and the Sinai Desert. This survey question resulted in a slight overall increase in correct responses from 1993 to 1996-1997 (Appendix C, Table 34), the second question to do so.

TABLE 6
HIGHEST MOUNTAIN IN THE WORLD

Answers Given	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
	No.	%	No.	%	No.	%	No.	%
No Answer	17	25%	37	32%	12	29%	3	9%
Everest	31	45%	45	38%	17	40%	23	70%
Himalayas	4	6%	7	6%	4	10%	0	0%
Kilimanjaro	3	4%	7	6%	7	17%	1	3%
Fuji	2	3%	8	7%	1	2%	3	9%
McKinley	1	1%	3	3%	0	0%	0	0%
Andes	3	4%	0	0%	0	0%	1	3%
K 2	3	4%	1	1%	0	0%	1	3%
Other	5	5%	9	9%	1	2%	1	3%

When asked to name the time zones in the contiguous (lower 48) states, only twenty-two percent of 1996 students at ETSU answered correctly (Table 7). Most students at both institutions correctly identified three of the four time zones. The most identified were the Eastern, Central, and Mountain time zone. Several students missed the Pacific time zone, calling it the Western time zone. Milligan College students had a significant increase in overall scores, averaging a fifteen percent improvement from 1993 to 1997. ETSU had a huge decline in overall scoring, dropping twenty-six percent. Overall ability to answer this question declined sixteen percent from the 1993 testing to the 1996-1997 testing (Appendix C, Table 35).

TABLE 7
TIME ZONES IN THE CONTIGUOUS (LOWER 48) STATES

Answers Correct	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
	No.	%	No.	%	No.	%	No.	%
0	11	16%	25	21%	3	7%	0	0%
1	1	1%	7	6%	1	2%	3	9%
2	12	17%	19	16%	4	10%	5	15%
3	12	17%	40	34%	17	40%	7	21%
4	33	48%	26	22%	17	40%	18	55%

Students were asked to name the four oceans of the world. The correct answers to this survey questions were Atlantic Ocean, Pacific Ocean, Indian Ocean and Arctic Ocean.

Milligan College students increased their correct response percentage by twenty-one percent (Table 8). Although ETSU students' correct answer percentage dropped, the overall percentage from both institutions from 1993 to 1996-97 increased (Appendix C, Table 36). The majority of students knew at least three of the world's oceans. The answer most missed was the Arctic Ocean with many incorrectly listing Antarctica as an ocean.

TABLE 8
FOUR OCEANS OF THE WORLD

Answers Correct	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
	No.	%	No.	%	No.	%	No.	%
0	0	0%	0	0%	0	0%	0	0%
1	1	1%	0	0%	0	0%	0	0%
2	7	10%	23	20%	2	5%	4	12%
3	21	30%	33	28%	21	50%	4	12%
4	40	58%	61	52%	19	45%	25	76%

Both schools scored well on the question asking about the most populated country in the world (Table 9). ETSU answered correctly in nearly three out of every five responses. Milligan College answered correctly about three out of four times.

Several different answers were given by the students. Nigeria, Brazil, Mexico, and the United States were listed by some students. Some students also named continents instead of countries. The continents named were Africa, Asia, Europe, and Australia.

TABLE 9
MOST POPULOUS COUNTRY IN THE WORLD

Answers Given	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
	No.	%	No.	%	No.	%	No.	%
No Answer	5	7%	22	19%	6	14%	1	3%
China	46	67%	66	56%	28	67%	25	76%
India	9	13%	4	3%	1	2%	3	9%
Africa	2	3%	5	4%	2	5%	0	0%
Japan	4	6%	11	9%	2	5%	3	9%
Asia	2	3%	1	1%	0	0%	0	0%
Russia	0	0%	5	4%	0	0%	0	0%
Other	1	1%	3	3%	3	6%	1	3%

A decline was noticed at both ETSU and Milligan College in response to the question of the most populous state in the entire United States (Table 10). Even with the decline, both ETSU and Milligan College responded correctly over fifty percent of the time in both 1993 and 1996-1997 (Appendix C, Table 38).

Among the answers given by the students were Florida, New Hampshire, and Washington. Two of America's smaller states, Rhode Island and New Jersey, were also chosen by students. These states could have been selected by the students who didn't

know the difference between populous and population density. New Jersey is the most densely populated state in America and Rhode Island is the second most densely populated.

TABLE 10

MOST POPULOUS STATE IN THE UNITED STATES

Answers Given	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
	No.	%	No.	%	No.	%	No.	%
California	44	64%	60	51%	26	62%	20	61%
New York	18	26%	31	26%	11	26%	7	21%
Texas	1	1%	3	3%	2	5%	0	0%
No Answer	6	9%	21	18%	2	5%	3	9%
Other	0	0%	2	2%	1	2%	3	9%

Listing the seven continents required the most student input. Seven answers were needed to correctly identify the continents. The correct answers were North America, South America, Asia, Africa, Australia, Antarctica, and Europe. Nearly fifty percent of the students correctly gave all seven answers (Table 11). The table also shows Milligan College had a substantial increase, fifteen percent, between 1993 and 1997 in the ability to name all seven continents. ETSU during the same period suffered a fourteen percent decrease. There was a slight decrease in the ability to answer this question from 1993 to 1996-1997 (Appendix C, Table 39).

Some of the incorrect answers given included Russia, Greenland, and Oceania.

TABLE 11
SEVEN CONTINENTS

Answers Given	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
	No.	%	No.	%	No.	%	No.	%
0	1	1%	5	4%	1	2%	0	0%
1	0	0%	1	1%	0	0%	0	0%
2	2	3%	3	3%	2	5%	0	0%
3	2	3%	5	4%	1	2%	1	3%
4	4	6%	9	8%	5	12%	1	3%
5	9	13%	19	16%	4	10%	2	6%
6	10	14%	22	19%	11	26%	10	30%
7	41	59%	53	45%	18	43%	19	58%

The most missed question of the entire survey in 1996-1997 was the one asking students to name the five Great Lakes (Table 12). ETSU students suffered an eighteen percent drop in naming all five Great Lakes. Milligan College did somewhat better with thirty-three percent correctly naming all five lakes. Only twenty-four percent of the students surveyed correctly identified all five Great Lakes (Appendix C, Table 40). The correct answers are Lakes: Superior, Michigan, Huron, Erie, and Ontario. Among the incorrect answers given were Lake Wisconsin, Lake Champlain, and the Great Salt Lake.

TABLE 12
FIVE GREAT LAKES

Answers Given	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
	No.	%	No.	%	No.	%	No.	%
0	7	10%	14	12%	3	7%	0	0%
1	2	3%	17	15%	6	14%	1	3%
2	9	13%	16	14%	4	10%	3	9%
3	12	17%	31	26%	6	14%	9	27%
4	12	17%	14	12%	10	24%	9	27%
5	27	39%	25	21%	13	31%	11	33%

The most correctly answered question on the survey in both 1993 and 1996-1997 was in response to the capital of Tennessee (Table 13). Each student was asked to identify the capital of Tennessee and to locate it on a map of the United States. Seventy-three percent of the students correctly chose Nashville as the capital of Tennessee (Appendix C, Table 41). This is a decline in the overall from 1993, however. The percentage of correct answers for both ETSU and Milligan College declined in 1996-1997. ETSU dropped from eight-three to seventy-six percent and Milligan College dropped from sixty-nine to sixty-four percent.

