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A study of the implementation of the national geography standards and their alignment with classroom instruction in United States PK–12 schools

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**A STUDY OF THE IMPLEMENTATION OF THE NATIONAL GEOGRAPHY
STANDARDS AND THEIR ALIGNMENT WITH CLASSROOM
INSTRUCTION IN UNITED STATES PK-12 SCHOOLS**

by

S. Kay Gandy, B.A., M.Ed., Ed.S.

**A Dissertation Presented in Partial Fulfillment
Of the Requirements for the Degree
Doctor of Education**

**COLLEGE OF EDUCATION
LOUISIANA TECH UNIVERSITY**

August 2002

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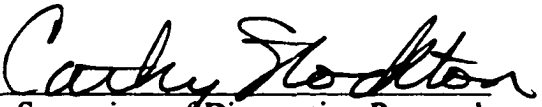
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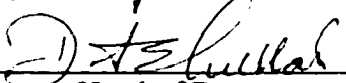
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August 15, 2002

We hereby recommend that the dissertation prepared under our supervision by Stephanie Kay Gandy entitled A Study of the Implementation of the National Geography Standards and Their Alignment With Classroom Instruction in United States PK-12 Schools be accepted in partial fulfillment of the requirements for the Degree of Doctor of Education in Curriculum and Instruction.

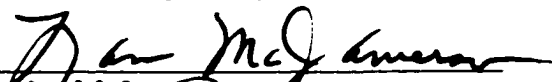

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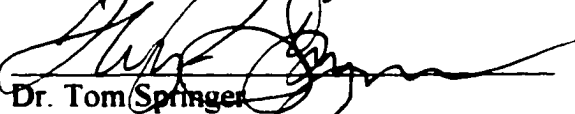

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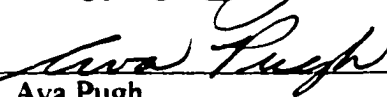
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ABSTRACT

In the 1980s, media reports of the state of geography in United States schools and national assessments documenting the failing grades of American students resulted in a campaign to eradicate geographic illiteracy. As a result, there have been many reforms made in geography education, including the development of national geography standards. The National Geographic Society developed a Geography Education Foundation to introduce a grassroots movement for curricula change through teacher inservice institutes. Furthermore, geography was recognized as a core subject in the curriculum designated by President George Bush and the governors of the United States of America as part of the competency requirements of *Goals 2000*. The purpose of this study was to conduct a survey to determine the relationship between various independent variables and the implementation of national geography standards in the curriculum of PK-12 classrooms. The population consisted of Teacher Consultants (TCs) who were trained through Alliance Summer Geography Institutes (ASGIs) and PK-12 teachers in two northeast Louisiana school districts. Findings indicated a relationship between the implementation of geography standards and a) teachers who have had pre-service training for geography, b) attendance at ASGIs, c) attendance at geography workshops, and d) the number of minutes per week geography was taught.

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CHAPTER 1

INTRODUCTION

Geography's role in the school curricula has changed greatly over the years. As early as the 1960s, professional educators became concerned with the declining emphasis of geography in American education (Stoltman, 1989). Economic and ecological stability preyed on the minds of citizens. The global economy, international impacts of political reform, and human environment relationships prodded decision-makers to examine geography as a means of meeting social, economic, and educational needs (Wilbanks, 1994). But it was not until the 1980s that the true renaissance of geography occurred (Stoltman, 1989). During this time, educators witnessed the development of national geography standards, the drive to initiate a grassroots movement for curricula change through teacher inservice institutes, and the recognition of geography as a core subject in the curriculum.

The publication of *A Nation At Risk* (1983) sounded the alarm and directed attention to the importance of education in maintaining international leadership (Stoltman, 1989). Surveys indicating the embarrassingly poor geography knowledge of American students were widely publicized (Petersen, Salvatore, & Boehm, 1994). In an international survey of nine nations commissioned by the National Geographic Society, the United States ranked seventh in overall geography knowledge (Ludwig, et al., 1991). The surveys, compounded with the results of the National Assessment of Education

Progress (NAEP) geography test, brought to the attention of the public, politicians, and professional educators the geography incompetence of American students.

In 1984, two professional geography organizations, the National Council for Geographic Education (NCGE) and the Association of American Geographers (AAG), formed the Joint Committee on Geographic Education. The Joint Committee collaborated to produce *Guidelines for Geographic Education*, a 28-page scope and sequence document for geography learning outcomes that introduced the five fundamental themes of geography (Boehm & Petersen, 1994). The five themes included a) location-position on the earth's surface, b) place-physical and human characteristics, c) relationships within places, such as human-environment interaction, d) movement-including goods and services, and e) regions-their formation and dynamics (Hill, 1989). The National Geographic Society (NGS) adopted these guidelines and the five themes as a basic framework for the teacher summer institutes sponsored by its Geography Education Alliances (Petersen, et al., 1994; Morrill, Eney, & Pontius, 1995). The two-week institutes, with a minimum of 80 hours of instruction, consisted of intense training in geography content, methods of teaching geography, and practice and preparation in giving workshops (M. Katzenmeyer, personal communication, January 11, 2002). The Joint Committee signified a cooperative effort by the AAG and NCGE Executive Committee to:

- 1. provide guidelines on course content, competencies, and teaching and learning objectives in geography for decisions-makers in American school systems,**
- 2. inform the general public of the need for geographic education in American schools,**

3. provide guidelines that will demonstrate how the geographical point of view and how the discipline of geography must be incorporated into . . . social studies and science courses and specifically in programs in global education, international education, world cultures, world history, and environmental education,
4. recommend standards for geography teacher preparation and for competencies [that permit] teaching geography courses in the schools . . . and course with significant geographical content (Petersen, et al., 1994; p. 207).

A consortium of professional geographic associations, called the Geographic Education National Implementation Project (GENIP), was organized in 1985 dedicated to improving the status and quality of geography education in the United States (U. S.). GENIP served as the umbrella for organizations including the American Geographical Society (AGS), the Association of American Geographers (AAG), the National Council for Geographic Education (NCGE), and the National Geographic Society (NGS). One of its functions was to serve as a clearinghouse of information for geography educational materials and resources. Furthermore, GENIP fostered communication among geography organizations and geography educators at the K-12 and university levels (Petersen, et al., 1994). The emphasis of standards-based geography instruction was its primary focus (GENIP website). GENIP brought the geography community together to speak with a single voice on issues concerning geography education (Marran, 1989).

GENIP's initiatives received the blessing and support of the Federal government. Congress declared November 15-21, 1987, as National Geography Awareness Week (see Appendix F for senate resolution). Hereafter, National Geography Awareness Week

(GAW) was introduced annually as a Congressional resolution (Schwartz, 1987; Farrell & Cirrincione, 1989; Grosvenor, 1989). The National Geographic Society Education Foundation was at the forefront of GAW distributing teacher activity packs and posters to thousands of schools. Moreover, teachers developed activities with their students during the week that focused on any aspect of geography (Grosvenor, 1989). Senator Bradley (Senate Joint Resolution 88, 1987) urged the passage of the resolution to focus national attention on the integral role geography plays in preparing world citizens. The primary goal of the week was to promote public awareness of geography and demonstrate geography's relevance across the curricula (NGS website).

In 1989, President George Bush and the 50 governors of the United States met in Charlottesville at the University of Virginia for an Education Summit. Educators, politicians, and geographers advocated educational reform. Specifically they demanded more geography be taught in the classroom, better teacher preparation, and better materials made available for the classroom. What stemmed from this reform effort was the call for geography standards, test competence, and annual state reports (Wilbanks, 1994; Morrill, et al., 1995). *Goals 2000: Educate America Act* identified the disciplines necessary for educational reform, including geography.

By the year 2000, all students will leave grades 4, 8, and 12 having demonstrated competency over challenging subject matter including . . . geography, and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our Nation's modern economy (*Goals 2000: Educate America Act, Section 102*).

By this time the National Geographic Society had already established a Geography Education Alliance program in order to begin a grassroots movement of “teachers training teachers” to expand geography education in K-12 schools (Salter, K., 1991; Dulli, 1994). The Alliance program was the centerpiece of the Geography Education Foundation established by the National Geographic Society confirming its commitment to geographic education (Hill, 1989). The network joined the content expertise of academic geographers and the classroom experience of teachers to mobilize educators to improve geography education in their states (Ludwig, et al., 1991; Petersen, et al., 1994).

The call for standards resulted in the publication of *Geography for Life: National Geography Standards* (Geography Education Standards Project, 1994). This detailed publication included a set of benchmarks structured around six essential elements and eighteen standards (see Appendix A for standards and benchmarks). Students were expected to demonstrate content and skill competency by the end of the fourth, eighth, and twelfth grades using these guidelines. This collaborative effort by the Geography Education Standards Project was “written, reviewed, and tested by teachers for teachers” (Salter, 1995, p. 477). The standards were a statement of consensus contributed to not only by teachers, but also government and business officials, college and university faculty members, school administrators, and PTA members (Downs, 1995).

Concurrently, in 1994, Congress authorized the National Assessment of Educational Progress (NAEP) to conduct an assessment of geography achievement. The assessment benchmarks reflected what students should know and the basic geographic skills they should possess to reach basic, proficient, and advanced levels of achievement

in the fourth, eighth, and twelfth grades (NAEP, 1994). The test results demonstrated the weakness of geography in high schools (Salter, C., 1991b). The assessment measured achievement levels of a) Basic: partial mastery of fundamental knowledge and skills, b) Proficient: solid academic performance for each grade assessed, and c) Advanced: superior performance (NAEP, 1994). Only 19 percent of fourth graders, 24 percent of eighth graders, and 25 percent of twelfth graders reached the level of Proficient (NAEP, 1994; Stoltman, 1997). The NAEP survey provided an avenue for dissemination of student geography content knowledge, and the practical skills deemed essential by professional educators and geographers for informed and productive world citizenship (Salter, C., 1991a; Stoltman, 1997).

NAEP has conducted national assessments of American students for more than 25 years. More than 3000 high school seniors in approximately 300 public and private schools took the NAEP geography survey in 1990, and approximately 19,000 students were assessed in 1994 (NAEP, 1994). Using multiple choice and constructed response questions, NAEP tested an array of knowledge skills from students including the ability to analyze, recall, understand, and interpret geographic information, and the ability to use the skills and tools of geography to apply to practical tasks (Stoltman, 1997).

The document described achievement at each grade level and within subgroups of the population. Seventy percent scored at basic level or higher. Whites and Asians scored higher than Blacks and Hispanics, while males out-performed females (NAEP, 1994). Additionally, the report discussed the relationship among student performance and instructional and home background. The salient findings pertinent to this study included: a) those who reported geography as their favorite subject scored at a higher level, and b)

more than 60 percent reported they had teachers spending less than 45 minutes per week on geography (NAEP, 1994). Stoltman (1997) reported that NAEP results could be used as a resource in planning classroom assessment. In addition to providing a portrait of what students know and can do, the NAEP assessments were valuable and reliable information that could be used in educational reform.

President Bush and the governors gave geography equal standing with traditional core subjects. However, since geography is the subject most schools have neglected, it had a long road to traverse to win its proper place in the curriculum (Munroe & Smith, 1998). The greatest challenge is to overcome the public view that geography is simply place-name recognition (Murphy, 1998).

Purpose of the Study

There have been many reforms made in geography education since the 1980s, including the development of national geography standards. The National Geographic Society developed a Geography Education Foundation to introduce a grassroots movement for curricula change through teacher inservice institutes. Furthermore, geography was recognized as a core subject in the curriculum designated by President Bush and the governors of the United States of America as part of the competency requirements of *Goals 2000*. It was important to know whether or not these reforms have led to the implementation of standards-based geography education. The purpose of this study was to determine the relationship between various independent variables and the implementation of national geography standards in PK-12 classroom instruction following the development of these reforms.

The study was conducted using a questionnaire designed by the researcher to determine to what extent national geography standards are implemented in the curriculum of PK-12 classrooms. The survey investigated the relationship of the implementation of standards to teacher preservice preparation, teacher participation in Alliance Summer Geography Institutes (ASGIs) or geography workshops, years of teaching experience, and the number of minutes per week allotted to the teaching of geography. The population consisted of Teacher Consultants (TCs) who were trained through the Geography Education Alliance programs that fall under the Education Foundation umbrella of the National Geographic Society. PK-12 teachers in two northeast Louisiana school districts were also surveyed to provide a comparison between teachers trained at ASGIs and teachers who may or may not have attended geography workshops. The national survey was conducted through e-mail correspondence with Geography Education Alliance coordinators. The local survey was conducted through the intra-school communication delivery system.

Standards-based Geography Education

Standards-based education emerged from such documents as *A Nation at Risk* (1983) and *Goals 2000* (see Figure 1). It is the most common approach to education reform in the U. S. today, with 49 of 50 states having standards in place (Standards-Based Reform, 1997; Kendall, 2001). The publication of *A Nation At Risk* led most states to increase graduation and course content requirements, which predicated setting student standards. Kendall (2001) reported that although standards-based education is not associated with any specific instructional model, the term suggests that education begins with expectations about what students should know and be able to do.

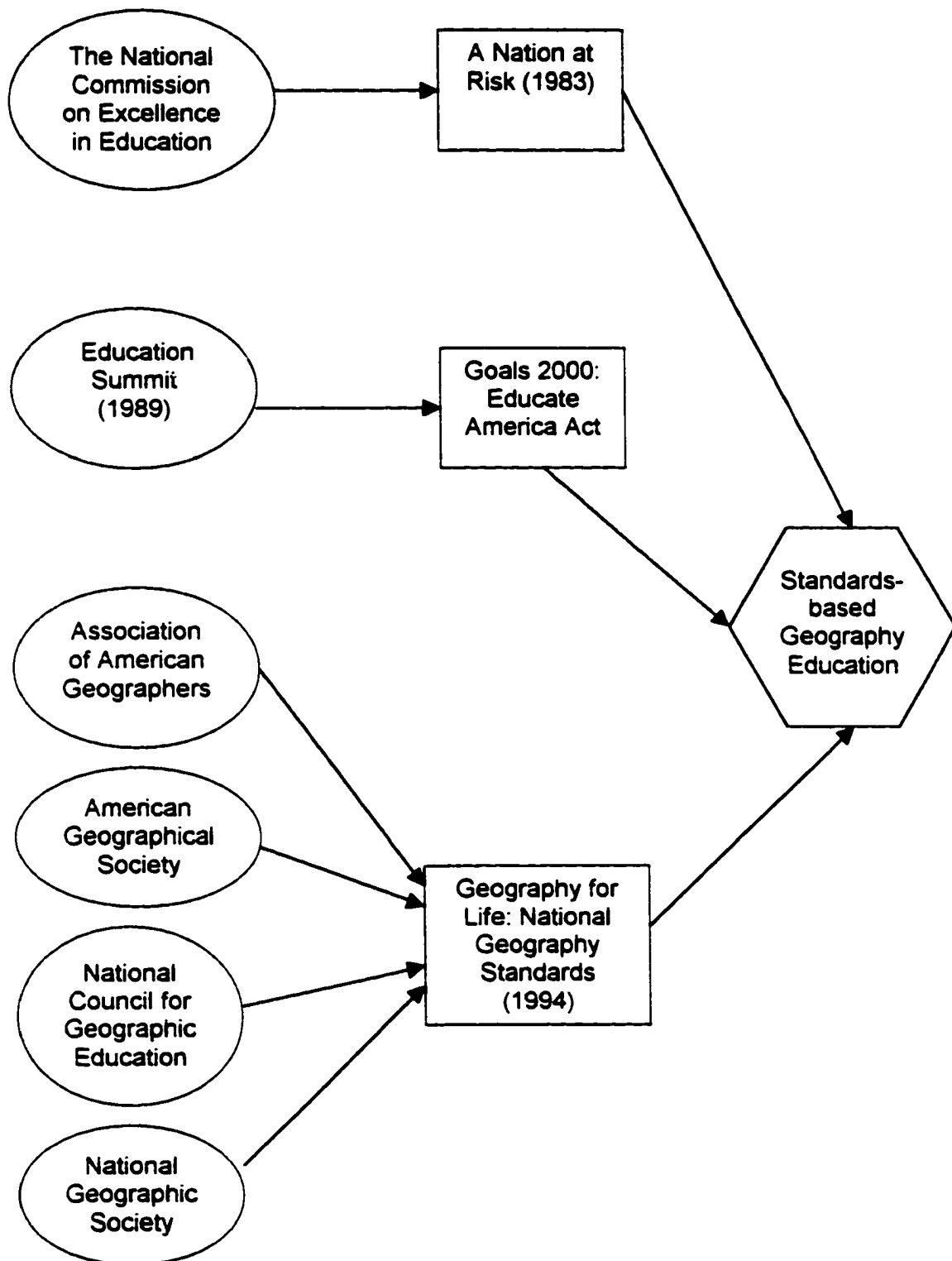


Figure 1. Standards-based geography education emerged from a variety of documents.