Among other cities selected as the capital of Tennessee were Memphis, Chattanooga, and Knoxville. Many students had no answer for this question, which could open the door for further research.

TABLE 13
CAPITAL OF TENNESSEE

Answers Given	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
	No.	%	No.	%	No.	%	No.	%
No Answer	11	16%	21	18%	7	17%	7	21%
Nashville	57	83%	89	76%	29	69%	21	64%
Memphis	1	1%	6	5%	2	5%	0	0%
Chattanooga	0	0%	0	0%	2	5%	0	0%
Knoxville	0	0%	1	1%	2	5%	5	15%

When asked the capital of Kentucky, the majority of students did not answer or did not know the answer. Only seventeen percent of 1996 ETSU, a decline from thirty percent, could correctly identify Frankfort as the capital of Kentucky (Table 14). Eighteen

percent of the 1996 ETSU students chose Lexington as the capital. Other cities listed included Louisville, Richmond, Paducah, and Lewisburg.

TABLE 14
CAPITAL OF KENTUCKY

Answers Given	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
	No.	%	No.	%	No.	%	No.	%
No Answer	26	38%	64	55%	14	33%	11	33%
Frankfort	21	30%	20	17%	21	50%	18	55%
Louisville	9	13%	8	7%	2	5%	2	6%
Lexington	12	17%	21	18%	5	12%	1	3%
Richmond	1	1%	2	2%	0	0%	0	0%
Other	0	0%	2	2%	2	2%	0	0%

The majority of students from both schools gave an incorrect answer to or had no response in naming the capital of Virginia. The 1996 ETSU students scored higher, forty-four percent, than either the 1993 or 1997 Milligan College students, forty-three and forty-two percent respectively (Table 15). This is a decline from the 1993 survey where fifty-two percent of ETSU students knew the correct answer. Among the incorrect answers given by students from both schools were Williamsburg, Madison, Jefferson, and Charlottesville.

TABLE 15
CAPITAL OF VIRGINIA

Answers Given	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
	No.	%	No.	%	No.	%	No.	%
No Answer	29	42%	53	45%	19	45%	17	52%
Richmond	36	52%	52	44%	18	43%	14	42%
Roanoke	3	4%	6	5%	3	7%	0	0%
Norfolk	0	0%	2	2%	1	2%	0	0%
Raleigh	0	0%	2	2%	1	2%	1	3%
Other	1	1%	2	2%	0	0%	1	3%

Both ETSU and Milligan College had almost the same percentage of correct answers in identifying Raleigh as the capital of North Carolina (Table 16). ETSU scored higher on this question in 1996, forty-four percent, than Milligan College did, forty-two percent. There was a slight decline, however, from the ETSU response in 1993, forty-nine percent to forty-four percent. Although the leading response was no answer, forty-four percent of the total responses in 1996-1997 chose Raleigh as the correct answer (Appendix C, Table 43). Other choices were wide ranging. Among the cities identified as the capital of North Carolina were: Asheville, Winston-Salem, and Charlotte. Other towns chosen were the lesser-known Atlanta, North Carolina; Little Rock, North Carolina; and Columbia and Charleston, North Carolina.

TABLE 16
CAPITAL OF NORTH CAROLINA

Answers Given	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
	No.	%	No.	%	No.	%	No.	%
No Answer	31	45%	55	47%	14	33%	12	36%
Raleigh	34	49%	52	44%	18	43%	14	42%
Charleston	2	3%	0	0%	1	2%	0	0%
Charlotte	0	0%	6	5%	8	19%	5	15%
Asheville	1	1%	1	1%	0	0%	0	0%
Columbia	0	0%	1	1%	0	0%	1	3%
Other	1	1%	2	2%	0	0%	1	3%

An overall increase between 1993 and 1996-1997 at both institutions was shown in correctly naming and locating our nation's capital (Table 17). ETSU had a four percent increase and Milligan College had a five percent increase. Among the incorrect locations for Washington, D.C. were Ohio, Pennsylvania, Kentucky, and Rhode Island. Some 1993 ETSU students located our nation's capital in New York state. The most misplaced location for Washington, D.C. was given by a 1993 ETSU student who located it in the state of Montana.

TABLE 17
CAPITAL OF THE UNITED STATES

Answers Given	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
	No.	%	No.	%	No.	%	No.	%
No Answer	17	25%	45	38%	11	26%	7	21%
DC Correct	36	52%	65	56%	31	74%	26	79%
DC in RI	1	1%	2	2%	0	0%	0	0%
DC in NJ	1	1%	4	3%	0	0%	0	0%
DC in NY	4	6%	0	0%	0	0%	0	0%
DC in VA	3	4%	0	0%	0	0%	0	0%
Other	7	9%	1	1%	0	0%	0	0%

A slight increase can be seen in the percentage of correct responses from Milligan College students from 1993 to 1997 in naming the largest city in population in the United States (Table 18). This is in sharp contrast to the 1996 ETSU responses which showed a sharp decline of twenty four percent in students giving the correct answer of New York City. Other cities given in response to the question was Los Angeles, San Francisco, and Washington, D.C. It should be noted the states of California and Texas tied with three votes each for most populated city from 1996 ETSU students.

TABLE 18
LARGEST CITY IN POPULATION IN THE U.S.

Answers Given	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
	No.	%	No.	%	No.	%	No.	%
No Answer	16	23%	56	48%	9	21%	13	39%
New York City	45	65%	48	41%	23	55%	19	58%
Los Angeles	6	9%	5	4%	9	21%	0	0%
San Francisco	1	1%	1	1%	1	2%	0	0%
California	0	0%	3	3%	0	0%	1	3%
Texas	0	0%	3	3%	0	0%	0	0%
Other	1	1%	1	1%	0	0%	0	0%

When asked to locate Utah on a map, Milligan College students showed a slight percentage increase in their overall answers (Table 19). Cumulative results indicated an eleven percent decrease from 1993 to 1996-1997 in the ability to answer this question (Appendix C, Table 47). ETSU students, in 1996, had a fourteen percent decrease on the same question. Among the answers given, most students chose states west of the Mississippi River. The mid-west states of Iowa, Kansas, and Nebraska were responses from ETSU students. Also selected were Indiana and California.

TABLE 19
STATE OF UTAH

Answers Given	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
	No.	%	No.	%	No.	%	No.	%
No Answer	16	23%	26	22%	7	17%	2	6%
Utah	42	61%	55	47%	29	69%	24	73%
Nevada	0	0%	3	3%	2	5%	2	6%
Wyoming	2	3%	10	9%	2	5%	1	3%
Idaho	1	1%	4	3%	1	2%	1	3%
Colorado	6	9%	3	3%	1	2%	0	0%
Oregon	0	0%	4	3%	0	0%	0	0%
Arizona	0	0%	2	2%	0	0%	2	6%
New Mexico	0	0%	2	2%	0	0%	1	3%
South Dakota	0	0%	3	3%	0	0%	0	0%
Other	2	2%	5	5%	0	0%	0	0%

Milligan College students, in 1997, once again increased in overall correct responses, sixty-nine percent to seventy-six percent, when asked to locate the country of India on a map (Table 20). ETSU students, in 1996, however, suffered a twenty-one percent decrease in correct responses. Among the answers given were: Pakistan, Vietnam, and Saudi Arabia. Students used the map to locate India in several different locations. Among the many different countries selected as India were: Brazil, Canada, and the continents of Australia and South America.

TABLE 20
COUNTRY OF INDIA

Answers Given	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
	No.	%	No.	%	No.	%	No.	%
No Answer	21	30%	45	38%	11	26%	6	18%
India	39	57%	42	36%	29	69%	25	76%
Saudi Arabia	1	1%	1	1%	1	2%	0	0%
Africa	2	3%	14	12%	0	0%	0	0%
China	3	4%	4	3%	0	0%	1	3%
Russia	1	1%	7	6%	0	0%	0	0%
Other	2	2%	4	4%	1	2%	1	3%

Students were asked to locate France on a map. In 1996, Milligan College students had a substantial increase in percentage of students correctly answering this question over their 1993 percentage (Table 21). ETSU students, in 1996, however, showed an eight percent decline. Cumulative results remained about even between 1993 and 1996 at fifty-four percent and fifty-one percent, respectively (Appendix C, Table 49).

Among the many countries chosen as an incorrect answer were China, Laos, Iran, and India. Some students selected Norway, Finland, and Italy also as the location of France. The two most misplaced locations were from ETSU students with the selection of Greenland and Canada. Three ETSU students also selected the continent of Africa and the location of France.

TABLE 21
COUNTRY OF FRANCE

Answers Given	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
	No.	%	No.	%	No.	%	No.	%
No Answer	17	25%	39	33%	8	19%	4	12%
Russia	3	4%	15	13%	3	7%	4	12%
France	36	52%	53	45%	24	57%	23	70%
Spain	2	3%	1	1%	1	2%	1	3%
Poland	0	0%	1	1%	3	7%	0	0%
Germany	2	3%	0	0%	1	2%	0	0%
Africa	1	1%	2	2%	0	0%	0	0%
Sweden	1	1%	2	2%	0	0%	0	0%
Other	7	7%	4	4%	2	4%	1	3%

When asked to locate Egypt on a map, the percentage of ETSU students and Milligan College students remained the same for the 1993 and 1996-1997 surveys (Table 22). Milligan College again scored much higher than ETSU students. The number of correct responses for ETSU students increased, but due to the increased number of participants the percentage stayed the same (Appendix C, Table 50).

Among the other countries selected for Egypt on the map were India, Pakistan, Israel, and Austria. Responses also misplaced were Canada and the continents of South American and Africa.

TABLE 22
COUNTRY OF EGYPT

Answers Given	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
	No.	%	No.	%	No.	%	No.	%
No answer	20	29%	48	41%	8	19%	4	12%
Egypt	24	35%	41	35%	27	64%	21	64%
Africa	14	20%	12	10%	4	10%	6	18%
Greece	2	3%	1	1%	2	5%	0	0%
Saudi Arabia	1	1%	4	3%	0	0%	2	6%
China	2	3%	3	3%	0	0%	0	0%
Russia	2	3%	3	3%	0	0%	0	0%
Other	4	5%	5	5%	1	2%	0	0%

Students were asked to locate Japan on a map. In locating Japan ETSU dropped nine percent from fifty-nine to fifty percent and Milligan College students answered much worse, dropping from seventy-one percent to fifty-eight percent. Although the overall percentage dropped from 1993 to 1996-1997, both ETSU students and Milligan College students correctly located Japan on a map over fifty-percent of the time in both surveying periods (Table 23).

Other locations chosen by the student were Taiwan, Indonesia, and New Guinea. Also selected as locations for Japan were the continents of Australia, Africa, and South America.

TABLE 23
COUNTRY OF JAPAN

Answers Given	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
	No.	%	No.	%	No.	%	No.	%
Japan	41	59%	59	50%	30	71%	19	58%
No Answer	19	28%	38	32%	7	17%	3	9%
Australia	0	0%	1	1%	1	2%	0	0%
China	3	4%	5	4%	2	5%	2	6%
Vietnam	0	0%	0	0%	1	2%	2	6%
Indonesia	2	3%	1	1%	0	0%	4	12%
Russia	3	4%	7	6%	0	0%	1	3%
Taiwan	0	0%	1	1%	0	0%	2	6%
Other	1	1%	5	5%	1	2%	0	0%

In locating the Mediterranean Sea on a map, Milligan College students scored well, nearly seventy-six percent correctly identifying the Mediterranean Sea (Table 24). Students at ETSU, however, had a decline of almost twenty percent over the three year period, from sixty-two percent to forty-four percent. Students chose to locate the Mediterranean Sea on the area of the Red Sea, the Baltic Sea, and the Persian Gulf. All four oceans of the world were also chosen by students as the location of the Mediterranean Sea.

TABLE 24

THE MEDITERRANEAN SEA

Answers Given	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
	No.	%	No.	%	No.	%	No.	%
No Answer	20	29%	38	32%	10	24%	5	15%
Mediterranean Sea	43	62%	52	44%	27	64%	25	76%
Indian Ocean	3	4%	16	14%	4	10%	2	6%
Atlantic Ocean	1	1%	3	3%	0	0%	0	0%
Pacific Ocean	0	0%	6	5%	0	0%	0	0%
Other	2	2%	2	2%	1	2%	1	3%

Over eighty percent of the 1997 Milligan College students correctly identified Oregon on a U.S. map. Fifty-six percent of ETSU students, in 1996, correctly identified Oregon. These responses represent a slight decrease, eight percent, for ETSU students over the three-year period and a moderate increase, eleven percent, for Milligan College students (Table 25). Some of the states located erroneously as Oregon were Minnesota, Iowa, New Mexico, and South Dakota.

TABLE 25

STATE OF OREGON

Answers Given	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
	NO.	%	No.	%	No.	%	No.	%
No Answer	12	17%	23	20%	8	19%	3	9%
Oregon	44	64%	65	56%	30	71%	27	82%
Colorado	0	0%	4	3%	3	7%	0	0%
Wyoming	4	6%	4	3%	1	2%	0	0%
Montana	1	1%	0	0%	0	0%	2	6%
Washington	5	7%	11	9%	0	0%	1	3%
Nebraska	1	1%	3	3%	0	0%	0	0%
Kansas	0	0%	4	3%	0	0%	0	0%
Other	2	2%	3	3%	0	0%	0	0%

The final question on the survey asked the students to identify the largest country in land area in the world. In 1997, Milligan College students had an increase of ten percent in their correct answers over those in 1993. ETSU students, in 1996, suffered a nineteen percent loss (Table 26). Although there was a decrease in overall percentage, more students selected the correct answer of Russia more than any other country (Appendix C, Table 54). Other answers that students chose as the largest country in land area was Greenland, Germany, England, and the Ukraine. Every continent was named with the exception of South America. One 1996 ETSU student selected Siberia, a part of Russia, as the largest country in land area in the world.