The Education Summit in 1989, initiated by President George Bush and the 50 governors, called for rigorous changes in the educational environment. This meeting laid the groundwork for the National Education Goals (Anderson, Fiester, Gonzales, & Pechman, 1996). Gubernatorial action at the Education Summit led to the passage in 1994 of *Goals 2000: Educate America Act*. *Goals 2000* promoted the development and adoption of a voluntary system of standards (*Goals 2000: Educate America Act*). As a result of this Act, Congress provided funding to states to raise their educational standards (Anderson, et al., 1996). The Education Summit in 1996 added student assessment and accountability to the standards dialogue (Tucker, 1998).

Four collaborating organizations, the National Council for Geographic Education, the National Geographic Society, the Association of American Geographers, and the American Geographical Society, sponsored the production of *Geography for Life: National Geography Standards 1994*. The national geography standards were a response to the *Goals 2000: Educate America Act* (Downs, 1995). The national geography standards captured the essence of geographic thought since antiquity. There are as many definitions of geography as there are geographers. Despite the variety of definitions, a central tenet of geography is the emphasis on human-environment interaction. An emphasis on the latter necessitates an understanding of physical and cultural processes as well as using the map as an analytical and representation tool. The elements of the national geography standards capture these important building blocks of the discipline.

Schmoker and Marzano (1999) averred that the rationale for the standards movement came out of the state of curricular chaos with the lack of any organization of common goals. Yet, as Nevi (2001) reported, significant percentages of students are not

reaching the standards. For example, in the state of Washington, 60 percent of tenth grade students failed to meet one or more of state standards. Nevi further clarified that none of the goals set by President Bush and the governors in 1990 have been accomplished.

Research Questions

The following questions guided this investigation:

Question 1: Is there a significant relationship between the implementation of national geography standards and the amount of preservice teacher training?

Question 2: Is there a significant relationship between the implementation of national geography standards and years of teaching experience?

Question 3: Is there a significant relationship between the implementation of national geography standards and attendance at Alliance Summer Geography Institutes (ASGIs)?

Question 4: Is there a significant relationship between the implementation of national geography standards and attendance at geography workshops?

Question 5: Is there a significant relationship between the implementation of national geography standards and the number of minutes per week geography was taught?

Research Hypotheses

The hypotheses are stated in the null form.

Hypothesis 1: There is no significant relationship between the implementation of national geography standards and amount of preservice teacher preparation.

Hypothesis 2: There is no significant relationship between the implementation of national geography standards and years of teaching experience.

Hypothesis 3: There is no significant relationship between the implementation of national geography standards and attendance at Alliance Summer Geography Institutes (ASGIs).

Hypothesis 4: There is no significant relationship between the implementation of national geography standards and attendance at geography workshops.

Hypothesis 5: There is no significant relationship between the implementation of national geography standards and the number of minutes per week geography was taught.

Significance of the Study

The general public tends to regard social studies as trivial or less important than other subjects in the curricula, especially mathematics and science (Meredith, 1985, Peterson, et al., 1994). In the *No Child Left Behind Act* authorized in 2002 by President George W. Bush, states are required to administer assessment in reading, mathematics, and later, science. There is no mention of geography. Schwartz (1987) averred that there are few problems in the world that do not in some way require a geographical perspective. Environmental concerns, political and social instability, urbanization, migration, trade, warfare, population growth, tourism and cultural exchange, competition for markets, and ethnicity are just a few pressing global problems that can benefit from a geographical investigation. Geographic literacy will lead to a better understanding of the world and will help tomorrow's leaders deal appropriately with ethnic conflicts in the post Cold War era (Kirchburg, 2000). Ludwig, et al. (1991) stated that geography "provides us with the information and tools we need to be responsible citizens able to act on issues and policies that affect the quality of life in our neighborhood, our nation, and our world" (p. 19).

Stoltman (1989) proclaimed that geography was practical for understanding human/environment activities, critical for developing citizenship competencies, and imperative for confronting present and future issues. Moreover, Americans should be informed voters and competent stewards of the environment (de Souza & Munroe, 1994). Geography teaches respect for diversity and concern for the environment (Hill, 1994). Cohen (1988) stated that “whatever definition we use, geography generally focuses on the relationship between human activity and the environment, describing and explaining the significance of location, distance, direction, spread, and spatial succession” (p. 248). Geographic literacy facilitates this through how humans modify, frequently adversely, physical patterns. American foreign policy is predicated on understanding the geography of different parts of the globe. In the light of September 11, 2001 attack in America by terrorists and heightened awareness of global terrorism, the need for geographic cultural literacy is paramount.

Although the general public considers geography to be fact recall (Fitzhugh, 1992a), geography is more than place finding or map reading (Natoli & Gritzner, 1988; Hill, 1989; Salter, 1990; Marran, 1994a). Geographers are concerned with where things are and why they are there (Schwartz, 1987). The National Council for Geographic Education defines geography as “the study of places on earth and their relationship with each other” (NCGE, 1994, p. 5). Fitzhugh (1992a) further expounded that geography is important for developing civic-minded citizens. The National Geographic Society stated that geography is necessary for job competition in the global market, critical for understanding the relationship between humans and the environment, and the key to appreciating cultural diversity and opening our minds to what lies outside our community

(NGS, 1998). Bednarz & Bednarz (1995) challenged that geography develops critical thinking skills to solve real-world problems and encourages active learning through fieldwork and research. In short, geography instruction lends itself to alternative learning strategies.

Grosvenor (1987), Chairman of the Board at the National Geographic Society, stated, "An ignorance of geography can deter, frustrate, and defeat us in our local, state, national, and global endeavors" (p. 5). He specifically referred to critical decisions made without the consideration of geographic factors, such as the controversial war in Vietnam. The National Council for Geographic Education (1994) published a stronger statement in a bulletin entitled *The Importance of Geography in the School Curriculum* when it wrote that, "This lack of geographical knowledge is more than an embarrassment, it is a threat to our country's status as a world leader."

Downs (1994) suggested there is a lack of empirical data in the field of geography education to underline decisions about forming curriculum, setting standards, developing teaching materials, strategies, and assessment procedures. Fitzhugh (1992b) pointed out that most research concentrated on secondary social studies, and little was done with elementary social studies. Elementary teachers are often perplexed about the purpose of social studies and undecided about how to teach it, leading many of them to downgrade its significance in the curriculum (Brophy, Alleman, & Mahoney, 2000).

Educators, legislators, and decision-makers need data in order to plan educational reforms, design curricula, or determine funding. Downs (1994) insisted "that quality instruction demands and depends upon quality research" (p. 58). This study is designed to contribute to a body of knowledge regarding the implementation of standards in the

classroom. The results and conclusions of this study will aid in policy making regarding education curricula.

Limitations of Study

The survey was of a self-report nature and therefore relied on the honesty and accuracy of teacher responses. Because the national study was limited to teachers associated with Geography Education Alliances, it was assumed that the national geography standards would be implemented, since the charge of the alliances has been to encourage standards-based educational reform. Since the national study was administered through e-mail, many of the teacher consultants may not have had e-mail or access to the Internet. This exploratory study was designed to discover relationships among variables, not to establish cause-effect relationships. There may exist unexamined factors toward implementation of standards not accounted for in this methodology.

Definition of Terms

Alliance Summer Geography Institute (ASGI)

The Alliance Summer Geography Institute was a workshop for educators that offered intense training in pedagogy and geography content, and practice and preparation in giving workshops.

Five Fundamental Themes

There are five fundamental themes of geography. Location is concerned with position on the earth's surface. Location can be both relative and absolute, and answers the question, where is it. Place is concerned with physical and human characteristics and can answer the question, what is it like. Relationships within places are concerned with

human/environmental interactions. Movement studies the relationship between places and answers the question, how and why are places connected. Regions are the basic unit of geography form and change and answers the question how and why is one area similar to another (Ludwig, et al., 1991).

Geography

Geography is the study of places on earth and their relationship with each other (NCGE, 1994) and is concerned not just with where things are located, but also with why they are located there (Joint Committee on Geographic Education, 1984).

Geography Education Alliance

The Geography Education Alliance is a partnership established by the National Geographic Society between K-12 educators and academic geographers to increase pedagogical content knowledge and introduce effective teaching strategies in order to promote a grassroots movement of curriculum reform.

Geography for Life: National Geography Standards

Geography for Life, a 272 page book produced under the sponsorship of AAG, AGS, NCGE, and NGS, offered statements of educational goals in geography. Written over a two-year period, this document was created by K-12 teachers from public and private schools, school administrators, PTA members, college and university faculty, and government and business officials. Its goal was to provide a set of voluntary benchmarks for schools to use as guidelines for developing their own curricula, and to set competency levels in grades four, eight, and twelve to create geographically informed students who understand people, places, and environments from a spatial perspective (Geography Education Standards Project, 1994).

Standards

Standards are attainable benchmarks to raise the level of student achievement (Geography Education Standards Project, 1994).

Teacher Consultant (TC)

A Teacher Consultant is an educator who has graduated from an Alliance Summer Geography Institute (ASGI) sponsored by one of the state Geography Education Alliances.

Summary and Overview

Much has been done in an effort to restore the importance of geography to the classroom. The National Geographic Society established a Geography Education Foundation and a network of Geography Education Alliances. Guidelines and standards for teaching and assessing geography curricula were developed. Congress declared the third week in November as Geography Awareness Week. The question addressed in this study was to determine whether any of these strategies led to the implementation of standards-based geography education in the classroom.

Chapter 2 presents a review of literature related to the emphasis on the increased importance of geography education. Subtopics include the decline of the importance of geography, the renaissance or revival of the importance of geography, the development of the Geography Education Alliances by the National Geographic Society, the significance of preservice and inservice teacher training, and the importance of using standards-based geography in the classroom. Chapter 3 outlines procedures for conducting research in how the participants will receive the survey, how the survey will be returned, and what statistical procedures will be used to analyze the data. The chapter also includes a

description of data, the development of the survey instrument, the results of the pilot study, and the treatment of data. Chapter 4 identifies the population and describes the sample in terms of demographic data collected, the instrument used, and the methods utilized for analysis. Chapter 5 presents a summary of the research findings, conclusions drawn, implications, and recommendations for the future of standards-based geography education.

CHAPTER 2

REVIEW OF LITERATURE

To consider geography's present place in American education, it is important to understand how the status of the discipline has changed over time and across the U. S. Despite the recent renaissance in geographic education, the discipline has not always commanded the respect that it deserves in the K-12 curricula. The cycle of waxing and waning in geography's importance in education is manifest in that the discipline has been taught as a separate subject, as well as enmeshed into the social studies curricula. Moreover, it is necessary to examine geography education initiatives, both preservice and inservice teacher preparation, and the importance of standards in teacher preparation.

Decline of Geography Importance in the Curriculum

During World War II, the regional expertise and map reading skills of geographers was demanded to aid the Allies against the Axis Powers. More specifically, geographers were in demand as cartographers, interpreters of aerial photos, and strategic planners using their knowledge of foreign area specialists (Natoli & Gritzner, 1988). By 1943, over 300 geographers were working in Washington, D.C. in intelligence agencies or in such capacities as identifying appropriate equipment and clothing for climate and environmental conditions, or planning the logistics of military transportation (Martin & James, 1993).

Geography in the schools was utilized to understand military activities and explain current events of the times (Stoltman, 1989). Prior to and during this time, geography had been taught as a single subject. Following the European Cold War and the Korean War, geography began fading from view and sharing classroom time with or buried within other social studies courses (Meredith, 1985; Grosvenor, 1987; Stoltman, 1989; Ludwig, et al., 1991; Viadero, 1992; Marran, 1994a). A survey in 1956 by the National Council of Geography Teachers reported 65 percent of secondary school geography courses were subsumed into the social studies curriculum (Stoltman, 1989).

One of the reasons for geography's diminished role was the over-crowded curriculum, and the move toward a more integrated approach of teaching social studies (Viadero, 1992). Hume and Boehm (2001) claimed that geography often lost the competition for time within the social studies curriculum to history, civics, or even economics. Unlike most other countries where geography remained a core subject, in the United States geography was considered a subsidiary discipline for almost 30 years from the 1960s through the 1980s (Murphy, 1998).

Stoltman (1989) listed several reasons for the diminished role of geography in the secondary school curriculum, as published by the National Council of Geography Teachers in 1956. These include:

1. The curriculum was becoming too crowded, and it was necessary to eliminate some subjects or consolidate them into 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 (pp. 9-10).

Traditionally, geography was taught as a lecture course with emphasis on fact memorization from textbooks with students functioning as passive learners (Libbee & Stoltman, 1988; Fitzhugh, 1992a; Viadero, 1992; Marran, 1994b; Risenger & Garcia, 1995). Elementary social studies consisted of “Pilgrims in November and Presidents in February” (Risenger & Garcia, 1995). The influx of immigrants in the early twentieth century popularized a “heroes/holiday” curriculum to reaffirm democratic values (Brophy, et al., 2000). Peters (1992) reported traditional geography content as the location of places on globes and maps or the study of selected landforms. As Spetz (1988) proclaimed, uninteresting lecture with rote memorization of forgettable places is not geography. Cohen (1988) stated that “correct location of places is the ABC of geography, but not its vocabulary” (p. 249). Social studies class periods tended to be short and taught at the end of the day (Fitzhugh, 1992a). Viadero (1992) reported that according to one national survey, by the mid 1970s enrollment in geography courses in seventh to twelfth grades had dropped to nine percent.

In the 1960s, in an attempt to inject energy into the deteriorating subject, professional geographers and educators developed a major curriculum project to present new teaching strategies and materials that actively involved students in learning about political, social, and economic problems in contemporary America. Known as the High

School Geography Project (HGSP), the units included simulations, role-playing, map projects, aerial photographs, and games to engage students in active, hands-on lessons (Stoltman, 1989; HGSP website). Utilizing the inquiry method rather than the traditional memorization method, the course aimed to develop concepts of how people adjust to their surroundings in the places where they live and work (James, 1990). The project fostered hands-on involvement and use of cognitive skills to explore geographic principles, issues of social policy, values of knowledge and learning, and practice of social skills (HGSP website). The numerous materials and kits created housekeeping and inventory problems for teachers and deterred the course from being widely adopted (Stoltman, 1989). In addition, few secondary teachers had adequate geographic knowledge to successfully implement the project. However, parts of the project, in particular the simulation farming game, became popular in other countries, including Germany, Israel, and Great Britain (Stoltman, 1989).