TABLE 26

LARGEST COUNTRY IN LAND AREA

Answers Given	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
	No.	%	No.	%	No.	%	No.	%
No Answer	0	0%	33	28%	5	12%	5	15%
Russia	36	52%	39	33%	19	45%	18	55%
United States	4	6%	8	7%	5	12%	4	12%
China	6	9%	7	6%	6	14%	2	6%
Canada	0	0%	3	3%	0	0%	1	3%
North America	10	14%	1	1%	1	2%	1	3%
Europe	2	3%	5	4%	1	2%	0	0%
Asia	4	6%	7	6%	1	2%	0	0%
Africa	3	4%	2	2%	1	2%	1	3%
Japan	1	1%	2	2%	0	0%	0	0%
France	1	1%	2	2%	0	0%	0	0%
Other	2	2%	8	8%	3	6%	0	0%

CHAPTER 4

SUMMARY AND CONCLUSIONS

The interest in geographic awareness has engaged man's thoughts since the early writings of Heredotus almost 2500 years ago (Fischer, Campbell, Miller, 1967, 8). Today Germany, England, and the United States are helping to lead a comeback of geographic knowledge and geographic awareness. The state of Tennessee was one of the early supporters of this geographic movement in the United States (Grosvenor, 1995, 412).

This survey was conducted by the writer to justify the need for improved geographic education in elementary and secondary school systems. Analyses of the data gathered were surprising and at times disheartening and even alarming. While it is not the purpose of this study to determine why scores increased or decreased, the study does show the various areas of fluctuation in survey responses between 1993 and 1996-1997 at Milligan College, a private post-secondary institution, and ETSU, a public post-secondary institution.

One surprise was the combined overall decline of correctly answered questions between 1993 and 1996-1997. Combining the 1993 scores from both ETSU and Milligan College and comparing them to the combined scores of ETSU 1996 and Milligan College 1997 shows a decline of seven percent from fifty-four percent, in 1993, to forty-seven percent, in 1996-1997 (Appendix D, Table 55).

More surprising is the result of comparing the scores on the surveys between ETSU and Milligan College for both survey periods. ETSU scores declined in the overall

correct answers given between 1993 and 1996. ETSU students, in 1993, listed the correct answer an average of fifty-four percent of the time (Appendix D, Table 56). This declined to forty-three percent in 1996. When the survey is split into United States geographic knowledge questions and world geographic knowledge questions, results from ETSU students showed an eleven percent decline in correct answers from 1993 to 1996 in United States geography knowledge (Appendix D, Table 57) and a decline of ten percent in world geographic knowledge during the same time period (Appendix D, Table 58).

Milligan College had an increase in correct answers given on the surveys between 1993 and 1997. Milligan College students, in 1993, identified fifty-four percent of the answers correctly and increased this to sixty-one percent in 1997 (Appendix D, Table 56). When the collected data are divided into United States geographic knowledge questions and world geographic knowledge questions another surprising result occurs. Milligan College students, in 1997, had a three percent increase (53% to 56%) on correct answers in United States geography (Appendix D, Table 57) but soared to a twelve percent increase (56% to 68%) on world geography questions (Appendix D, Table 58).

Several reasons could be given for these differences. Milligan College students may have taken the test more seriously than ETSU students. ETSU students might not care about geography. The sampled classes may not have been a good representation of all students taking geography at ETSU. The required SAT/ACT admission scores are higher for incoming freshmen at Milligan College than at ETSU; thus, Milligan College may attract a higher quality of student than ETSU. Because it is a private college,

Milligan College could be more discriminating in student selection. The newly-implemented requirement for all incoming freshmen at Milligan College of an Ethnic Studies class, requiring some geographic awareness, may have made a difference in their survey scores. Another reason for this difference might be that Milligan College, with a smaller sample size, could respond with a higher degree of accuracy than that of the larger sample size taken at ETSU. However, it is beyond the jurisdiction of this paper to determine the exact cause of the difference in scores between ETSU, a public institution, and Milligan College, a private institution, or even between the 1993 and 1996-1997 scores at the individual institutions. This paper only serves to show that a distinct difference in scores does exist between the two institutions. The survey served only a small sample of students at Milligan College and ETSU and may not have been indicative of the geographic knowledge of the total population of both schools. Unfortunately, all samples indicated a substantial amount of geographic ignorance existed at both schools.

Hypothesis Rejection

This research project has shown that geographic education in both world geography and United States geography declined at ETSU, from 1993 to 1996. Geographic awareness did, however, increase in both United States geography and world geography at Milligan College, from 1993 to 1997. Therefore the hypothesis that geographic awareness did increase in both world geography and United States geography in both private and public post-secondary institutions following the Education Improvement Act of 1993 is rejected.

Additional Research

Several areas of further research could be conducted between the two schools involved in this project. During this project, the writer observed an increase in geographic knowledge in Milligan College students as compared to that of students at ETSU. What factors caused this increase? Were changes made in admissions requirements or curriculum at either ETSU or Milligan College that led to the difference in survey findings? What caused the decline in geographic awareness in students at ETSU?

Further study could be conducted on future impact of the Educational Improvement Act of 1993. The requirements of the Educational Improvement Act of 1993 did not take effect until 1996. Only then, with the ninth grade, did world history/geography become mandatory. These students will not appear in classrooms at post-secondary schools until the year 2000.

Another area warranting study is the reported apathy of Generation X and its affect on education (Giles, 1995, 63). A larger sample could be taken at both schools to see if it compares to the findings of the initial study. This would help to validate the data already collected. Also a study could be conducted by surveying other public and private post-secondary schools to determine their geographic awareness as compared to ETSU and Milligan College.

Concluding Comment

As I conducted this survey and compiled the data, I became increasingly aware of how little geographic knowledge students actually have. As a teacher, and the son of an educator, it was a disturbing revelation. Before geographic knowledge will increase, two important factors have to occur. First, geography must unchain itself from the bondage of Social Studies. It is important to this country, and to the world, that people have an understanding of each other and the world around them. Secondly, teachers certified in geography need to teach geography. It is important to give quality education to students and enhance their desire to learn.

BIBLIOGRAPHY

Bibliography

- Anderson, R.C. "High School Geography: Retrospect and Prospect." Journal of Geography 65 (March 1966): pg 103 - 108.
- Association of American Geographers. Guidelines for Geographic Education: Elementary and Secondary Schools. Washington, D.C.: National Council for Geographic Education, 1983. Text - fiche
- Barth, James L. "Social Studies: There is a History, There is a Body, But Is It Worth Saving?" Social Education 57 (October 1993): pg 56 - 57.
- Barth, James L., and others. "Social Studies: A Field at Risk." Social Education 57 (October 1993): pg 315 - 317.
- Beazley, C. Raymond. The Dawn of Modern Geography. New York: Peter Smith Publishing, 1949.
- Bednarz, Robert S. and James Petersen. "The Reform Movement In Geographic Education." Journal of Geography 93 (January - February 1994): pg 61 - 64.
- Bein, Frederick, L. "Baseline Geography Competency Test: Administered in Indiana Universities." Journal of Geography 89 (November - December 1990): pg 260 - 265.
- Bettis, Norman C. "The Renaissance in Geography Education in the United States, 1974 - 1994." International Journal of Social Education 10 (Fall - Winter 1995 - 1996): pg 61 - 72.
- Birkenhauer, Josef, and Bill Marsden. German Didactics of Geography in the Seventies and Eighties. A Review of Trends and Endeavors. International Geographical Union; Edmonton: Commission on Geographic Education, 1992. Text - fiche.
- Brook, George A., and Diane L. Brook. "Trends in Geographic Education in British Secondary Schools." Journal of Geography 79 (February 1980): pg 60 - 70.
- Clinchy, Evans. Reform, Revolution, or Just More Smoke and Mirrors? Phi Delta Kappan 73 (November 1991): pg 210 - 218.
- Cramer, R. E., and C.F. Gritzner, Jr. "Let's Sell Geography." Journal of Geography 89 (September - October 1990): pg 212 - 213.

- Darby, H.C. "On the Relations of Geography and History." in Cultural Geography: Selected Readings. 30 - 42. New York: Thomas Crowell Company, 1967.
- de Souza, Anthony R. and Susan Munroe. "Implementation of Geography Standards: Potential Strategies and Initiatives." Journal of Geography 93 (January - February 1994): pg 46 - 49.
- Department of Education, Office of Educational Research and Improvement. NAEP 1994 Geography Report Card. Washington D.C.: 1996.
- Dickenson, R.E., and O.J.R. Howarth. The Making of Geography. Oxford: Clarendon Press, 1933.
- Doyle, Danis P. "America 2000." Phi Delta Kappan 73 (November 1991): pg 184 - 191.
- Dumas, Wayne, and William B. Lee. "Geography in West German Schools." Journal of Geography 76 (March 1977): pg 84 - 85.
- Fairbanks, Harold W. Real Geography and Its Place In The Schools. San Francisco: Harr Wagner Publishing, 1927.
- Fischer, Eric, Robert Campbell, and Eldon Miller. A Question of Place: The Development of Geographic Thought. Arlington: Beatty Publishing, 1969.
- Fison, Robert. Fundamental Place - Name Geography. Dubuque: Wm. C. Brown Publishing, 1966.
- Freeland, Kent. "Social Studies Curriculum and Assessment in England." International Journal of Social Education 7 (Fall 1992) pg 17 - 24.
- Freeman, T.W. A Hundred Years of Geography. Chicago: Aldine Press, 1961.
- Frick, Mary Louise. "The Status of Geography in the High School Today." Journal of Geography 64 (October 1965): pg 317 - 322.
- Giles, Jeff. "Generation X." Newsweek 123 (June 6, 1994): pg 63-67.
- Glowacki, Walter M. "New Trends In Secondary School Geography." The Social Studies 64 (March 1973): pg 131 - 134.

- Gordon, Marvin. "Geography as a Component In an International Studies Program." NASSP Bulletin (January 1990): pg 21 - 24.
- Gritzner, Charles F. "Geographic Education - Where have we failed?" Journal of Geography 80 (December 1981): pg 264 - 266.
- Grosvenor, Gilbert M. "In Sight of the Tunnel: The Renaissance of Geography Education." Annals of the Association of American Geographers 85 (1995): pg 409 - 420.
- Harper, Robert. "The New School Geography: A Critique." Journal of Geography 89 (January - February 1990): pg 27 - 30.
- Hartshorne, Richard. "Geography for What?" Social Education 1 (1937): pg 166 - 172.
- Herman, Dan. "Overcoming Geographic Innocence in Geography Education." Journal of Geography 94 (September - October 1995): pg 527 - 529.
- Hill, A. David. "Rediscovering Geography: Its Five Fundamental Themes." NASSP Bulletin (December 1989): pg 1 - 7.
- Howe II, Harold. "America 2000: Bumpy Ride on Four Trains." Phi Delta Kappan 73 (November 1991): pg 192 - 203.
- Johnson, Howard G. "The National Geography Standards and Your Undergraduate Curriculum: The Opportunity That Knocks More Than Once." Journal of Geography 94 (September - October 1995): pg 534 - 537.
- Jumper, Sidney R. "National Geographic Education. An Interview With Gilbert M. Grosvenor, President and Chairman of the Board, National Geographic Society." Journal of Geography in Higher Education 15 (1991): pg 101 - 111.
- Kemball, Walter G. "The Objectives of Geographic Education." NASSP Bulletin (December 1989): g 15 - 18.
- Manson, Gary. "Notes on the Status of Geography in American Schools." Journal of Geography 80 (December 1981): pg 244 - 248.
- Manson, Gary. An Analysis of the Status of Geography In American Schools. Association of American Geographers; Louisville (April, 1980). Text - fiche.

- Marchioni, M. P. East Tennessee State University. Interview, March 1997, Johnson City, Tennessee.
- Marchioni, M. P. East Tennessee State University. Lecture, Spring Semester 1996, Johnson City, Tennessee.
- McBride, Lawrence W. "Could This Be the End of History." Social Education 57 (October 1993): pg 282 - 283.
- Natoli, Salvatore, J. "Guidelines for Geographic Education and the Fundamental Themes in Geography." Journal of Geography 93 (January-February 1994): pg 2 - 6.
- Niemz, Günter. "Trends in German Geography Education For The Turn of the Millennium." International Journal of Social Education 10 (Fall - Winter 1995 - 1996): pg 42 - 52.
- Ormond, Jeanne E. and David B. Cole. "Teaching Content Knowledge and Pedagogical Content Knowledge: A Model From Geography Education." Journal of Teacher Education 47 (January - February 1996): pg 37 - 42.
- Pabst, Diana L. "Geography: The Forgotten Subject," Principal 66 (November 1986): pg 22 - 24.
- Petersen, James F., Salvatore J. Natoli, and Richard G. Boehm. "The Guidelines for Geographic Education: A Ten-year Retrospective." Social Education 58 (April - May 1994): pg 206 - 210.
- Petry, Anne K. "Future Teachers of Geography: Whose Opportunity?" Journal of Geography 94 (September - October 1995): pg 487 - 494.
- Rawling, Eleanor M. "A School Geography Curriculum For the Twenty-first Century? The Experience of the National Curriculum in England and Wales." International Journal of Social Education 10 (Fall - Winter 1995 - 1996): pg 1 - 21.
- Sewall, Gilbert T. "America 2000 An Appraisal." Phi Delta Kappan 73 (November 1991): pg 204 - 209.
- Solorzano, Tricia. "Why Johnny Can't Read Maps Either". U.S. News and World Report, (March 1985): pg. 50.
- Stoddart, D.R. On Geography and its History. Oxford: Basil Blackwell, 1986.