During the 1970s and 1980s, American geographic illiteracy became evident from results of studies by NAEP, and Gallop poll reports (Meredith, 1985; Peterson, 1987; Murphy, 1998; Salter, 1990; Petersen, et al., 1994). In a 1987 CBS News affiliate survey, 25 percent of Dallas seniors could not name the nation that borders the United States on the south. Moreover, nearly half of students in Baltimore could not locate the United States on a world map. Furthermore, half of the students in Minneapolis could not name three countries in Africa and 95 percent of freshmen at a midwestern university could not find Vietnam on a map (Grosvenor, 1987; Schwartz, 1987). Stoltman (1991) reported that more than half of U.S. students were failing to achieve geographic literacy. In a 1991 survey reported in *The Washington Post* (Will, 1991) less than 50 percent of students tested

could locate New York on a map and 63 percent of students could not locate France on an unlabeled map. A *Dallas Times-Herald* survey in 1983 proclaimed that more than one fifth of that city's elementary students could not locate the United States on a world map (Viadero, 1992). Viadero further reported that Americans ranked in the bottom third of a ten nation Gallup Poll of adult geographic knowledge conducted in 1988 and 1989. More appalling was the fact that 18 to 24 year olds ranked last among the nations in geography literacy (Munroe & Smith, 1998). In a more recent survey commissioned by the Colonial Williamsburg Foundation, one in five teenagers did not know some of the basic fundamentals in history and geography of the United States (Haines, 2001). The survey, administered by Caravan®ORC International, asked basic fourth grade level questions. Some indicators of illiteracy reported were that 24 percent of American teenagers did not know who fought in the Civil War, 19 percent could not identify the three branches of government, 31 percent did not know who wrote America's national anthem, and 17 percent did not know that there were 13 original colonies (Colonial Williamsburg Foundation, 2001). Patrick (1998) argued that the lack of geographic knowledge is related to the lack of a solid foundation in geography. Patrick further reported that geography is often integrated into social studies courses, and only one student in seven takes a high school geography course.

Aside from geography receiving sort shrift in the curricula, many social studies teachers were not educated to teach geography (Spetz, 1988; Bednarz, 1989; Murphy, 1998; Jumper, 1991; Fitzhugh, 1992a; Hill, 1994; Marran, 1994a; Petersen, et al., 1994; Hermann, 1995; Morrill, et al., 1995). Grosvenor (1987) reported that in a survey of teacher training, 30 percent of teachers who taught geography in grades seven to twelve

never had a college geography course. Farrell and Cirrincione (1989) reported the findings of survey sent to social studies teachers randomly chosen from the National Council for Social Studies (NCSS) membership. Results indicated that 26 percent of teachers had no undergraduate training in geography, 55 percent had between one and three courses in geography, and only 10 percent of the social studies teachers identified themselves as geography teachers. In 1988, the National Council for Social Studies (NCSS) reported that less than 44 percent of teachers were required to complete geography coursework in order to be certified (Fitzhugh, 1992a). Goldman (1990) found that only one-third of Tennessee teachers had any sort of preparation to teach geography. In 1991, NCGE reported that only five states required geography for elementary certification and only two-thirds required any geography for secondary social studies certification (Morrill, et al., 1995; Gilsbach, 1997).

Most social studies teachers have an undergraduate degree in education and neither a major nor a minor in their content area (Ravitch, 1998). In a survey conducted by Fitzhugh (1992b) comparing preservice education of newly hired teachers to experienced teachers, only 37 percent of experienced teachers had taken a geography course. Although Fitzhugh reported that newly hired teachers had a better background in geography than experienced teachers, other researchers complained that preservice teachers were not receiving formal preparation in geographic methods and techniques (Murphy, 1998; Boehm, Brierly, & Sharma, 1994; Marran, 1994a). Geography professors, having to teach remedial lessons to begin their courses, expressed concern that entering freshman did not leave high school geographically literate (Meredith, 1985; Ravitch, 1998).

Libbee & Stoltman (1988) summed up the major concerns for geography education as inappropriate curricula requirements for teacher certification, lack of initiative by professional geographers for participation in national curriculum movements, and confusion about the definition of geography in the curriculum. Fitzhugh (1992a) agreed, but added a concern for developing tests that require more than just memory recall or place-name geography.

Geography Renaissance

Evidence of geographic illiteracy reported increasingly by the nation's news media and public disenchantment over the ignorance of American students created a niche for a campaign to eradicate geographic illiteracy (Peterson, 1987; Viadero, 1992; Gilsbach, 1997). Since 1957, when the United Soviet Socialist Republic (U.S.S.R.) launched the world's first artificial satellite, the issue of falling behind in science and the feeling of the need for an improved education system permeated American society (James, 1990; Martin & James, 1993). The launch of Sputnik spawned the National Defense Education Act (NDEA) in 1958, which made available federal funding to improve the teaching of science, math, and foreign language in American schools. In 1964 additional funding was designated to other fields, including geography (James, 1990; Martin & James, 1993).

Geography experienced a significant renaissance, largely due to efforts by the National Geographic Society (Goldman, 1990). On its centenary in 1988, the National Geographic Society established an Education Foundation with an endowment of \$20 million dollars earmarked to improve geography literacy (NGS website; Jumper, 1991). The Society offered matching funds to individuals, foundations, corporations, or state

governments who contributed to the endowment. The goals of the NGS Geography Education Program were “a) to increase public awareness of the importance of geography, b) to increase the emphasis on geography in grades K-12, and c) to improve geography teaching methods and materials” (Binko, 1989, p. 5). Another goal was to develop a nationwide teacher support network with the creation of Geography Education Alliances coordinated by university-based geographers (Peterson, 1987).

A cornerstone of the NGS Education Foundation public awareness campaign was the distribution of more than six million free United States map-posters that illustrated the five fundamental themes of geography (Peterson, 1987). The Society also produced various educational materials and introduced an annual Geographic Bee (Goldman, 1990). Materials available for educators included *Reading Expeditions*: a series of non-fiction books, *Big Books*: large, colorful science and social studies books, educational videos, *MapPacks*: colorful map transparencies, and many types of CD-ROMs. The Geographic Bee was designed to “encourage teachers to include geography in their classrooms, spark student interest in the subject, and increase public awareness about geography (NGS website).” The Bee involves as many as five million students a year (NGS website).

As a result of the public awareness campaign, there were significant increases in geography enrollments in college courses, increased numbers of geography majors, and heightened awareness of the importance of geography (Jumper, 1991). The National Geographic Society also noted an improvement in the number of geography courses included in the K-12 curriculum, the number of states requiring geography for graduation from high school, and the number of state universities requiring geography for admission

(NGS, 1998). Petry (1995) reported that enrollments in general geography courses rose 16.6 percent between 1990 and 1995.

On June 9, 1987, Senate Joint Resolution 88 proclaimed the first Geography Awareness Week (see Appendix F for complete resolution). The resolution presented a definition of geography, quoted nation-wide statistics of geography illiteracy among students, and provided evidence of the importance of geography:

Whereas an ignorance of geography, foreign languages, and cultures places the United States at a disadvantage with other countries in matters of business, politics, and the environment;

Whereas the United States is a nation of worldwide involvement and global influence, the responsibilities of which demand an understanding of the lands, languages, and cultures of the world; and

Whereas national attention must be focused on the integral role that knowledge of world geography plays in preparing citizens of the United States for the future of an increasingly interdependent and interconnected world: Now, therefore, be it

Resolved by the Senate and house of Representatives of the United States of America in Congress assembled, That the period commencing November 15, 1987, and ending November 21, 1987, is designated as "Geography Awareness Week," and the President is authorized and requested to issue a proclamation calling upon the people of the United States to observe such week with appropriate ceremonies and activities (Senate Joint Resolution 88, 1987).

The senators sponsoring the resolution reiterated the statistics reported by the media during this time of geography renaissance. Senator Armstrong announced concern

that Americans did not understand other lands and culture and possess the knowledge needed for global responsibilities. Senator Sanford pointed out that lack of geography education deterred Americans from competing effectively in world trade markets. Senator Stafford concurred that improved geography education was needed in order to sustain economic competitiveness and global responsibilities. Along with Senators Kennedy, Bradley, and Wilson, the co-sponsors of the resolution announced the importance of geography in preparing young Americans to live in a global community (Senate Joint Resolution 88, 1987).

The Five Fundamental Themes

In 1984, the Joint Committee of NCGE and AAG introduced the five themes of geography as a blueprint for improving the teaching and learning of geography (GENIP website). The themes progressed logically, beginning with *location*, in absolute or relative terms. *Place* elaborated upon location endowing it with physical or cultural characteristics. *Human-environment* interactions referred to relationships within places. Spatial interactions among places constituted the theme of *movement*. Distinctive characteristics of places defined the theme of *regions* (Petersen, et al., 1994).

The five fundamental themes presented a focus for geography instruction that teachers could use at any grade level (Petersen, et al., 1994). Textbook publishers wove the themes into content organizers, and map companies produced a variety of materials utilizing the five themes. The themes provided a useful starting point for curriculum planning and clearly defined geography as more than place names (Hill, 1989). Petersen, et al. further reported that the adoption of the five fundamental themes played a

prominent role in national assessment initiatives, the development of educational media, as content structure for the alliances, and the foundation for curricula change.

The five fundamental themes are not a taxonomy. Teachers should not teach the five themes, but rather use the five themes to teach geography (Boehm & Petersen, 1994). The themes conveyed core ideas of geography to the general public, vying that geography was very complex and diverse and more than just location and place. The Geography Education Alliances used the five themes in the inservice training of teacher consultants (Morrill, et al., 1995).

Geography Education National Implementation Project

The formation of GENIP continued and elaborated upon the work of the Joint Committee by engaging in several projects. In the *Guidelines For Geographic Education: Elementary and Secondary Schools*, GENIP expanded the five fundamental themes by identifying key ideas for teaching each theme, and included scope and sequence and suggested learning outcomes for K-12 students. The *Guidelines* also outlined geographic skills that students must acquire to become geographic thinkers and learners (Ludwig, et al., 1991).

An Advanced Placement (AP) course in Human Geography was introduced in 2000 for high school students to gain college credit. GENIP sponsored AP certification workshops to prepare teachers for the AP classes. NASA and GENIP collaborated to produce a CD-ROM of curriculum support materials that link NASA's missions with national geography standards. GENIP focused on five key areas:

1. the dissemination and implementation of the content, skills, and perspectives of the National Geography Standards in both formal and informal education settings,
2. the use of geographic tools and technology in education,
3. the development of effective materials and programs in preservice and inservice education,
4. the development of partnerships with other stakeholder organizations, and
5. public advocacy for geography education (GENIP website).

GENIP represented a cooperative effort by four major geography organizations to improve the quality of geography education in the U.S. in the areas of resources, teacher preparation, and assessment. Its mission was to develop teaching materials, review teacher certification standards, and develop teacher-training institutes and workshops. The efforts initiated would produce a cadre of leaders and advocates among teachers and advising groups who prepared diagnostic and competency tests (Petersen, et al., 1994). To encourage reform efforts in schools of education, the project also created a task force to identify preservice needs in geography education (Bednarz & Bednarz, 1995).

National Geographic Bee

Another manifestation of the renaissance of K-12 geography education came in the form of the popularity of the National Geographic Bee. Between 1989 and 1992, participation in national geography competitions doubled with six million vying to be the National Geographic Bee champion (Viadero, 1992). The National Geographic Society created the National Geographic Bee in 1988 in response to the concern about the lack of geographic knowledge among young people in the United States (NGS website). The Bee

is open to students in grades four through eight, and is conducted at three levels. At the school level, materials are provided by NGS, and prizes are awarded to the winning student. School winners take a written test, and the top one hundred scorers in each state compete at the state level. Winners at each state Bee proceed to the national level to compete in the finals at the headquarters of NGS in Washington, D.C. The first place winner receives a \$25,000 college scholarship, and the second and third place winners receive a \$15,000 and \$10,000 college scholarship respectively. In 1993, NGS also organized an International Geographic Olympiad. The first competition was held at the Royal Geographical Society in London. Later competitions were held in Florida, Washington, D.C., Toronto, and Vancouver. The international competitions take place every two years (NGS website).

Geography Education Improvements

In 1990, Tennessee high schools experienced a one hundred percent enrollment increase in geography courses over a three-year period (Goldman, 1990). Goldman further reported that the University of Tennessee required one-semester of either geography or world history for all entering freshmen and the University of Colorado required a full-year of world geography for admittance to the College of Arts and Sciences. Furthermore, Kentucky schools required that all fourth graders receive at least twenty minutes per day of geography instruction. Viadero (1992) cited additional evidence of a geography renaissance in Illinois where more than 500 students took elective classes in geography. Moreover, separate geography classes were being taught in high schools, and a university in Tennessee had to turn away students from geography courses because demand was too great. Murphy (1998) reported additional evidence of

the renaissance of geography in that more elementary and secondary schools required geography courses, and the College Board added Advanced Placement (AP) courses for geography to high school curricula. The importance of geographic literacy had also filtered to the business world in that businesses sought employees with proficiency in geographic analysis.

Another thread in the arsenal to revitalize geography education was in the sphere of teacher resources. The development of *Activities and Readings in the Geography of the United States* (ARGUS) and the *Geographic Inquiry Into Global Issues* (GIGI) provided new methods and materials for the geography educator. The ARGUS Project consisted of computer and printed materials to help students use maps as analytical tools, apply spatial perspectives to problem solving, and to develop the ability to see meaning in the landscape (Hill, 1994). The text contained 26 case studies that illustrated geographic concepts of typical U. S. regions, and 35 student activities that encouraged geographic research to solve real-world problems (ARGUS website). The components of the GIGI Project consisted of materials for secondary schools designed to help teach responsible citizenship and critical thinking through geography awareness (Hill, 1994). Two issues-based modules for each of ten world regions stressed geographic inquiry through questions about the real world and answers with real data. The modules covered such issues as religious conflict, human rights, urban growth, hunger, and waste management in the countries of Japan, former Soviet Union, East Asia, Europe, South Asia, Australia/New Zealand/Pacific, North Africa/South-West Africa, Latin America, and Southeast Asia (Hill, 1994).

In 1992, the National Council for the Social Studies (NCSS) adopted ten thematic strands to form the basis for social studies standards, which encouraged experienced-based learning, and joining school and community together in an effort to connect society and the world in the teaching/learning process (Blanchard, Senesh, & Patterson-Black, 1999). The standards presented in *Geography for Life*, the five themes created by the Joint Committee, and the strands adopted by NCSS provided educators with a framework and material for curriculum improvement. Yet it was not until 1999 that the Grosvenor Center for Geographic Education launched a project to develop content-specific scope and sequence in geography education for grades K-12. The resulting sixty-page booklet entitled *Path Toward World Literacy: A Standards-Based Guide to K-12 Geography* made clear statements of what students should learn in geography and how it should be learned (Hume & Boehm, 2001).

Geography Education Alliances

One of the more successful movements for improvement of geography literacy came through the efforts of the National Geographic Society Education Foundation. Dulli (1994) reported that the NGS believed teachers to be the key for educational change and curriculum reform. In 1985, Geography Education Alliances were initiated in which networks of teachers, administrators, and college professors dedicated themselves to the improvement of geography education in K-12 classrooms (Grosvenor, 1987). Teachers would gain geography content, develop expertise in creating lessons, practice inservice presentations, and receive up-to-date geographic educational materials. Alliance coordinators identified small groups of teachers to send to Washington, D.C. for the training of the first teacher consultants (TCs). Subsequently, the consultants returned to

their states to conduct two-week Alliance Summer Geography Institutes (ASGIs) to provide a forum for teacher training in geography education and methods in a grassroots movement to revise curriculum and improve instruction (Grosvenor, 1987). The mission of the institute was to instruct teachers on how to teach geography and provide them with high-tech audiovisual lessons that could be used to motivate students (Jumper, 1991). The institute was designed to introduce teachers to the five fundamental themes of geography, give examples of hands-on learning activities, and promote awareness of the importance of geography. Lessons meeting the geography standards were modeled in the ASGIs by the newly trained teacher consultants, and trainees were required to develop and present their own lessons. Using a model developed by Binko (1989), teachers were prepared to develop and deliver workshops to their colleagues and peers upon returning to their communities. The Binko workshop presented guidelines on how to prepare, conduct, and evaluate a presentation. The new TCs were then required to return to their school districts and conduct inservice activities to guide other teachers (Grosvenor, 1987; Hill, 1989; Dulli, 1994; Ormrod & Cole, 1996).