Stoltman, Joseph P. "Geography in The Secondary Schools 1945 - 1990." NASSP Bulletin (December 1989): pg 9 - 13.

Taylor, Griffith, ed. Geography in the Twentieth Century. New York: Philosophical Library, 1951.

Tennessee State Board of Education. Master Plan for Tennessee Schools, 1993: Preparing for the Twenty-First Century . Nashville, Tennessee: 1992. Text - fiche

von Engeln, O.D. "A Campaign For Geography." Journal of Geography 89 (September - October 1990): pg 225 - 226.

Wilbanks, T.J. "Geography Education in National Context." Journal of Geography 93. (January - February 1994): pg 43 - 45.

APPENDICES

APPENDIX A
SURVEY INSTRUMENT

Grade Classification: _____ Present School: _____

High School Attended: _____ Location of High School _____

Please answer the following questions to the best of your ability:

1. Name the four geographic boundaries of the contiguous (lower 48) states:
(north) _____ (east) _____
(south) _____ (west) _____
2. Name the largest state in area in the entire United States _____
3. Name the longest river in the world _____
4. Name the highest mountain in the entire United States _____
5. Name the lowest dry land point in the United States _____
6. Name the highest mountain in the world _____
7. Name the time zones in the contiguous (lower 48) states _____

8. Name the four oceans of the world:
 1. _____ 2. _____
 3. _____ 4. _____
9. What is the most populated country in the world? _____
10. What is the most populated state in the entire United States? _____
11. Name the seven continents: 1. _____ 2. _____
3. _____ 4. _____ 5. _____
6. _____ 7. _____

12. Name the Great Lakes: 1. _____ 2. _____

3. _____ 4. _____ 5. _____

13. On the following maps locate, name and number, using the number beside each answer, the following:

1. The capital of Tennessee
2. The capital of Kentucky
3. The capital of Virginia
4. The capital of North Carolina
5. The capital of the United States
6. The largest city in population in the United States
7. The state of Utah
8. The country of India
9. The country of France
10. The country of Egypt
11. The country of Japan
12. The Mediterranean Sea
13. The state of Oregon

14. What is the largest country in the world? _____

APPENDIX B
STATES GRANTING HIGH SCHOOL DIPLOMAS

TABLE 27

STATE GRANTING H. S. DIPLOMA -
ETSU STUDENTS

ETSU				
State Granting High School Diploma	1993		1996	
	No.	%	No.	%
Unknown	8	11.6%	1	.9%
Tennessee	46	66.7%	86	73.5%
Virginia	8	11.6%	15	12.8%
California	1	1.4%	1	.9%
Georgia	1	1.4%	1	.9%
Florida	1	1.4%	1	.9%
Maryland	2	2.9%	-	-
New Jersey	1	1.4%	-	-
Taiwan	1	1.4%	-	-
Argentina	-	-	1	.9%
Venezuela	-	-	1	.9%
Kansas	-	-	1	.9%
Pennsylvania	-	-	3	2.6%
New York	-	-	2	1.7%
General Education Diploma	-	-	1	.9%
Arizona	-	-	1	.9%
North Carolina	-	-	2	1.7%

TABLE 28

STATE GRANTING H. S. DIPLOMA -
MILLIGAN COLLEGE STUDENTS

Milligan College				
State Granting High School Diploma	1993		1996	
	No.	%	No.	%
California	1	2.4%	1	3.0%
Unknown	5	12.0%	1	3.0%
Indiana	10	23.8%	8	24.2%
Tennessee	9	21.4%	6	18.2%
Oklahoma	1	2.4%	-	-
Kentucky	2	4.8%	1	3.0%
Africa	1	2.4%	-	-
Colorado	1	2.4%	-	-
Ohio	6	14.3%	6	18.2%
Alabama	1	2.4%	-	-
Virginia	3	7.1%	-	-
Iowa	1	2.4%	-	-
North Carolina	1	2.4%	2	6.1%
Illinois	-	-	2	6.1%
Florida	-	-	2	3.0%
Canada	-	-	1	3.0%
Minnesota	-	-	1	3.0%
Georgia	-	-	1	3.0%
South Carolina	-	-	1	3.0%

APPENDIX C

CUMULATIVE RESULTS OF SURVEY QUESTIONS

TABLE 29

CUMULATIVE RESULT
FOUR GEOGRAPHIC BOUNDARIES

Total	1993		1996-97	
	No.	%	No.	%
0	31	28%	39	26%
1	1	1%	11	7%
2	7	6%	4	3%
3	5	5%	5	3%
4	67	60%	91	61%

TABLE 30

CUMULATIVE RESULT OF THE LARGEST
STATE IN AREA IN U.S.

Answers Given	1993		1996-97	
	No.	%	No.	%
No Answer	2	2%	5	3%
Alaska	60	54%	53	35%
Texas	44	40%	87	58%
California	4	4%	5	3%
Mississippi	1	1%	0	0%

TABLE 31

CUMULATIVE RESULT OF
LONGEST RIVER IN THE WORLD

Answers Given	1993		1996-97	
	No.	%	No.	%
No Answer	8	7%	12	8%
Mississippi	9	8%	11	7%
Amazon	24	22%	23	15%
Nile	65	59%	93	62%
Euphrates	2	2%	5	3%
Colorado	0	0%	2	1%
Others	3	3%	4	4%

TABLE 32

CUMULATIVE RESULT
OF THE HIGHEST MOUNTAIN U.S.

Answers Given	1993		1996-97	
	No.	%	No.	%
Appalachian	1	1%	2	1%
McKinley	38	34%	43	29%
No Answer	31	28%	46	31%
Rockies	8	7%	15	10%
Everest	20	18%	18	12%
Mt. St. Helens	6	5%	6	4%
Pikes Peak	1	1%	4	3%
Rushmore	1	1%	3	2%
Mitchell	1	1%	4	3%
Himalayas	0	0%	3	2%
Other	4	4%	6	5%

TABLE 33

CUMULATIVE RESULT OF LOWEST
DRY LAND POINT IN THE U.S.

Answers Given	1993		1996-97	
	No.	%	No.	%
No Answer	36	32%	61	41%
Death Valley	47	42%	56	37%
Nevada	1	1%	2	1%
Arizona	6	5%	5	3%
Grand Canyon	7	6%	9	6%
Sahara	2	2%	7	5%
Great Salt Lake	2	2%	4	3%
Other	10	10%	6	4%

TABLE 34

CUMULATIVE RESULT OF
HIGHEST MOUNTAIN IN THE WORLD

Answers Given	1993		1996-97	
	No.	%	No.	%
No Answer	29	26%	40	27%
Everest	48	43%	68	45%
Himalayas	8	7%	7	5%
Kilimanjaro	10	9%	8	5%
Fuji	3	3%	11	7%
McKinley	1	1%	3	2%
Andes	3	3%	1	1%
K 2	3	3%	2	1%
Other	6	6%	10	9%

TABLE 35

CUMULATIVE RESULT OF TIME ZONES IN
THE LOWER 48 STATES

Total	1993		1996-97	
	No.	%	No.	%
0	14	13%	25	17%
1	2	2%	10	7%
2	16	14%	24	16%
3	29	26%	47	31%
4	50	45%	44	29%

TABLE 36

CUMULATIVE RESULT OF THE
FOUR OCEANS OF THE WORLD

Total	1993		1996-97	
	No.	%	No.	%
0	0	0%	0	0%
1	1	1%	0	0%
2	9	8%	27	18%
3	42	38%	37	25%
4	59	53%	86	57%

TABLE 37

CUMULATIVE RESULT OF MOST
POPULOUS COUNTRY

Answers Given	1993		1996-97	
	No.	%	No.	%
No Answer	11	10%	23	15%
China	74	67%	91	61%
India	10	9%	7	5%
Africa	4	4%	5	3%
Japan	6	5%	14	9%
Asia	2	2%	1	1%
Russia	0	0%	5	3%
Other	4	4%	4	4%

TABLE 38

CUMULATIVE RESULT OF MOST
POPULOUS STATE IN THE U.S.

Answers Given	1993		1996-97	
	No.	%	No.	%
California	70	63%	80	53%
New York	29	26%	38	25%
Texas	3	3%	3	2%
No Answer	8	7%	24	16%
Other	1	1%	5	5%

TABLE 39

CUMULATIVE RESULT
OF SEVEN CONTINENTS

Answers Given	1993		1996-97	
	No.	%	No.	%
0	2	2%	5	3%
1	0	0%	1	1%
2	4	4%	3	2%
3	3	3%	6	4%
4	9	8%	10	7%
5	13	12%	21	14%
6	21	19%	32	21%
7	59	53%	72	48%

TABLE 40

CUMULATIVE RESULT
OF FIVE GREAT LAKES

Answers Given	1993		1996-97	
	No.	%	No.	%
0	10	9%	14	9%
1	8	7%	18	12%
2	13	12%	19	13%
3	18	16%	40	27%
4	22	20%	23	15%
5	40	36%	36	24%

TABLE 41

CUMULATIVE RESULT
OF CAPITAL OF TENNESSEE

Answers Given	1993		1996-97	
	No.	%	No.	%
No Answer	18	16%	28	19%
Nashville	86	77%	110	73%
Memphis	3	3%	6	4%
Chattanooga	2	2%	0	0%
Knoxville	2	2%	6	4%

TABLE 42

CUMULATIVE RESULT
OF CAPITAL OF KENTUCKY

Answers Given	1993		1996-97	
	No.	%	No.	%
No Answer	40	36%	75	50%
Frankfort	42	38%	38	25%
Louisville	11	10%	10	7%
Lexington	17	15%	22	15%
Richmond	1	1%	2	1%
Other	0	0%	3	3%

TABLE 43
 CUMULATIVE RESULT
 OF CAPITAL OF VIRGINIA

Answers Given	1993		1996-97	
	No.	%	No.	%
No Answer	48	43%	70	47%
Richmond	54	49%	66	44%
Roanoke	6	5%	6	4%
Norfolk	1	1%	2	1%
Raleigh	1	1%	3	2%
Other	1	1%	3	3%

TABLE 44
 CUMULATIVE RESULT
 OF CAPITAL OF NORTH CAROLINA

Answers Given	1993		1996-97	
	No.	%	No.	%
No Answer	45	41%	67	45%
Raleigh	52	47%	66	44%
Charleston	3	3%	0	0%
Charlotte	8	7%	11	7%
Asheville	1	1%	1	1%
Columbia	0	0%	2	1%
Other	2	2%	3	3%

TABLE 45

CUMULATIVE RESULT OF
CAPITAL OF THE UNITED STATES

Answers Given	1993		1996-97	
	No.	%	No.	%
No Answer	28	25%	52	35%
DC Correct	67	60%	91	61%
DC in RI	1	1%	2	1%
DC in NJ	1	1%	4	3%
DC in NY	4	4%	0	0%
DC in VA	3	3%	0	0%
Other	1	7%	1	1%

TABLE 46

CUMULATIVE RESULT OF
LARGEST CITY IN POPULATION U.S.

Answers Given	1993		1996-97	
	No.	%	No.	%
No Answer	25	23%	69	46%
New York City	68	61%	67	45%
Los Angeles	15	14%	5	3%
San Francisco	2	2%	1	1%
California	0	0%	4	3%
Texas	0	0%	3	2%
Other	1	1%	1	1%

TABLE 47

CUMULATIVE RESULT OF STATE OF UTAH

Answers Given	1993		1996-97	
	No.	%	No.	%
No Answer	23	21%	28	19%
Utah	71	64%	79	53%
Nevada	2	2%	5	3%
Wyoming	4	4%	11	7%
Idaho	2	2%	5	3%
Colorado	7	6%	3	2%
Oregon	0	0%	4	3%
Arizona	0	0%	4	3%
New Mexico	0	0%	3	2%
South Dakota	0	0%	3	2%
Other	1	2%	5	4%

TABLE 48

CUMULATIVE RESULT
OF COUNTRY OF INDIA

Answers Given	1993		1996-97	
	No.	%	No.	%
No Answer	32	29%	51	34%
India	68	61%	67	45%
Saudi Arabia	2	2%	1	1%
Africa	2	2%	14	9%
China	3	3%	5	3%
Russia	1	1%	7	5%
Other	3	3%	5	4%

TABLE 49
 CUMULATIVE RESULT
 OF COUNTRY OF FRANCE

Answers Given	1993		1996-97	
	No.	%	No.	%
No Answer	25	23%	43	29%
Russia	6	5%	19	13%
France	60	54%	76	51%
Spain	3	3%	2	1%
Poland	3	3%	1	1%
Germany	3	3%	0	0%
Africa	1	1%	2	1%
Sweden	1	1%	2	1%
Other	9	9%	5	4%

TABLE 50
 CUMULATIVE RESULT
 OF COUNTRY OF EGYPT

Answers Given	1993		1996-97	
	No.	%	No.	%
No answer	28	25%	52	35%
Egypt	51	46%	62	41%
Africa	18	16%	18	12%
Greece	4	4%	1	1%
Saudi Arabia	1	1%	6	4%
China	2	2%	3	2%
Russia	2	2%	3	2%
Other	5	5%	5	4%

TABLE 51
 CUMULATIVE RESULT
 OF COUNTRY OF JAPAN

Answers Given	1993		1996-97	
	No.	%	No.	%
Japan	71	64%	78	52%
No Answer	26	23%	41	27%
Australia	1	1%	1	1%
China	5	5%	7	5%
Vietnam	1	1%	2	1%
Indonesia	2	2%	5	3%
Russia	3	3%	8	5%
Taiwan	0	0%	3	2%
Other	2	2%	5	4%