Participants attended the institute free of charge and were exposed to geography content, strategies for teaching, hands-on activities, and observational field trips (Ormrod & Cole, 1996). Teachers received teaching resources including atlases, books, maps, videotapes, and lesson plans to use in their classrooms and inservice presentations. The Alliances grew from seven states in 1986 to 53 Alliances by 1994, one in each of the fifty states with two in California, one in Canada, and one in Puerto Rico. Since 1985, more than 11,000 teachers have been trained as teacher consultants from Geography Education Alliances (NGS, 1998).

The NGS Education Foundation's Alliance initiative was not without critics. Hill (1994) contended that teacher lessons from the Alliance Summer Geography Institutes were often illegally copied and unreadable with no unifying sequence. Hill further explained that there was not enough geography content material in a two-week institute for the high quality instruction needed to meet the new geography standards. Fuller (1989) was another detractor from the effectiveness of ASGIs contending that the Alliance concept did not promote assessment of student learning in the classroom. In contrast, Cole and Ormrod (1995) reported that ASGI graduates made substantive changes in how they taught geography, and conducted high-quality inservices to inspire their colleagues to change their teaching practices. In 1992, the researchers surveyed participants in nine two-week summer institutes in seven states. Participants completed evaluations and follow-up questionnaires to determine whether their classroom teaching had changed as a result of attending the institutes. Eighty-eight percent reported changes in teaching methods, 69 percent reported changes in teaching materials, and 25 percent reported increased use of technology. Ninety-four percent of the new TCs reported conducting one or more inservice workshops after returning to their school districts. Cole and Ormrod concluded that the ASGIs were an effective means of promoting change in geographic education.

In a survey reported in 1994 by Katzenmeyer, 96 percent of ASGI graduates from 24 states reported changing the way they teach geography (Cole & Ormrod, 1995). Teachers involved in this grassroots movement have reached more than three million students. (Ormrod & Cole, 1996). The Geography Education Alliance network provided links to both effective teaching models and access to quality geographic educational

materials (Salter, C., 1991b). Aside from the NGS surveys and the surveys by Cole and Ormrod, little research has been conducted to assess the effectiveness of the summer institutes (Downs, 1994).

The Alliances have spent considerable efforts to increase public awareness of the importance of geography education and geographic literacy (Salter, K., 1991). The National Geographic Society established a permanent endowment and committed more than \$70 million dollars to the program (Viadero, 1992). After more than a decade, the NGS changed the policy for funding Geography Education Alliance Programs. The NGS will grant a one-time match of up to \$500,000 dollars, creating a one million dollar state endowment in order to create a revenue source and establish a permanent, self-sustaining source of funding for the state Geography Alliance (NGS website). Because most education reform and curricula changes occur at state and local levels, the Alliance mobilizes education activists to develop fundraising skills and to serve as advocates for change at the local level (Grosvenor, 1989).

Although it differed from Alliance to Alliance, typically ASGIs were team-taught by college professors and trained teacher consultants (Grosvenor, 1989). By actively supporting the geography education programs, universities and colleges experienced increased enrollment, a higher profile for geography and more funding for their programs (Jumper, 1991). The partnership between university geography professors and elementary and secondary teachers produced better trained and more knowledgeable and effective content geography teachers and increased public awareness in the field of geography (Bednarz, 1989). Cohen (1988) suggested that geography taught to college students, particularly those in the College of Education, and the geography education research

conducted at universities should be the source for improved geographic education in public schools and greater awareness in the public arena. In the past, there had been a sense of disdain and a lack of cooperation between academic geographers and educators (Bednarz & Bednarz, 1995; Gilsbach, 1997). For example, geographers who worked with educators were often held in low esteem by their colleagues (Bednarz & Bednarz, 1995). Salter, C. (1991b) maintained that the alliance created an exciting forum for productive idea exchange and provided a support mechanism for improved geography instruction at all levels of the education spectrum.

The NGS Education Foundation supported teachers as agents of change in the classroom in their efforts to improve student achievement, support the implementation of standards, provide field experiences for students, conduct community projects, and deliver professional development to their peers (NGS website). Yearly, the Foundation allots \$100,000 for Teacher Grants of up to \$5000 each for innovative geography education projects that either promote geographic knowledge through education or promote stewardship of natural or cultural resources. Additionally, the Foundation offers the Grosvenor Grant Program, selecting 25 to 35 proposals of \$50,000 to \$70,000 each, for Geographic Alliances and other nonprofit educational organizations that involve teachers, communities, and businesses as partners in geographic education (NGS website).

Guidelines for Teachers

For the Alliance network to be effective, it became important that teachers were aware of the Alliance network and the related national and state standards (Hermann, 1995; Ludwig, 1995; Morrill, et al., 1995). This would amplify the demand for teacher

inservice training for increased geographic literacy (Cole & Ormrod, 1995). The Alliance network provided free, quality instructional materials and demonstrated to teachers how to use these materials. Drawing upon research, Cole and Ormrod (1995) concluded that teacher planning and implementation of inservice training and peer modeling, such as conducted by the Geography Alliances, resulted in higher participation and was more effective in bringing about change in teaching strategies and methods. Teachers were encouraged to compliment the textbook with standards-based, hands-on lessons in the classroom. Grosvenor (1987) asserted that technology must be harnessed and that traditional materials would no longer only be successful in the teaching of geography. Yet, Hill (1994) averred that even if teachers have quality training, they often do not have access to superior teaching materials or technology. If teachers only teach lessons to preprinted tests provided by textbook companies, students will not make the connection between the real world and the content (Gay, 1995).

Teachers are often confused about the purpose of social studies and how to teach it, and therefore downgrade its importance in the curricula (Brophy, et al., 2000). Fitzhugh (1992a) insisted that teachers need quality inservice presentations, because what they do not know or understand will receive low priority in the classroom. Thornton and Wenger (1990) acquiesced that teacher knowledge strongly influences what is included in the curriculum. The researchers further found that many teachers do not perceive geography as a priority. Dowd (1990) explained that teachers feel less prepared to teach geography than more familiar subjects, such as reading and math. Boehm and Petersen (1994) concurred that teachers often feel more comfortable teaching subjects in which they have had better preparation. Teachers cannot teach what they have not been

taught (Boehm & Petersen, 1994; Ludwig, 1995; Petry, 1995; Gilsbach, 1997).

Researchers maintained that it is the teacher who dictates the curriculum agenda (Natoli & Gritzner, 1988; Thornton & Wenger, 1989). Salter, K. (1991) agreed that once inside the classroom, only the teacher could implement real change.

Brophy, et al. (2000) pointed out that few teachers have sufficient knowledge about social education to contribute to the development and planning of curricular goals, and therefore rely on local resources or educational materials from major publishers to guide their decisions, especially the textbook. Since many textbook publishers model their products on state-established adoption guidelines, texts often offer unrelated facts and isolated skill exercises. The researchers further propounded that unprepared teachers, relying on these texts, tend to follow the dreary routine of having students read the chapter and answer the questions at the end (Brophy, et al., 2000). Ediger (1998) proposed that a quality social studies teacher should capture learner interest, demonstrate meaningful learning experiences, stimulate purposeful learning, provide opportunities for student success, and encourage application of acquired learning. Stoltman (1991) urged educators to emphasize active learning by encouraging the use of hands-on investigations that apply geographic knowledge to solve realistic problems. The lack of diverse effective teaching models has created teacher-centered, lecture-driven educators who encourage the student vote towards social studies as being the least favorite among major school subjects (Brophy, et al., 2000).

Gay (1995) has suggested matching preservice students with trained alliance teacher consultants to expose them to quality lessons and materials to improve geography instruction practices before they enter the classroom. Thornton and Wenger (1990) and

Morrill, et al. (1995) agreed that preservice teacher education was the obvious place to affect reform. Geography is often not required in the education degree, and the social studies methods classes are often taught by professors with little knowledge of geography (Bednarz & Bednarz, 1995). Usually, language arts and mathematics are heavily emphasized in teacher education programs, with many preservice teachers only taking a single course in social studies (Brophy, et al., 2000). Utilizing the national standards in preservice teacher education will ensure that future teachers will incorporate the standards and improve geography teaching and learning (Morrill, et al., 1995).

In 1991, the National Council for Geographic Education published a position paper outlining recommendations for the geography component of teacher education. The paper suggested that all preservice programs should include basic geography content, and that methods courses should emphasize the use of geographic tools and techniques (Gilsbach, 1997). Spetz (1989) offered these recommendations for the training of geography/social studies teachers.

1. The prospective teacher should have the education courses necessary for certification.
2. The teacher must be aware of the newly developed geography materials and have experience in their use.
3. The teacher should have at least a minor in formal geography training.
4. The teacher should be confident in the use of maps, globes, and computers in teaching geography.
5. The teacher should be familiar with the use of field trips in teaching geography.

6. The teacher should be innovative by incorporating geography into the teaching of other subject areas (p. 46).

In a publication entitled *The Importance of Geography in the School Curriculum*, NCGE (1994) suggested ways to improve geography instruction: a) implement the national standards into the classroom, b) encourage student participation in nation-wide geography contests, such as the NGS Geographic Bee, c) hire qualified, enthusiastic teachers, d) encourage teacher affiliation with state geography education alliances, e) provide up-to-date equipment for geography classrooms, and f) encourage creative teaching methods to make geography interesting and exciting. Binko (1989) pronounced that “through improvement of the teaching of geography, student understanding of geography will improve” (p. 7).

Geography Standards

Setting geography standards was a giant step toward nationwide education reform (de Souza & Munroe, 1994). The National Geography Standards provided a guideline as to what students should know and be able to do as active and responsible citizens (Hill, 1994; Marran, 1994b; Wilbanks, 1994). These standards provided a geographic perspective to teachers and enabled them to improve teaching strategies and create beneficial lessons with real life applications (Gay, 1995). NCGE (1998) proclaimed that the standards were student-centered and not a composition of what or how teachers should teach. Standards defined what students should know and be able to do, and provided a basis of measurement for achievement of those goals (Downs, 1993; Marran, 1994b; Geography Education Standards Project, 1994). The standards forged a link between curricula and assessment (NCGE, 1998b).

There are eighteen National Geography Standards that are grouped into six essential elements (see Appendix A for the standards and elements). The *Executive Summary of the National Geography Standards* (de Souza & Downs, 1994) presented a description of the six essential elements:

1. **The World in Spatial Terms:** Geography studies the relationships between people, places, and environments by mapping information about them into spatial context.
2. **Places and Regions:** The identities and lives of individuals and peoples are rooted in particular places and in those human constructs called regions.
3. **Physical Systems:** Physical processes shape Earth's surface and interact with plant and animal life to create, sustain, and modify ecosystems.
4. **Human Systems:** People are central to geography in that human activities help shape Earth's surface, human settlements and structures are part of Earth's surface, and humans compete for control of Earth's surface.
5. **Environment and Society:** The physical environment is modified by human activities, largely as a consequence of the ways in which human societies value and use Earth's natural resources, and human activities are also influenced by earth's physical features and processes.
6. **The Uses of Geography:** Knowledge of geography enables people to develop an understanding of the relationships between people, places, and environments over time—that is, of Earth as it was, is, and might be (pp. 14, 15).

One of the purposes of the standards was to bring U. S. students on par with international competitive levels (Geography Education Standards Project, 1994). Diegmueller (1994) paraphrasing Downs, who served as the lead writer for the project, stated that these standards exceeded what students in other countries are expected to know and have mastered. Grosvenor agreed that the standards created a guideline for a world-class education (Diegmueller, 1994). Yet, Bednarz (1997) pointed out that Cheney, former head of the National Endowment for the Humanities, reminded the American public that traditionally the educational system has been controlled locally, not federally. State efforts to implement the standards would prove a better measure of the improvement of geography education than a top-down national endeavor. Cheney's assertion seemed on the mark, as a number of states adopted social studies frameworks that marginalized the role of geography in the curriculum (Hume & Boehm, 2001).

The Fordham Foundation commissioned an appraisal of state academic standards in each of the five core subjects designated by Goals 2000. In 1997, the Foundation conducted an appraisal of state geography standards in 38 states and the District of Columbia. Criteria were developed to judge the general characteristics, rigor, and comprehensiveness of the state geography standards. The final geography report ranked the 38 states and the District of Columbia on the thoroughness of integration of national geography standards into state frameworks. Six states received honor grades and 18 failing grades. Colorado led the states with a perfect score, followed by Indiana and Texas with A scores, and Michigan, New Hampshire, and West Virginia with B scores. The states receiving failing grades presented standards too thin in content, too generally stated, or too muddled to be of value (Munroe & Smith, 1998).

Geography was considered a single subject in some states, but integrated into social studies in others, and there was no commonality in the structure of the standards (Bednarz, 1998). Manzo (1998) was more caustic in his assertion that most state standards lacked rigor and clarity and were therefore practically useless. Part of the confusion resulted from a document released in 1994 by the National Council for Social Studies (NCSS), *Expectations of Excellence: Curriculum Standards for Social Studies*, which introduced curriculum standards based on ten thematic strands. These strands include a) culture, b) time, continuity and change, c) people, places and environments, d) individual development and identity, e) individuals, groups and institutions, f) power, authority and governance, g) production, distribution and consumption, h) science, technology and society, i) global connections, and j) civic ideals and practices.

The thematic strands contrasted with the disciplined-based standards introduced in the *Geography For Life* publication. Cast with the five fundamental themes introduced in the *Guidelines for Geographic Education*, the models complicated the job of standards developers in creating a definition for geography (Munroe & Smith, 1998).

Marran (1994b) proposed that significant changes would occur with the adoption of standards, such as textbook content, styles of assessment, instructional methods, teacher education and staff development programs, and the introduction of new technologies. Reeves (2001) suggested significant effects when using standards as a focus of assessment: a) student performance is compared to standards rather than a norm, b) students are required to demonstrate proficiency rather than guess the answer, c) standards are not veiled in secrecy, and d) standards ensure improvement of student learning.

Munroe & Smith (1998) vied that using the standards for the development of assessment instruments offered further opportunities to clarify the meaning of geography.

Bednarz (1998) has contended that there are not enough geography education materials readily available to help students and teachers make the leap to higher standards. Although the geography curriculum should be tailored to the specific context of an area, Downs (1993) suggested that geography standards should also accommodate new discoveries with regard to the environment, human society, public policy, and advances in technology. State and district curricula standards shape the content of textbooks and therefore, the way of social studies teachers teach (Brophy, et al., 2000). Bednarz (1998) agreed, "that despite national standards, the states still play a large role in shaping geographic education" (p. 87).

Summary

In spite of the importance of geographic skills and tools, geography's place in the curricula of American schools has been inconsistent. From a distinct, separate course in the nineteenth century, to its emergence into the social studies field during the twentieth century, geography began to disappear into the time left over at the end of the day. In the 1980s, attitudes toward the importance of geography began to undergo a substantial change. Media reports pushed geography into the minds of the populace. Professional organizations joined together to produce documents and standards for geography educators. The National Geographic Society spent millions of dollars to campaign for geography awareness. The NAEP geography assessment and Gallup surveys revealed the need for significant reform in geographic education. The Education Summit, which

resulted in the establishment of Goals 2000, implied the value of geography and ignited a renaissance movement toward widespread acceptance that geography is essential for life.

CHAPTER 3

METHODOLOGY

This chapter describes the research design of this study, the development of the survey used, the selection of subjects, methods of pilot testing, and procedures used in data collection and analysis. Also discussed will be the purpose of the study and the rationale for the use of a survey.

There have been many reforms made in geography education since the 1980s, including the development of national geography standards. The National Geographic Society developed a Geography Education Foundation to introduce a grassroots movement for curricula change through teacher inservice institutes. Furthermore, geography was recognized as a core subject in the curriculum designated by President Bush and the governors of the United States of America as part of the competency requirements of *Goals 2000*. It was important to know whether or not these reforms led to the implementation of standards-based geography education. The purpose of this study was to determine the relationship between various independent variables and the implementation of national geography standards in PK-12 classroom instruction following the development of these reforms. The study was conducted using a questionnaire designed by the researcher.

Research Design

This study followed the causal-comparative research design. According to Crowl (1996), in causal-comparative research the groups have already been formed according to values of a variable before the study has begun. The researcher used quantitative methods to compare the mean number of national geography standards across different groups. One dependent variable, the implementation of national geography standards into the curriculum, was examined to determine its relationship to the independent variables of preservice teacher training, participation in Alliance Summer Geography Institutes or geography workshops, years of teaching experience, and the number of minutes per week geography was taught. Analyses of data were conducted with Independent Samples t-tests and Analysis of Variance (ANOVA). The Scheffé's post hoc test was used to identify mean differences among the groups.

Survey Development

The researcher designed a questionnaire and sent it for review to four professional geographers in Texas and Louisiana, and eight social studies educators in seven states. The survey was intentionally designed to be short and easy to complete to increase the probability of receiving a greater response rate (see Appendix B for survey). The development of the instrument followed an extensive literature review associated with the renaissance of geography over the last decade. The first part of the survey collected demographic information about the teachers. Questions included such items as years of teaching experience, preservice training in geography, use of geographic educational materials, attendance at geography workshops or institutes, grade levels taught, and the number of minutes per week allotted to the teaching of social studies/geography. The

second part of the survey consisted of yes/no questions with regard to the implementation of each of the eighteen national geography standards.

This survey was designed to establish whether national geography standards are included in the PK-12 social studies/geography curriculum. The data collected were analyzed to determine answers to the research questions and to envision implications and recommendations for future research in standard-based geographic education.

Rationale for the Use of a Survey

According to Crowl (1996), surveys are typically used when the population under consideration is relatively large. Internet surveys are beneficial in saving both time and money (Schmidt, 1997), and are useful in reaching across geographical borders (Coomber, 1997). Since the population of teacher consultants is both large and widely spread across North America, it was advantageous to use an Internet survey. Disadvantages from using an Internet survey included lack of representation from those who do not have access to the Internet (Coomber, 1997), and lack of control of the population which could access the URL (Schmidt, 1997). Validity could be maintained by collecting demographic data to check the population (Schmidt, 1997).

Procedures

Since the instrument used in the study was developed by the researcher, a pilot study was necessary to validate the instrument itself. In the first phase of the pilot study, the survey was dispersed to obtain feedback from professional stakeholders who examined the product for content validity. Several university professors, teachers, supervisors, and principals from places other than the population sample were sent the

pilot survey along with a letter inviting written comments and questions underscoring the researcher's desire to make changes and improvements prior to the study. Refinements in wording and formatting resulted from the feedback.

In the second phase of the pilot study, the revised questionnaire was then distributed to approximately 300 teachers not included in the population sample for the final survey. Ten elementary, middle, and high schools were randomly selected from a school district in northwest Louisiana to receive the survey. Again, a letter was included inviting written comments and questions to improve the survey. The questionnaire was also sent to the 94 Louisiana Teacher Consultants. Since Teacher Consultants (TCs) are generally trained in the same method throughout the Geography Education Alliances, the results should be indicative of the national population sample. The Louisiana TCs were not included in the population sample for the final survey. The responses were collected and analyzed, both in terms of data gathered, and as a method of detecting and correcting weaknesses in the instrument. Revisions in the instrument were made prior to the national and local study.

The revised survey was placed on a Universal Resource Locator (URL) through a local university, and the address was e-mailed to a random sample of the 53 Geography Education Alliance coordinators in the United States, Canada and Puerto Rico to be forwarded to teacher consultants via e-mail for the national survey (see Appendix D for e-mail to coordinators). The e-mail contained additional URLs of geography education websites that would be beneficial to teachers.

For the local sample, the survey was distributed by the intra-district communication delivery system to teachers throughout two northeast Louisiana school

districts. The two districts were chosen for several reasons. First, the supervisors of each district were known to be very supportive of educational research and had agreed to encourage teachers to return the surveys. Secondly, the school districts only had two Teacher Consultants trained by an Alliance Summer Geography Institute (ASGI). Survey responses could then be compared between teachers ASGI-trained and teachers who were not ASGI-trained. Finally, the two districts incorporated state geography standards into the curriculum that were based on the national geography standards.

Permission was first obtained from the superintendent of each district to conduct the survey. Copies of the survey were then sent to the principals of each school in the districts to distribute to the teachers. The appropriate human use permission was secured (see Appendix C for letters of correspondence). Teachers were given a date to return the surveys, and a follow-up letter was sent to encourage tardy responses. The Curriculum Supervisor or Social Studies Supervisor for each school district was contacted to collect the returned surveys through the intra-district communication delivery system.

Population

The population sample for the national survey included approximately 2,925 teacher consultants from 25 Geography Education Alliances that fall under the Education Foundation umbrella of the National Geographic Society in the 50 states, Canada, and Puerto Rico. The population sample for the local survey included approximately 1,198 PK-12 teachers from 49 schools in two northeast Louisiana school districts who may or may not have attended geography workshops. The local teachers were surveyed to provide a comparison between teachers trained at Alliance Summer Geography Institutes (ASGIs) and teachers who received no training at an institute. Since the Teacher

Consultants for the Louisiana Geography Education Alliance are concentrated in central and south Louisiana, there are only two teachers in the school districts that have been trained at an ASGI.

Data Analysis

Data from the study were analyzed using Independent Samples t-tests and Analysis of Variance (ANOVA). Independent variables included in the analysis were preservice teacher training, years of teaching experience, attendance at Alliance Summer Geography Institutes (ASGIs) or geography workshops, and minutes per week geography was taught. The dependent variable was the implementation of national geography standards.

The Independent Samples t-test compares the means of two samples (Crowl, 1996). The independent variables of attendance at ASGIs and attendance at geography workshops were analyzed with the t-test. ANOVA is used to compare the means of two or more groups of subjects that vary on a single independent variable (Ferguson & Takane, 1989). The independent variables of years of teaching experience, preservice training, and minutes per week geography was taught included several values, and therefore were analyzed using the ANOVA. In the event of a significant ANOVA, post hoc tests are necessary to identify if the means of groups are different from the means of other groups. In this study, Scheffé's post hoc tests were utilized. ANOVA and the Independent Samples t-tests were used to analyze the level of implementation of national geography standards. The level of implementation was determined by adding the responses to the 18 national geography standards and creating a continuous dependent variable.

Research Questions

The following questions guided this investigation:

Question 1: Is there a significant relationship between the implementation of national geography standards and the amount of preservice teacher training?

Question 2: Is there a significant relationship between the implementation of national geography standards and years of teaching experience?

Question 3: Is there a significant relationship between the implementation of national geography standards and attendance at Alliance Summer Geography Institutes (ASGIs)?

Question 4: Is there a significant relationship between the implementation of national geography standards and attendance at geography workshops?

Question 5: Is there a significant relationship between the implementation of national geography standards and the number of minutes per week geography was taught?

Research Hypotheses

The hypotheses are stated in the null form.

Hypothesis 1: There is no significant relationship between the implementation of national geography standards and amount of preservice teacher preparation.

Hypothesis 2: There is no significant relationship between the implementation of national geography standards and years of teaching experience.

Hypothesis 3: There is no significant relationship between the implementation of national geography standards and attendance at Alliance Summer Geography Institutes (ASGIs).

Hypothesis 4: There is no significant relationship between the implementation of national geography standards and attendance at geography workshops.

Hypotheses 5: There is no significant relationship between the implementation of national geography standards and the number of minutes per week geography was taught.

Pilot Survey Results

Out of the approximately 300 parish teachers in 10 elementary, middle, and high schools surveyed in the pilot study, 43 (14%) returned the questionnaires. Twenty-five (27%) of the 94 Teacher Consultants (TCs) with the Louisiana Geography Education Alliance (LaGEA) returned the surveys. Very few teachers included comments for revision with the returned surveys, however, many indicated an interest in the results.

Statistical analyses from the pilot survey indicated a relationship between the implementation of geography standards and teachers trained at ASGIs or geography workshops, preservice training, and minutes per week geography was taught.

Data Collection

Data collection for this study began on the first of May 2002 and concluded at the end of the month. The survey instrument was placed on the Internet server at a local university in northeast Louisiana. The researcher e-mailed requests for participation to 25 randomly selected Geography Education Alliances. E-mail addresses for the coordinators were obtained from the National Geographic Society website (see Appendix D for contact information for Alliance coordinators). Recipients of the e-mail were given the URL for the survey and asked to forward the survey information via e-mail to their Teacher Consultants (TCs). As a further effort to increase teacher participation, the researcher additionally sent the URLs of various geographic educational websites. The

researcher subsequently sent another e-mail correspondence to the Alliance coordinators requesting the number of TCs who had been contacted concerning the survey.

In addition to the on-line research, the survey was delivered on the intra-school delivery system to 49 schools and approximately 1,986 teachers in two northeast Louisiana parishes. Principals from each of the 49 schools were contacted by telephone to encourage teacher participation. After three weeks the number of responses was reviewed by the researcher and determined to be sufficient because 152 participants had responded through the Internet survey, and 177 through the intra-school delivery system. By the end of May, 329 responses had been received and the statistical analysis process began.

Hypotheses Testing

Four questions on the survey were utilized in the data analyses. Question 2 asked: "What training or classes have you had for geography? a) one college course, b) more than one college course, c) workshop, d) self-study, e) as part of another course, f) other." For preservice training, choices a, b, and e were chosen to test Hypothesis 1: There is no significant relationship between the implementation of national geography standards and the amount of preservice teacher training. Choice c, the workshop, was used to test Hypothesis 4: There is no significant relationship between the implementation of national geography standards and attendance at geography workshops.

Question 5 on the survey asked: "How many minutes do you spend teaching geography per week? a) less than 30 minutes, b) 30 to 45 minutes, c) 60 minutes, d) 60 to 90 minutes, e) 90 to 120 minutes, f) more than 120 minutes." Responses were used to test Hypothesis 5: There is no significant relationship between the implementation of national geography standards and the number of minutes per week geography was taught.

Question 7 on the survey asked: "Have you attended a summer institute for teachers conducted by a Geography Education Alliance? a) yes, or b) no." The response was used to test Hypothesis 3: There is no significant relationship between the implementation of national geography standards and attendance at Alliance Summer Geography Institutes.

Question 9 on the survey asked: "How many years of teaching experience do you have? a) less than 5 years, b) 5 to 10 years, c) 11 to 20 years, d) more than 20 years." Answers were used to test Hypothesis 2: There is no significant relationship between the implementation of national geography standards and years of teaching experience.

The answers to each of the questions regarding the variables preservice training, inservice training, minutes per week geography was taught, and years of teaching experience were analyzed with regard to the implementation of national geography standards. The last question of the survey: "Do you implement these concepts in your classroom?" required a yes/no response to each of the 18 national geography standards.

Summary

National and state standards provide guidelines for curricula and assessment. This study endeavored through survey research to determine if national standards are being implemented in PK-12 schools. The researcher examined variables of preservice teacher training, participation in Alliance Summer Geography Institutes or geography workshops, years of teaching experience, and the number of minutes per week allotted to the teaching of geography to justify the implementation of standards, or lack thereof. Chapter 4 will contain the data gathered in this study.

CHAPTER 4

RESULTS OF STUDY

The purpose of this study was to examine the relationship between the implementation of national geography standards and a) training at Alliance Summer Geography Institutes (ASGIs) or geography workshops, b) amount of preservice training for geography, c) years of teaching experience, and d) number of minutes per week geography was taught. A survey was utilized, both locally and nationally, and Independent Samples t-test and Analysis of Variance (ANOVA) were employed in the analyses of data.

Survey Returns

The survey instrument was placed on the Internet server at a local university in northeast Louisiana. The researcher e-mailed requests for participation to 25 Geography Education Alliances, randomly selected from the 53 Alliances located in the United States, Canada, and Puerto Rico. Many of the Alliances had two co-coordinators, so 47 e-mails were sent. Addresses were obtained from the National Geographic Society website (see Appendix E for contact information). Five of the e-mails were returned due to incorrect addresses. Recipients of e-mails were given the Universal Resource Locator (URL) for the survey and asked to forward the survey information via e-mail to their

Teacher Consultants (TCs). The researcher subsequently sent another e-mail correspondence to the Alliance coordinators requesting the number of TCs who had been contacted concerning the survey. Based on the numbers sent in by nine coordinators, the researcher determined that approximately 2,925 teachers received the survey. One hundred fifty-two teachers (5%) from 15 states participated in the online survey. The researcher noted that approximately 39% of the online participants were not ASGI-trained. It was unexpected that not only TCs, but also regular classroom teachers would be asked to participate in the online survey. The researcher determined that 61% of the respondents had been ASGI-trained, and were therefore considered TCs.

The return rate for the participants of the online survey could not be accurately computed, because the researcher could not determine how many of the e-mail messages sent were ever received. E-mail messages would not have been returned to the researcher. Although the final number of participants in the study was known ($N=152$), the number of teachers who received the message requesting their participation was unknown.

In addition to the on-line research, the survey was delivered on the intra-school delivery system to approximately 1,986 teachers at 49 schools in two northeast Louisiana school districts. One hundred seventy-seven teachers (9%) from approximately 25 schools responded. Although the survey letter requested that the questionnaire be returned on the intra-school delivery system, many of the surveys were received through the mail. Therefore, the researcher could not determine exactly which schools participated in the study.

Demographics

A total of 329 teachers responded to the survey, 152 (46%) online and 177 (54%) from the two Louisiana school districts. In response to the question: “Do you teach geography as a separate subject or integrated with another subject?” 86 respondents (26%) taught geography as a separate course and 43 (13%) did not teach any geographical concepts (see Table 1 for demographic information). In Louisiana high schools, students are required to have three social studies courses for graduation including Civics (one semester), Free Enterprise Economics (one semester), and American History (two semesters). The remaining course can be selected from World Geography, Western Civilization, or World History (Louisiana Department of Education website). Although pre-kindergarten-8 Louisiana teachers are required to integrate geography into their curricula and high school teachers have the option to teach geography as a separate subject, state assessment instruments emphasize mathematics and reading/language arts. Therefore, geography often gets short shrift in the classroom.

In response to the question: “What training or classes have you had for geography?” 94 respondents (29%) had only one course in geography, and 184 respondents (56%) have had more than one geography course. In comparison to the survey by Farrell and Cirrincione (1989) in which 55% of respondents had between one and three courses in geography, 84% of respondents for this study had between one and three courses in geography. In a study by Fitzhugh (1992b) only 37% of teachers surveyed had taken a geography course (see Table 1 for demographic information).

When asked: “Have you attended a summer institute for teachers conducted by a Geography Education Alliance?” 94 teachers (29%) reported attending ASGIs, while 126

Table 1

Demographic Data for Survey Respondents

Role	N	%
Teach Geography		
as separate course	86	26%
integrated with another subject	200	61%
not at all	43	13%
Preservice Training (more than one choice)		
one geography course	94	29%
more than one geography course	184	56%
self-study	105	32%
part of another course	39	12%
other	48	15%
Inservice Training		
attended geography workshop	126	38%
attended ASGI	94	29%
Grade Level (more than one choice)		
PK-4 teachers	137	42%
5-8 teachers	153	47%
9-12 teachers	65	20%
Teaching Experience		
less than 5 years	50	15%

Table 1 continues

Table 1 (continued)

Role	N	%
between 5-10 years	74	22%
between 11-20 years	100	30%
more than 20 years	101	31%
no response	4	01%
Minutes/Week Geography was taught		
Less than 30 minutes	123	37%
30-45 minutes	54	16%
60 minutes	31	09%
60-90 minutes	24	07%
90-120 minutes	10	03%
more than 120 minutes	67	20%
no response	20	06%
National Geography Standards		
very familiar	88	27%
somewhat familiar	120	36%
not at all	118	36%
no response	3	01%
Use of New Geography Educational Materials Since		
two years ago	196	60%
five years ago	170	52%
seven years ago	150	46%

(38%) have attended other geography workshops. Attendance at geography inservices figured prominently in geography training. Sixty-seven percent of survey participants had attended either geography workshops or ASGIs. Combined with the data reported that 56% of teachers surveyed had more than one college geography course, results indicated that more geography content has been included in preservice and inservice training for teachers than noted in previous studies (see Table 1 for demographic information).