TABLE 52
 CUMULATIVE RESULT
 OF THE MEDITERRANEAN SEA

Answers Given	1993		1996-97	
	No.	%	No.	%
No Answer	30	27%	43	29%
Mediterranean Sea	70	63%	77	51%
Indian Ocean	7	6%	18	12%
Atlantic Ocean	1	1%	3	2%
Pacific Ocean	0	0%	6	4%
Other	3	3%	3	3%

TABLE 53

CUMULATIVE RESULT
OF STATE OF OREGON

Answers Given	1993		1996-97	
	No.	%	No.	%
No Answer	20	18%	26	17%
Oregon	74	67%	92	61%
Colorado	3	3%	4	3%
Wyoming	5	5%	4	3%
Montana	1	1%	2	1%
Washington	5	5%	12	8%
Nebraska	1	1%	3	2%
Kansas	0	0%	4	3%
Other	2	2%	3	3%

TABLE 54

CUMULATIVE RESULT OF
LARGEST COUNTRY IN LAND AREA

Answers Given	1993		1996-97	
	No.	%	No.	%
No Answer	5	5%	38	25%
Russia	55	50%	57	38%
United States	9	8%	12	8%
China	12	11%	9	6%
Canada	0	0%	4	3%
North America	11	10%	2	1%
Europe	2	2%	5	3%
Asia	5	5%	7	5%
Africa	4	4%	3	2%
Japan	1	1%	2	1%
France	1	1%	2	1%

APPENDIX D
SUMMARIZATION OF RESULTS

TABLE 55

SUMMARY OF CORRECT ANSWERS - 1993 AND 1996

Question	Correct Answer	1993		1996	
		No.	%	No.	%
1	4 - named	67	60%	91	61%
2	Alaska	60	54%	53	35%
3	Nile	65	59%	93	62%
4	McKinley	38	34%	43	29%
5	Death Valley	47	42%	56	37%
6	Everest	48	43%	68	45%
7	4 - named	50	45%	44	29%
8	4 - named	59	53%	86	57%
9	China	74	67%	91	61%
10	California	70	63%	80	53%
11	7 - named	59	53%	72	48%
12	5 - named	40	36%	36	24%
13.1	Nashville	86	77%	110	73%
13.2	Frankfort	42	38%	38	25%
13.3	Richmond	54	49%	66	44%
13.4	Raleigh	52	47%	66	44%
13.5	DC Correct	67	60%	91	61%
13.6	New York City	68	61%	67	45%
13.7	Utah	71	64%	79	53%
13.8	India	68	61%	67	45%
13.9	France	60	54%	76	51%
13.10	Egypt	51	46%	62	41%
13.11	Japan	71	64%	78	52%
13.12	Mediterranean Sea	70	63%	77	51%
13.13	Oregon	74	67%	92	61%
14	Russia	55	50%	57	38%
Totals			54%		47%

TABLE 56

SUMMARY OF CORRECT ANSWERS BETWEEN SCHOOLS

Question	Answers Correct	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
		No.	%	No.	%	No.	%	No.	%
1	4 - correct	38	55%	65	56%	29	69%	26	79%
2	Alaska	38	55%	40	34%	22	52%	13	39%
3	Nile	42	61%	70	60%	23	55%	23	70%
4	McKinley	27	39%	33	28%	11	26%	10	30%
5	Death Valley	32	46%	40	34%	15	36%	16	48%
6	Everest	31	45%	45	38%	17	40%	23	70%
7	4 - correct	33	48%	26	22%	17	40%	18	55%
8	4 - correct	40	58%	61	52%	19	45%	25	76%
9	China	46	67%	66	56%	28	67%	25	76%
10	California	44	64%	60	51%	26	62%	20	61%
11	7 - correct	41	59%	53	45%	18	43%	19	58%
12	5 - correct	27	39%	25	21%	13	31%	11	33%
13.1	Nashville	57	83%	89	76%	29	69%	21	64%
13.2	Frankfort	21	30%	20	17%	21	50%	18	55%
13.3	Richmond	36	52%	52	44%	18	43%	14	42%
13.4	Raleigh	34	49%	52	44%	18	43%	14	42%
13.5	DC Correct	36	52%	65	56%	31	74%	26	79%
13.6	New York City	45	65%	48	41%	23	55%	19	58%
13.7	Utah	42	61%	55	47%	29	69%	24	73%
13.8	India	39	57%	42	36%	29	69%	25	76%
13.9	France	36	52%	53	45%	24	57%	23	70%
13.10	Egypt	24	35%	41	35%	27	64%	21	64%
13.11	Japan	41	59%	59	50%	30	71%	19	58%
13.12	Mediterranean Sea	43	62%	52	44%	27	64%	25	76%
13.13	Oregon	44	64%	65	56%	30	71%	27	82%
14	Russia	36	52%	39	33%	19	45%	18	55%
	Total		54%		43%		54%		61%

TABLE 57

COMPARISON OF U.S. GEOGRAPHY QUESTIONS

Question	Answers Correct	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
		No.	%	No.	%	No.	%	No.	%
1	4 - correct	38	55%	65	56%	29	69%	26	79%
2	Alaska	38	55%	40	34%	22	52%	13	39%
4	McKinley	27	39%	33	28%	11	26%	10	30%
5	Death Valley	32	46%	40	34%	15	36%	16	48%
7	4 - correct	33	48%	26	22%	17	40%	18	55%
10	California	44	64%	60	51%	26	62%	20	61%
12	5 - correct	27	39%	25	21%	13	31%	11	33%
13.1	Nashville	57	83%	89	76%	29	69%	21	64%
13.2	Frankfort	21	30%	20	17%	21	50%	18	55%
13.3	Richmond	36	52%	52	44%	18	43%	14	42%
13.4	Raleigh	34	49%	52	44%	18	43%	14	42%
13.5	DC Correct	36	52%	65	56%	31	74%	26	79%
13.6	New York City	45	65%	48	41%	23	55%	19	58%
13.7	Utah	42	61%	55	47%	29	69%	24	73%
13.13	Oregon	44	64%	65	56%	30	71%	27	82%
	Total		53%		42%		53%		56%

TABLE 58

COMPARISON OF WORLD GEOGRAPHY QUESTIONS

Question	Answers Correct	ETSU 1993		ETSU 1996		Milligan 1993		Milligan 1997	
		No.	%	No.	%	No.	%	No.	%
3	Nile	42	61%	70	60%	23	55%	23	70%
6	Everest	31	45%	45	38%	17	40%	23	70%
8	4 - correct	40	58%	61	52%	19	45%	25	76%
9	China	46	67%	66	56%	28	67%	25	76%
11	7 - correct	41	59%	53	45%	18	43%	19	58%
13.8	India	39	57%	42	36%	29	69%	25	76%
13.9	France	36	52%	53	45%	24	57%	23	70%
13.10	Egypt	24	35%	41	35%	27	64%	21	64%
13.11	Japan	41	59%	59	50%	30	71%	19	58%
13.12	Mediterranean Sea	43	62%	52	44%	27	64%	25	76%
14	Russia	36	52%	39	33%	19	45%	18	55%
	Total		55%		45%		56%		68%