The national geography standards are identified for grade level categories of K-4, 5-8, and 9-12. The state geography standards for Louisiana are also identified for grade level categories of K-4, 5-8, and 9-12. In response to the question: "What grade level do you teach?" 137 (42%) respondents teach in grades PK-4, in the middle school grades of 5-8 there were 153 (47%) teachers, and 65 (20%) taught in the high school grades of 9-12. The researcher noted that many of the teachers taught more than one grade level and more than one category (see Table 1 for demographic information).

When asked: "How many years of teaching experience do you have?" 50 (15%) respondents had less than five years experience and 101 (31%) had more than 20 years of experience. One hundred twenty-three participants (37%) reported teaching geography less than 30 minutes per week, and 67 (20%) reported teaching geography more than 120 minutes per week (see Table 1 for demographic information). The researcher noted that the majority of the respondents taught geography less than 30 minutes per week. The two local school districts surveyed required social studies to be taught for 225 minutes per week in the elementary grades, integrating the strands of geography, civics, economics, and history into the social studies curriculum. Curricula requirements for online participants were not indicated.

In response to the question: “How familiar are you with the national geography standards?” 88 (27%) stated very familiar and 118 (36%) stated not at all. Since the charge of the Alliances has been to encourage standards-based educational reform through the use of the national geography standards, it was surprising to find that of the 94 TCs who responded, only 77 (82%) stated that they were very familiar with the national geography standards. In contrast, of all the 235 teachers not considered TCs, only 10 (4%) reported being very familiar with the national geography standards (see Table 1 for demographic information).

In a study of the effectiveness of ASGIs by Cole and Ormrod (1995), 69% of TCs reported changes in teaching materials. In response to the question in this study: “Are you currently using geography materials that you did not use two years ago, five years ago, seven years ago?” 77 (82%) of TCs reported using materials not used two or five years ago, and 71 (76%) reported using materials not used seven years ago. Sixty percent of all participants reported using materials not used two years ago (see Table 1 for demographic information).

According to survey respondents, maps were still the number one resource used in the teaching of geography. Textbooks, videos and transparencies were also used frequently in geography classrooms. According to Juliette (1994) over-worked teachers have the problem of how to keep up with current products and resources. Figure 2 represents the top five geographic education materials chosen from the survey that were used in the classroom.

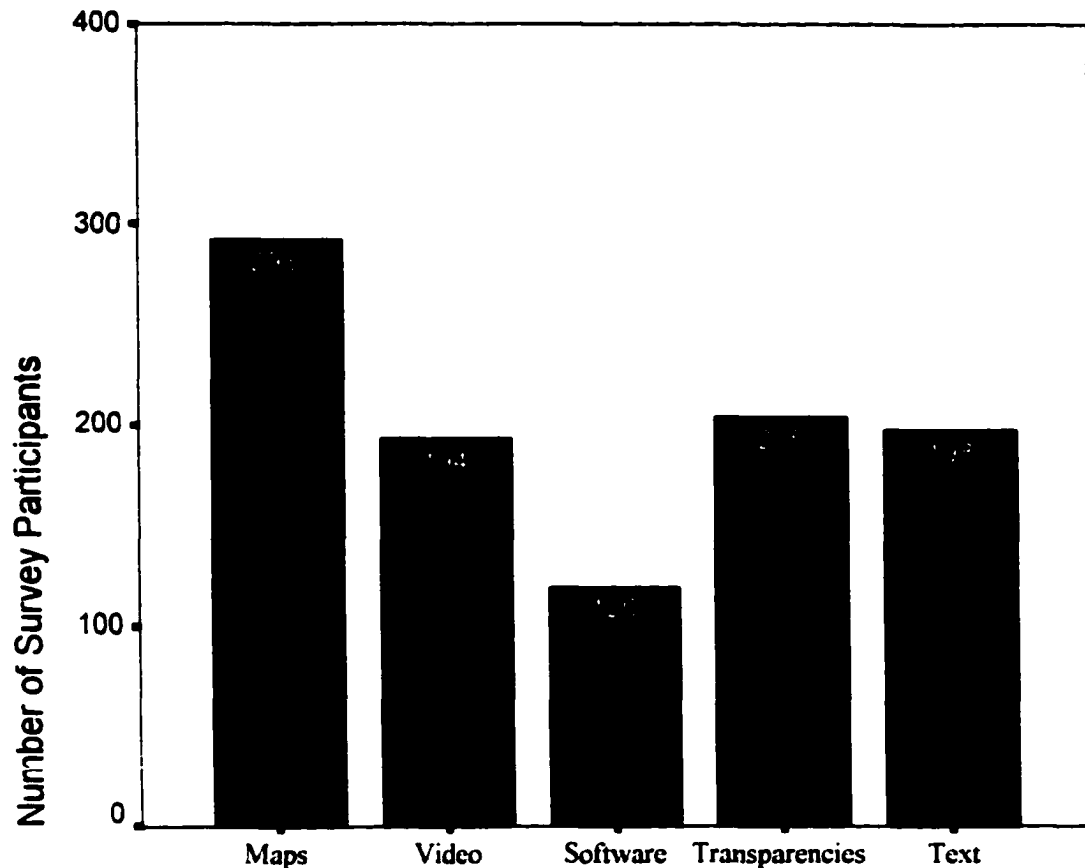


Figure 2. List of top five geographic educational materials used in the classroom.

Testing of Null Hypotheses

This study sought to determine the relationship between each of the independent variables, preservice teacher preparation, years of teaching experience, participation in geography workshops, participation in Alliance Summer Geography Institutes (ASGIs), and minutes per week geography was taught, and the dependent variable, the implementation of national geography standards. Since the median of implementation of standards fell between 13 and 14 standards (49.5% of respondents chose 13 or less, 50.5% chose 14 or more), the researcher selected 14 out of 18 standards (75%) as the basis for deciding whether or not a respondent implements the national geography

standards. Based on this decision, 159 (48%) of all survey participants implemented the national geography standards. Sixty-three (67%) of the TCs and 93 (40%) of teachers not trained as TCs implemented the national geography standards.

The data in this study were analyzed using Independent Samples t-tests and Analysis of Variance (ANOVA) through the *SPSS Base 10.0* software. ANOVA is used to compare the means of two or more groups of subjects that vary on a single independent variable (Ferguson & Takane, 1989). In the event of a significant ANOVA, post hoc tests are necessary to identify if the means of groups are different from the means of other groups. Scheffé's post hoc analysis was used in this study. ANOVA was used to analyze the level of implementation of national geography standards. The level of implementation of national geography standards was determined by counting the "Yes" responses to the 18 national geography standards and creating a continuous dependent variable.

Hypothesis 1

There is no significant relationship between the implementation of national geography standards and the amount of preservice teacher training. Categories were created to represent the number of choices respondents made for pre-service training. For example 0 = not choices, 1 = one choice, and 2 = two choices. Out of the six possible choices, four choices were the most that any respondent indicated.

ANOVA results indicated a difference between the level of implementation of national geography standards and the number of choices for preservice training ($F(4, 324) = 12.274, p < .01$). Table 2 presents ANOVA findings. The researcher noted that respondents who had four choices implemented more standards ($M = 15.34, SD = 3.36$) than respondents who made one choice ($M = 10.54, SD = 5.69$). Thus, the more choices

Table 2

ANOVA Output Examining Level of Implementation of Standards and Amount of Preservice Training

ANOVA Results				
Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>
Between Groups	1290.028	4	322.507	12.274**
Within Groups	8513.523	324	26.276	
Total	9803.550	328		

Note. * $p < .05$. ** $p < .01$

made with regard to preservice training, the higher the level of implementation of standards (see Table 3 for mean values for preservice training). This validated recommendations by researchers to increase requirements for preservice training in geography education (Boehm, et al., 1994; Bednarz & Bednarz, 1995; Ludwig, 1995; Gilsbach, 1997). Spetz (1988) reported that minimum geography requirements for all teachers, as recommended by the GENIP teacher certification committee, should include three courses: a) physical geography with emphasis upon the relationships between humans and their environment, b) cultural geography, and c) world-regional geography. Scheffé's post hoc comparison was used to determine whether a statistical difference existed among the means of the groups comparing the level of implementation of standards and amount of preservice training (see Table 4 for post hoc results). The results indicated that the mean of one choice for preservice training differed significantly from the means of two choices, three choices, and four choices.

Table 3

Mean Values for Number of National Geography Standards Implemented Based on Number of Choices for Preservice Training

Descriptive Statistics				
Training	<i>N</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
1 choice	179	10.54	5.69	.43
2 choices	59	13.76	4.77	.62
3 choices	45	14.24	4.01	.60
4 choices	41	15.34	3.36	.52
No response	5			
Total	329	12.19	5.47	.30

Table 4

Scheffé's Post Hoc Analysis for Preservice Training

Training	<i>M</i>	Training	<i>M</i>	<i>SE</i>
1 choice	10.54	2 choices	13.76**	.77
		3 choices	14.24**	.85
		4 choices	15.34**	.89

Note. * $p < .05$. ** $p < .01$.

Hypothesis 2

There is no significant relationship between the implementation of national geography standards and years of teaching experience. The null hypothesis was not rejected as ANOVA results indicated no differences between the means of years of

teaching experience and the level of implementation of national geography standards ($F(4, 324) = .582, p > .05$). Whether a teacher taught less than five years, five to ten years, 11 to 20 years, or more than 20 years did not significantly affect the means of the level of implementation of national geography standards (see Table 5 for ANOVA results for years of teaching experience). Since there were no significant differences in the means for years of teaching experience, there was no need to run Scheffé's post hoc comparisons (see Table 6 for mean values).

Table 5

ANOVA Output Examining Level of Implementation of Standards and Years of Teaching Experience

ANOVA Results				
Source	SS	df	MS	F
Between Groups	69.905	4	17.476	.582
Within Groups	9733.645	324	30.042	
Total	9803.550	328		

Note. * $p < .05$. ** $p < .01$.

Hypothesis 3

There is no significant relationship between the implementation of national geography standards and attendance at Alliance Summer Geography Institutes. Since there were only two groups, those who were ASGI-trained, and those who were not ASGI-trained, an Independent Samples t-test was utilized to test the hypothesis rather than an ANOVA. The null hypothesis was rejected as results indicated a difference between attendance at ASGIs and the level of implementation of national geography

Table 6

Mean Values for Number of National Geography Standards Implemented Based on Years of Teaching Experience

Teaching Experience	Descriptive Statistics			
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
< 5 years	50	12.00	5.55	.78
5 to 10 years	74	11.45	5.35	.62
11 to 20 years	100	12.35	5.17	.52
> 20 years	101	12.68	5.74	.57
no response	4			
Total	329	12.19	5.47	.30

standards ($F(1, 327) = 10.901, p < .01$). The mean of the ASGI-trained group was significantly higher ($M = 14.56, SD = 4.68$) than the mean of those not ASGI-trained ($M = 11.25, SD = 5.48$). The findings confirmed the need for ASGIs as a means of encouraging standards-based geography education (see Table 7 for t-test results for attendance at ASGIs). Post hoc tests were not performed for ASGIs because there were only two groups.

Hypothesis 4

There is no significant relationship between the implementation of national geography standards and attendance at geography workshops. An Independent Samples t-test was utilized, rather than an ANOVA, since there are only two groups represented: respondents who attended geography workshops and respondents who did not attend

Table 7

Independent Samples t-test Output Examining Level of Implementation of Standards and Attendance at ASGIs

Category	<i>N</i>	<i>df</i>	<i>M</i>	<i>SD</i>	<i>t</i>
ASGI-trained	94	1, 327	14.56	4.68	-5.162**
Not ASGI-trained	235	1, 327	11.25	5.48	

Note. * $p < .05$. ** $p < .01$.

geography workshops. Results indicated a difference between attendance at geography workshops and the level of implementation of national geography standards ($F(1, 327) = 31.479, p < .01$). The mean of the group that attended geography workshops was significantly higher ($M = 14.52, SD = 4.07$) than the mean of the group that did not attend geography workshops ($M = 10.75, SD = 5.73$). Post hoc tests were not performed for geography workshops because there were only two groups (see Table 8 for t-test results for attendance at geography workshops).

Table 8

Independent Samples t-test Output Examining Level of Implementation of Standards and Attendance at Geography Workshops

Category	<i>N</i>	<i>df</i>	<i>M</i>	<i>SD</i>	<i>t</i>
Workshop Attendance	126	1, 327	14.52	4.07	-6.430**
No Workshop Attendance	203	1, 327	10.75	5.73	

Note. * $p < .05$. ** $p < .01$.

Hypothesis 5

There is no significant relationship between the implementation of national geography standards and the number of minutes per week geography was taught. The null hypothesis was rejected as ANOVA results indicated a difference between the level of implementation of national geography standards and the number of minutes per week geography was taught ($F(6, 322) = 12.844, p < .01$). The number of minutes per week geography was taught did affect the level of implementation (see Table 9 for ANOVA results for minutes per week geography was taught). Analysis revealed that respondents who taught geography more than 120 minutes per week implemented more standards ($M = 15.22, SD = 3.77$) than respondents who taught geography less than 30 minutes per week ($M = 10.07, SD = 6.55$). The results suggested that more time in the curriculum should be provided for geography content (see Table 10 for mean values for number of national geography standards implemented based on number of minutes per week geography was taught).

Table 9

ANOVA Output Examining Level of Implementation of Standards and Minutes Per Week Geography was Taught

ANOVA Results				
Source	SS	df	MS	F
Between Groups	1893.149	6	315.525	12.844**
Within Groups	7910.401	322	24.566	
Total	9803.550	328		

Note. * $p < .05$. ** $p < .01$.

Table 10

Mean Values for Number of National Geography Standards Implemented Based on Number of Minutes Per Week Geography was Taught

Descriptive Statistics				
Geography Taught	<i>N</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
< 30 minutes/week	123	10.07	5.68	.51
30 to 45 minutes/week	54	13.17	4.80	.66
60 minutes/week	31	14.26	3.95	.71
60 to 90 minutes/week	24	13.54	4.06	.83
90 to 120 minutes/week	10	13.30	3.80	1.20
> 120 minutes/week	67	15.22	3.77	.46
No response	21			
Total	329	12.19	5.47	.30

Scheffé's post hoc analysis was used to determine the nature of the differences between the means of the groups and level of implementation of standards (see Table 11 for post hoc results). The results indicated that the mean value of teaching geography 30 to 45 minutes per week was significantly different than the mean value of teaching geography less than 30 minutes per week, the mean value of teaching geography 60 minutes per week was significantly different than the mean value of teaching geography less than 30 minutes per week, and the mean value of teaching geography more than 120 minutes per week was significantly different than the mean value of teaching geography less than 30 minutes per week.

Table 11

Scheffé's Post Hoc Analysis for Minutes Per Week Geography was Taught

Minutes	<i>M</i>	Minutes	<i>M</i>	<i>SE</i>
< 30 minutes	10.07	30 to 45 minutes	13.17*	.79
		60 minutes	14.26**	.97
		60 to 90 minutes	13.54	1.08
		90 to 120 minutes	13.30	1.59
		> 120 minutes	15.22**	.73

Note. * $p < .05$. ** $p < .01$.

Summary

This chapter presented the findings of statistical procedures designed to identify the relationship between the implementation of national geography standards and the variables of preservice training, attendance at ASGIs or geography workshops, years of teaching experience, and number of minutes per week geography was taught. Survey results from 329 teachers demonstrated a) a significant relationship between preservice training for geography and the implementation of national geography standards, b) a significant relationship between attendance at ASGIs and the implementation of national geography standards, c) no significant relationship between years of teaching and the implementation of national geography standards, d) a significant relationship between teachers who have attended geography workshops and the implementation of national geography standards, and e) a significant relationship between the number of minutes geography was taught per week and the implementation of geography standards.

The framework undergirding this study was standards-based education (see Figure 1, p. 9). Statistical analyses of data generated by this study confirmed the importance of preservice and inservice training, and the number of minutes per week geography was taught for the implementation of standards. The national geography standards exemplify the building blocks of the discipline. These aspects need to be considered to implement a successful geography curriculum.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Discussion

The purpose of this study was to examine the relationship between the implementation of national geography standards and a) teacher inservice training at Alliance Summer Geography Institutes or geography workshops, b) preservice training with geography coursework, c) years of teaching experience, and d) the number of minutes per week that geography was taught. Twenty-five randomly selected Geography Education Alliances, along with 49 schools in two northeast Louisiana school districts were asked to respond to a survey. Approximately 4,911 teachers were contacted. A total of 329 responded to the survey that constituted a seven percent response rate. Teacher responses to the survey developed by the researcher provided quantitative data that were statistically analyzed using Independent Samples t-tests and Analysis of Variance (ANOVA).

The results of this study suggested that the implementation of national geography standards is related to several factors. A significant relationship was shown to exist between teachers who have had preservice training and the implementation of national geography standards. This corroborated the importance of preservice training, as suggested by researchers such as Bednarz and Bednarz (1995), Ludwig (1995), and

Gilsbach (1997). Boehm and Petersen (1994) asserted that teachers feel more comfortable teaching subjects in which they have had better preparation.

The researcher noted that the more choices a respondent made, with regard to one college course, more than one college course, self-study, or part of another course, increased the mean average of implementation of national geography standards. The *2000 Blue Ribbon Commission Report* in Louisiana recommended changes in teacher preservice requirements. The Commission called for a greater emphasis on reading/language arts and mathematics and only six hours of social studies content (Louisiana Department of Education website). Because geography was not specifically required in the elementary education curriculum, preservice teachers may not choose to take any geography courses. In the secondary education curriculum, preservice teachers may take geography if required in a major area of study.

A significant relationship was not shown to exist between years of teaching experience and the implementation of national geography standards. The results suggested that all teachers, regardless of the years of experience, were implementing the same average of national geography standards.

A significant relationship was shown to exist between teachers who attended Alliance Summer Geography Institutes (ASGIs) and the implementation of national geography standards. Studies by Katzenmeyer in 1994 and Cole and Ormrod (1995) concluded that ASGIs were an effective means of promoting instructional change and therefore geographic education. For the Alliances to be even more effective, teachers need to become aware of the network and the materials and workshops available. Since a significant relationship was also shown to exist between teachers who have attended

geography workshops and the implementation of national geography standards, findings suggested that inservice training for teachers needs to include a geography component.

A significant relationship was determined between the number of minutes per week geography was taught and the implementation of national geography standards. Respondents who taught geography 60 minutes per week and more than 120 minutes per week had a higher mean of implementation of the national geography standards. The researcher noted that a significant relationship was not determined between respondents who taught geography 60 to 90 minutes per week or 90 to 120 minutes per week and the level of implementation. The results suggested that more time in the curriculum should be spent teaching geography. Yet as Hume and Boehm (2001) stated, geography often loses out to history, civics or even economics. Munroe & Smith (1998) alleged that it was difficult to do justice to both geography and history in the traditional 40 minutes per day traditionally allotted for the teaching of social studies. Fitzhugh (1992a) expounded that geography needs to be integrated not only in social studies, but also throughout the whole curriculum. In contrast, Hume and Boehm (2001) declared that geography is handicapped when adopted into the social studies framework.

Limitations

The study only yielded a seven percent return rate for survey respondents. Principals from each of the 49 schools were contacted by telephone to encourage a greater response rate. Many of the principals reported that the teachers were required to complete end-of-the-year paperwork and would not be able to participate in the study. It was possible that not all teachers were given the surveys, particularly in the upper grades. Middle school and high school teachers are often content-specific. Therefore,

mathematics or reading teachers may not have considered responding to a survey about geography education. Alliance coordinators were contacted by e-mail to encourage a greater response rate. Several of the coordinators reported that teachers were involved in closing out the school year and may not participate in the survey until later. The return rate for the participants of the online survey could not be accurately computed, because the researcher could not determine how many of the e-mail messages sent were ever received. E-mail messages would not have been returned to the researcher.

Although the Louisiana Social Studies Standards included a geography component based on the national geography standards, information was not obtained on state standards from the online participants. The diversity of state standards required in other states may have been a factor in response choices on the survey.

Several questions on the survey should have been revised. The researcher did not provide the choice "no training" for preservice training. Nor did the researcher provide a question for types of geography courses taught by respondents. The choice of "other" for preservice training should have included space for identification of other types of training. Since attendance at a geography workshop was considered as a separate hypothesis, the researcher should have included that choice on the survey separately from the other choices for preservice training.

Conclusions

Downs (1994) averred that the lack of empirical data in the field of geography education underpins decisions about standard setting and assessment procedures.

Therefore, Downs suggested that geography education research should produce a set of baseline studies that chronicle the status of geography in the U. S. schools, discuss

classroom practices in teaching geography, and evaluate assessment batteries of geographic skills and knowledge among students. Educators, legislators, and decision-makers need empirical data in order to plan educational reform, design appropriate curricula, and determine necessary funding.

In the wake of Downs' (1994) plea for empirical data, some results have been forthcoming. *Quality Counts 2001*, the fifth annual 50-state report by *Education Week*, conveyed that teachers who had received more training were more likely than those who had not to report using lesson plans linked to state standards and modifying their curricula to align with state standards (Executive Summary, 2001). The national geography standards provide teachers with a geographic framework that enables them to improve teaching strategies. In 1996, the nation's governors added student assessment and accountability to the standards dialogue, which created the need for curriculum materials that are matched to the standards (Tucker, 1998). Standards forge a link between curricula and assessment.

In today's post-industrial society, the importance of geographic literacy cannot be overstated. Geography literacy is essential for a better understanding of environmental concerns, international trade, warfare, business competition, and ethnic conflict (Schwartz, 1989). The National Geographic Society (2000) declared its position statement in the brochure entitled *Path Toward World Literacy: A Scope and Sequence in Geographic Education, K-12* asserting that:

Global, economic, cultural, and environmental forces increasingly shape our lives. What happens in one place affects other people and other cultures. If students are to leave school equipped to earn a decent living, enjoy the richness of life, and

participate responsibly in local, national, and international affairs, they must learn to look at the world like geographers. A strong education in geography opens the door to an expanding array of interesting jobs and careers while enriching our lives by broadening our understanding of the world in which we live (NGS, 2002).

American foreign policy is predicated on understanding the physical and cultural geography of different parts of the globe. In the light of September 11, 2001 attack in America by terrorists and heightened awareness of global terrorism, the need for geographic cultural literacy is paramount to U. S. foreign policy. The Association of American Geographers (AAG) and the National Science Foundation (NSF) have combined forces to initiate a research project that addresses the role of geographic information and technologies in emergency management and response to the September terrorist attacks. Moreover, the project has a national research agenda on the geographical dimensions of terrorism (American Association of Geographers, 2002). Some research issues to be addressed include: a) understanding vulnerability to environmental threats, b) ensuring the continuity of operations during an emergency, c) geographic conditions and factors that affect the diffusion of purposely introduced diseases, and d) emergency preparedness and response.

Recommendations Based on Findings

The results of this study led to the following recommendations for universities, school systems, and administrators who are responsible for decision-making processes that address training, curricula design, and funding.

1. Results indicated a relationship between the implementation of national geography standards and attendance at ASGIs or geography workshops. School systems and administrators should contact the local Geography Education Alliances to find out what resources and materials are available and establish partnerships. In addition, geography workshops should be offered to teachers during the year.
2. Results indicated a relationship between the implementation of national geography standards and teachers who have had preservice training for geography. Universities should require geography as a standard part of the elementary and secondary education curriculum.
3. Results indicated a relationship between the implementation of national geography standards and number of minutes per week geography was taught. School districts should emphasize the importance of geography in the school curriculum and provide more time for geography content.

Recommendations for Future Research

1. Further research should extend to other areas beyond the small geographical area conducted in this study. A larger sample of teachers would strengthen the study.
2. Since the National Geographic Education Foundation has established \$1 million endowments for geography education in 19 states, research could be conducted to examine implementation of national geography standards by state or region.
3. The study should be conducted at a time other than the final month of school. Teachers are committed to much paperwork at the end of the school year. A

greater response rate may be obtained if the survey were conducted at a different time during the school year.

Recommendations for Geography in Schools

Salter (1991a) proposed school-wide solutions for the elimination of geographic ignorance. These included participation in geography competitions and the endorsement of geography projects and field trips. Additionally, geography should be taught earlier in education, expanded upon in later school years, and integrated into all social studies curricula and throughout other areas of study including reading and math (Fitzhugh, 1992a). Fitzhugh further expounded that teachers need geographic preparation before they begin teaching and continued district support through inservice activities while pursuing their teaching careers. Positive perceptions about geography in schools are critical to generating enrollment in geography courses in universities. Stoltman (1991) and Patrick (1998) suggested the following steps schools should take to restore geography prominence and ensure student competency:

1. Increase coverage of geography at every grade level of the school curriculum for ample exposure to the subject.
2. Teach geography as a separate school subject and infuse the five themes into other school subjects.
3. Add depth to studies of geography and avoid fact memorization.
4. Use multiple sources and media of instruction, such as video programs, primary documents, computer software, wall maps and charts, globes and atlases, and periodicals with numerous pictures and maps.

5. Emphasize active learning by applying knowledge to investigate real geographic problems.
6. Use the local community as a resource for examples of the five geographic themes and involve students in hands-on investigations.

Parents and educators should work together to secure a niche for geography in the curriculum. In the 1994 Geography Report Card from the NAEP assessment, students who reported not discussing their studies at home performed at a lower level than did students who regularly discussed their studies (NAEP, 1994). Parents and guardians are the child's first teachers. By directing attention and activities at home toward geography, families can make an enormous difference in a student's achievement of geographic literacy (Stoltman, 1991).

Recommendations for Geography at Home

In 1994, the National Geographic Society began the Family Geography Challenge. Developed by the Michigan Geographic Alliance, the Challenge created a forum to reach families with the message about the importance of geography education (National Geographic Society, 1994). Trained Teacher Consultants led one-hour workshops for up to 50 families in schools all across the nation. Parents and students who attended the workshops were encouraged to "take the Challenge" by signing a contract to watch the news together at least once a week for ten weeks. Each family was given a large, laminated wall map of the world and introduced to some of the basic concepts of geography, including the five themes of geography, as well as given an outline map and a journal for recording their observations. After completing the challenge, the families

received an inflatable globe and a certificate. Stoltman (1991) agreed that parents could reinforce the geographic skills of their children by discussing places in national and international news. Stoltman further advocated the observation and discussion of maps in magazines, newspapers, or textbooks, and the provision of geographic learning resources in the home.

Patrick (1998) explained that parents could monitor and reinforce geography lessons presented at school by reading stories from other countries, exposing children to ethnic foods, encouraging children to make maps, and giving children an opportunity to travel. The National Geographic Society has recently published a series of non-fiction books for students that combine science and social studies content with reading development skills. This series is called *Reading Expeditions* and covers such topics as *American Communities Across time*, *Civilizations Past to Present*, *Voices From America's Past*, and *Seeds of Change in American History* (NGS website).

Patrick (1998) and Stoltman (1991) encouraged family viewing of television programs with geographic content. The National Geographic Channel produces a variety of family programs of exploration, adventure, and discovery (NGS website). Distributed throughout the world by cable and satellite, the Channel is a further endeavor by the National Geographic Society to spread geographic literacy. Salter (1991a) additionally suggested that comments about landscape features during travel or vacations and the use of board games with geography theme sections could sow seeds of interest in geography within the family culture.

In 1998, the National Council for Geographic Education published a brochure entitled *How to Help Children Become Geographically Literate*. NCGE encouraged

parents to a) get geographic materials, such as maps, globes, atlases, encyclopedias, and almanacs for the home and keep them readily available for reference, b) make geography a family endeavor through such activities as planning vacation trips, reading maps of zoos or parks, or solving map puzzles, c) learn about geography in your community, and d) initiate writing to pen pals in another state or country (NCGE, 1998a).

Final Recommendations

Vast quantities of scientific, technical, economic, and other kinds of information are available to educators and students in today's information-oriented society. Juliette (1994) recommended resources for keeping current in geography:

1. Read relevant professional journals.
2. Get involved in a geography or social studies organization.
3. Expand your horizons by trying new materials.
4. Let your school librarian know of your interest and need for geographic materials.
5. Get in touch with your local university's geography department.
6. Become informed about geography networks and alliances (p. 106).

The mental map of the world today should be an interconnected and seamless globe (Cohen, 1988). Time, technology, resource substitution, and population change reflect a political theory in which no place has strategic dominance. Educators should work "to understand and promote geography in its role as a mature field of humanistic and scientific study that has an important role to play in helping to educate and enlighten citizens and their leaders in this interdependent world" (Cohen, 1988, p. 250).

Geography prepares students to evaluate important issues in the community, such as resource utilization, environmental conservation, and land use (NCGE, 1998c). Geographers play a critical role in addressing global concerns such as acid rain, nuclear war, hazardous waste, or population growth (Association of American Geographers, 1996). The AAG reported that according to the U.S. Department of Labor, geography graduates are needed in government agencies, health and social service organizations, marketing, research and consulting firms, and a variety of businesses. Geography careers available include urban and regional planning, land use planning, cartography, remote sensing specialist, tourism and travel planners, real estate sales and appraisal agents, and geographic information systems analysts (NCGE, 1998c). Munroe and Smith (1998) declared that standards offer the best route to the renaissance of geography. Because the development of state assessment instruments offers further opportunities for clarification of geography, standards can benefit from this process. Since the quality of state standards is a function of public conviction, the public needs to decide knowing and using geography is important to their children's future (Munroe & Smith, 1998). Instructional methods, teacher education, and staff development programs can benefit whenever standards are a focus of the design.

APPENDIXES

APPENDIX A
THE NATIONAL GEOGRAPHY STANDARDS

The National Geography Standards

A. The World in Spatial Terms

1. How to use maps and other geographic representations, tools, and technologies to acquire, process, and report information from a spatial perspective
2. How to use mental maps to organize information about people, places, and environments in a spatial context
3. How to analyze the spatial organization of people, places, and environments on Earth's surface

B. Places and Regions

4. The physical and human characteristics of places
5. That people create regions to interpret Earth's complexity
6. How culture and experience influence people's perceptions of places and regions

C. Physical Systems

7. The physical processes that shape the patterns of Earth's surface
8. The characteristics and spatial distribution of ecosystems on Earth's surface

D. Human Systems

9. The characteristics, distribution, and migration of human populations on Earth's surface
10. The characteristics, distribution, and complexity of Earth's cultural mosaics
11. The patterns and networks of economic interdependence on Earth's surface
12. The processes, patterns, and functions of human settlement
13. How the forces of cooperation and conflict among people influence the division and control of Earth's surface

E. Environment and Society

14. How human actions modify the physical environment
15. How physical systems affect human systems
16. The changes that occur in the meaning, use, distribution, and importance of resources

F. The Uses of Geography

17. How to apply geography to interpret the past
18. How to apply geography to interpret the present

APPENDIX B
GEOGRAPHY SURVEY

12. Do you implement these concepts in your classroom?	Yes	No
a. How to use maps and other geographic representations, tools, and technologies to acquire, process, and report information from a spatial perspective	1	2
b. How to use mental maps to organize information about people, places, and environments in a spatial context	1	2
c. How to analyze the spatial organization of people, places, and environments on Earth's surface	1	2
d. The physical and human characteristics of places	1	2
e. That people create regions to interpret Earth's complexity	1	2
f. How culture and experience influence people's perceptions of places and regions	1	2
g. The physical processes that shape the patterns of Earth's surface	1	2
h. The characteristics and spatial distribution of ecosystems on Earth's surface	1	2
i. The characteristics, distribution, and migration of human populations on Earth's surface	1	2
j. The characteristics, distribution, and complexity of Earth's cultural mosaics	1	2
k. The patterns and networks of economic interdependence on Earth's surface	1	2
l. The processes, patterns, and functions of human settlement	1	2
m. How the forces of cooperation and conflict among people influence the division and control of Earth's surface	1	2
n. How human actions modify the physical environment	1	2
o. How physical systems affect human systems	1	2
p. The changes that occur in the meaning, use, distribution, and importance of resources	1	2
q. How to apply geography to interpret the past	1	2
r. How to apply geography to interpret the present and plan for the future	1	2

Online Geography Survey

1. Do you teach geography as a separate subject or integrated with another subject?

- Separate
 - Integrated
 - Not at all
-

2. What training or classes have you had for geography? (Select all that apply)

- One college course
 - More than one college course
 - Workshop
 - Self-study
 - As part of another course
 - Other
-

3. Are you currently using geography educational materials that you did not use...

a) TWO years ago?

- Yes
- No

b) FIVE years ago?

- Yes
- No

c) SEVEN years ago?

- Yes
- No

4. What geographical educational materials do you use in your classroom? (Select all that apply)

- Professional journals
 - Video tapes
 - Book sets
 - Maps
 - Software
 - Transparencies
 - GeoKits
 - Textbook
-

5. How many minutes do you spend teaching geography per week?

- Less than 30 minutes
 - 30-45 minutes
 - 60 minutes
 - 60-90 minutes
 - 90-120 minutes
 - More than 120 minutes
-

6. If geography is not taught as a separate subject, how many minutes do you spend teaching Social Studies per week?

- Less than 30 minutes
- 30-45 minutes
- 60 minutes
- 60-90 minutes
- 90-120 minutes
- More than 120 minutes

7. Have you attended a summer institute for teachers conducted by a Geography Education Alliance

- Yes
 - No
-

8. What grade level do you teach? (Select all that apply)

- 1
 - 2
 - 3
 - 4
 - 5
 - 6
 - 7
 - 8
 - 9
 - 10
 - 11
 - 12
 - Pre-K
 - Kindergarten
-

9. How many years of teaching experience do you have?

- Less than 5 years
- 5-10 years
- 11-20 years
- More than 20 years

10. How familiar are you with the National Geography Standards?

- Very familiar
 - Somewhat familiar
 - Not at all familiar
-

11. In which state/country/territory do you teach?

Alabama

12. Do you implement these concepts in your classroom?**a) How to use maps and other geographic representations, tools, and technologies to acquire, process, and report information from a spatial perspective.**

- Yes
- No

b) How to use mental maps to organize information about people, places, and environments in a spatial context.

- Yes
- No

c) How to analyze the spatial organization of people, places, and environments on Earth's surface.

- Yes
- No

d) The physical and human characteristics of places.

- Yes
- No

e) That people create regions to interpret Earth's complexity.

- Yes

No

f) How culture and experience influence people's perceptions of places and regions.

Yes

No

g) The physical processes that shape the patterns of Earth's surface.

Yes

No

h) The characteristics and spatial distribution of ecosystems on Earth's surface.

Yes

No

i) The characteristics, distribution, and migration of human populations on Earth's surface.

Yes

No

j) The characteristics, distribution, and complexity of Earth's cultural mosaics.

Yes

No

k) The patterns and networks of economic interdependence on Earth's surface.

Yes

No

l) The processes, patterns, and functions of human settlement.

Yes

No

m) How the forces of cooperation and conflict among people influence the division and control of Earth's surface.

Yes

No

n) How human actions modify the physical environment.

Yes

No

o) How physical systems affect human systems.

Yes

No

p) The changes that occur in the meaning, use, distribution, and importance of resources.

Yes

No

q) How to apply geography to interpret the past.

Yes

No

r) How to apply geography to interpret the present and plan for the future

Yes

No

APPENDIX C
LETTERS OF CORRESPONDENCE

Date

Superintendent First Name Last Name
 School District
 Address
 City, State, Postal Code

Dear Superintendent Last Name:

I am requesting permission to survey teachers in your district. I am conducting this research in partial fulfillment of requirements for the Louisiana Education Consortium doctoral program in which I am currently enrolled. This study will investigate factors related to the implementation of national geography standards in the classroom.

The results of the study may be used by school systems and individual schools to improve current training and support practices related to the implementation of standards. The data collected may prove useful for future grant-writing proposals or for planning future inservices. The results of the study will be reported as aggregate data so that no particular school or school district will be identified. Each principal, however, may receive a summary of the research results upon request.

Each principal will receive a packet of surveys to distribute to the teachers. Each teacher will complete the short survey and return it to the principal. It should take no longer than five minutes to complete the questionnaire. The surveys will then be returned on the intra-school delivery system to the social studies supervisor.

In appreciation for your cooperation, each school will receive a packet of maps published by the National Geographic Society, and will also be eligible for a drawing to receive other materials from the Society.

Please indicate your willingness to participate at the bottom of this letter, and return your answer at your earliest convenience in the self-addressed, stamped envelope provided. With your approval, the survey will be distributed during the spring semester of 2002.

Thank you for your time and consideration.

Sincerely,

S. Kay Gandy,
 PO Box 2505, West Monroe, L.A. 71294, (318) 376-6155, docgandy@hotmail.com

_____ Yes, the schools may participate
 in the survey.

_____ No, the schools will not participate
 in the survey.

 Superintendent signature

 Date

Date

Dear Principal:

With the approval of Superintendent Last Name, I am requesting your assistance in surveying teachers at your school. I am conducting this research in partial fulfillment of requirements for the Louisiana Education Consortium doctoral program in which I am currently enrolled. This study will investigate factors related to the implementation of national geography standards in the classroom.

The results of the study may be used by school systems and individual schools to improve current training and support practices related to the implementation of standards. The data collected may prove useful for future grant-writing proposals or for planning future inservices. The results of the study will be reported as aggregate data so that no particular school or school district will be identified. Each principal, however, may receive a summary of the research results upon request.

Enclosed are surveys to distribute to your teachers. Each teacher will complete the short survey and return it to you. It should take no longer than five minutes to complete the questionnaire. Please return the surveys on the intra-school delivery system to the Social Studies Supervisor.

In appreciation for your cooperation, your school will receive a packet of maps published by the National Geographic Society, and will also be eligible for a drawing to receive other materials from the Society.

Please send the forms as soon as possible. All survey responses are confidential. Please encourage your teachers to respond in a timely manner.

Your assistance is essential to the success of this research. I realize that you are extremely busy with the daily operations of the school, and sincerely appreciate your prompt attention and cooperation in this matter. If you have any questions, please feel free to contact me.

Sincerely,

S. Kay Gandy
PO Box 2505
West Monroe, LA 71294
(318) 376-6155
docgandy@hotmail.com

Date

Dear Classroom Teacher:

With the approval of your superintendent and principal, I am gathering information for a study to examine factors related to the implementation of national geography standards into the classroom. I believe the results of this study will provide important information regarding the use of standards, and may prove helpful in future grant-writing proposals or in planning inservices.

By completing the attached survey, you are agreeing to participate in this study. Your participation is voluntary, however, and your individual responses will be confidential. Please answer each item to the best of your ability and understanding. After completing the survey, please return it to your principal. If you are interested in obtaining a summary of the results of the study, your principal may request this information for your school.

As a classroom teacher, I am well aware of the demands upon your time. The enclosed survey will require approximately 5 minutes to complete. I would be very grateful for your time, your participation, and the knowledge that will be gained from your taking time to complete the survey. Please try to complete the survey within 5 days from when you receive it, as I am under time constraints to complete this project, and would very much like for your input to be included in this study. Feel free to contact me if you have any questions.

In appreciation for your time, your school will receive free maps from the National Geographic Society, and will be placed in a drawing to receive other free materials.

Thank you again for your prompt response.

Sincerely,

S. Kay Gandy
PO Box 2505
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(318) 376-6155
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HUMAN SUBJECTS CONSENT FORM

The following is a brief summary of the project in which you have been asked to participate. Please read the information before signing the statement below.

TITLE: A Study of the Implementation of National Geography Standards and Their Alignment With Classroom Instruction in United States PK-12 Schools

PURPOSE OF STUDY/PROJECT: To investigate the implementation of geography standards by classroom teachers based on years experience of teaching, educational training, and time spent teaching geography.

PROCEDURE: Selected teachers will be asked to respond to a survey to answer yes/no questions regarding the implementation of standards.

INSTRUMENTS AND MEASURES TO INSURE PROTECTION OF CONFIDENTIALITY/ANONYMITY: The instrument used for this project is a set of questions developed by the researcher about the implementation of standards. Data collected will remain confidential.

RISKS/ALTERNATIVE TREATMENTS: There are no risks associated with participation in this study. Participation is voluntary.

BENEFITS/COMPENSATION: None.

I, _____, attest with my signature that I have read and understood the description of the study, "A Study of the Implementation of National Geography Standards and Their Alignment With Classroom Instruction in United States PK-12 Schools" and its purpose and methods. I understand that my participation in this research is strictly voluntary. Further, I understand that I may withdraw at any time or refuse to answer any questions. I understand that the data from my interview will be confidential. I have not been requested to waive nor do I waive any of my rights related to participation in this study.

Signature of Participant

Date

CONTACT INFORMATION: The researcher listed below may be reached to answer questions about the research, subjects' rights, or related matters.

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The human subjects committee of Louisiana Tech University may also be contacted if a problem cannot be discussed with the researcher.

Dr. Mary Livingston 257-4315

Dr. Terry McConathy 257-2924

APPENDIX D
E-MAIL TO ALLIANCE COORDINATORS

Dear Alliance Coordinator,

I am a doctoral candidate in Louisiana who is interested in the integration of national geography standards into the classroom. The research I am conducting will be beneficial in helping to assess the progress school districts have made toward standard integration in schools across America.

Please forward this message to your teacher consultants to complete the survey that is linked to this e-mail. The survey asks about the implementation of standards in the classroom. The results of the study may be used by school systems and individual schools to improve current training and support practices related to the implementation of standards. The data collected may prove useful for future grant-writing proposals or for planning future inservices. The results of the study will be reported as aggregate data so that no particular state will be identified. You may, however, receive a summary of the research results upon request.

The survey is located at the following URL:

<http://www.latech.edu/survey/>

Thank you for your time in completing this survey. In appreciation for your help, I have attached to this e-mail the URLs for several geography education websites to share with your teachers.

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Geography Education Websites

Site Address	What is there
http://geography.state.gov/htmls/plugin.html	U.S. Dept. of State's Geographic Learning Site
http://www.macalester.edu/~geograph/apgeog/links.html	Geography Links for K-12 Education by topic.
http://www.geographia.com/	An interactive tour of the countries in Africa, Asia, Latin America, Europe, and the Caribbean.
http://www.odci.gov/cia/publications/factbook/	Profiles everything about the countries of the world, including maps, politics, flags, weather, major cities, and economics.
http://geography.about.com/	Maps, humor, quizzes, population, and lots more.
http://members.aol.com/bowermanb/games.html	Online games relating to geography.
http://www.educationindex.com/geography/	Educational information and links in 50 categories.
http://www.weatherhub.com/global/	International weather reports around the globe.
http://members.aol.com/bowermanb/101.html	Maps, globes, games, and resources for high school geography
http://www.50states.com	Birds, songs, flags, and facts about each state.
www.socialstudies.com	Links to geography and history sites as well as teacher made lesson plans

APPENDIX E
GEOGRAPHY EDUCATION ALLIANCE COORDINATORS
CONTACT INFORMATION

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APPENDIX F

SENATE RESOLUTION FOR GEOGRAPHY AWARENESS WEEK

Senate Joint Resolution 88

Whereas the United States of America is a truly unique nation with diverse landscapes, bountiful resources, a distinctive multiethnic population, and a rich cultural heritage, all of which contributes to the status of the United States as a world power.

Whereas geography is the study of people, their environments, and their resources;

Whereas, historically, geography has aided Americans in understanding the wholeness of their vast nation and the great abundance of its natural resources;

Whereas geography today offers perspectives and information in understanding ourselves, our relationship to the Earth, and our interdependence with other people of the world;

Whereas 20 percent of American elementary school students asked to locate the United States on a world map placed it in Brazil;

Whereas 95 percent of American college freshmen tested could not locate Vietnam on a world map;

Whereas 75 percent of Americans responding to a nationwide survey could not locate El Salvador on a map, while 63 percent could not name the two nations involved in the SALT talks;

Whereas over 20 percent of American teachers currently teaching geography have taken no classes in the subject and therefore, do not have the training necessary to effectively teach geographic concepts;

Whereas Departments of geography are being eliminated from American institutes of higher learning, thus endangering the discipline of geography in the United States;

Whereas traditional geography has virtually disappeared from the curricula of American schools while still being taught as a basic subject in other countries, including Great Britain, Canada, Japan, and the Soviet Union;

Whereas an ignorance of geography, foreign languages, and cultures places the United States at a disadvantage with other countries in matters of business, politics, and the environment;

Whereas the United States is a nation of worldwide involvement and global influence, the responsibilities of which demand an understanding of the lands, languages, and cultures of the world; and

Whereas national attention must be focused on the integral role that knowledge of world geography plays in preparing citizens of the United States for the future of an increasingly interdependent and interconnected world: Now, therefore, be it

Resolved by the Senate and house of Representatives of the United States of America in Congress assembled, That the period commencing November 15, 1987, and ending November 21, 1987, is designated as "Geography Awareness Week," and the President is authorized and requested to issue a proclamation calling upon the people of the United States to observe such week with appropriate ceremonies and activities.

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VITA

Stephanie Kay Gandy was born in West Monroe, Louisiana and graduated from West Monroe High School in 1972. She received three degrees from Northeast Louisiana University: B.A. in Early Childhood Education (1976), M. Ed. in Elementary Education (1979), and Ed. S. in Elementary Education (1992). She received her doctorate in Curriculum and Instruction in August, 2002, from Louisiana Tech University. In her 26-year teaching career, Kay taught kindergarten (17 years), first grade (five years), and fifth grade (four years).

Kay was *Teacher of the Year* at Mitchell Elementary (1997) and *Teacher Consultant of the Year* for the Louisiana Geography Education Alliance (1998). She has served as vice-president for the Association of Doctoral Students, the Louisiana Geography Education Alliance (LaGEA), and Delta Kappa Gamma. Additionally, Kay has been the state coordinator for Geography Awareness Week, a judge for the state Geography Bee, a grant evaluator for the National Geographic teacher grants, and a recipient of eight grants.

As a Teacher Consultant for LaGEA, Kay has presented at national conferences in Boston, Chicago, Indianapolis, and Vancouver, and presented at state conferences in New Orleans, Lafayette, Baton Rouge, and Alexandria. She has served as a staff member for four Alliance Summer Geography Institutes and two institutes sponsored by the Louisiana Endowment for the Humanities. Locally, Kay has presented geography

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Kay served as one of the Teacher Guides for the 2600-mile trek across America's public lands sponsored by the National Geographic Society, the Bureau of Land Management, and the Public Lands Interpretive Association. The project, entitled *America's Backyard: Exploring Your Public Lands*, created national exposure about the role and relevancy of public lands and was documented through film and Internet lessons.

Kay is the mother of two children, Nathan, a graduate of the University of Louisiana at Monroe, and Audrey, a student at Louisiana Tech University. Kay and her children currently reside in West Monroe, Louisiana.