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The Relationship Between the Formal Study of a Second language and the Geographic Knowledge of High School Students

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THE RELATIONSHIP BETWEEN THE FORMAL STUDY OF A SECOND LANGUAGE AND THE GEOGRAPHIC KNOWLEDGE OF HIGH SCHOOL STUDENTS

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ABSTRACT

THE RELATIONSHIP BETWEEN THE FORMAL STUDY OF A SECOND LANGUAGE AND THE GEOGRAPHIC KNOWLEDGE OF HIGH SCHOOL STUDENTS

PROBLEM: The geographic skills and knowledge base of many Americans are not strong as reported by several major geographic knowledge studies in the past few years. (Barrows, 1981; Boyer, 1983; The Gallup Organization, 1988.) Geographic knowledge is one component of the cultural emphasis of second language learning, therefore, one place to examine geographic knowledge is with second language students.

HYPOTHESIS: The hypothesis tested is that there is a significant difference in the geographic knowledge between high school students who study a second language and students who have not studied a second language.

SUBJECTS: The experimental group consisted of 101 high school students from tenth and eleventh grade who have studied a second language in high school while the control group consisted of 48 high school students who have no second language courses on their high school transcripts. Subjects were randomly selected from all four academic rank quartiles of both grades, with Quartile 1, the top academic section of the class and similarly, Quartile 4 representing the lowest section.

PROCEDURES: Early in the academic year, all subjects were administered the 75 question Competency-Based Geography Test, Secondary Level, Form II, developed by the National

Council for Geographic Education in 1983. Student demographic information about language studied most, amount of travel abroad, and ways in which subjects have learned most of their geographic facts was collected from all subjects using ten student demographic items.

Mean test scores, standard deviations, and t-values are presented to compare the correlations related to the control group's and the experimental group's geographic knowledge. Data were analyzed by academic quartile; data were also examined in the experimental group by second language studied.

FINDINGS: The hypothesis is accepted for Quartiles 3 and 4, the lowest academic sections where the data indicate very significant differences in the mean test scores. Not enough subjects from the control group completed tests in Quartiles 1 and 2 for conclusions to be drawn. For the experimental group, no particular language studied was correlated with higher test scores. For each quartile, a different language represented the greatest mean test scores. Spanish students did not rank at the top in mean score in any quartile. This is significant for two reasons, Spanish is one language spoken in many places throughout the world and secondly, because all students in this district are required to study Spanish in the primary grades.

Mean test scores are generally quite low, from 40 percent of the test questions correct in Quartile 4, control group, to a high of 72 percent correct for Quartile 1 in the experimental group. These low test scores parallel other

recent geography knowledge tests, and indicate that, for this sample, more and better geography learning may be desired. The results of this research should provide timely data for current attempts to improve Americans' geographic knowledge and should contribute to second language educators' efforts in the classroom.

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CHAPTER ONE

Introduction

Broad and integrated geographic knowledge, and an awareness of the significance of that knowledge, are very important for a thorough understanding of this world which increasingly takes on a global perspective (The Gallup Organization, 1988). The lack of geographic awareness and knowledge has been much reported by news media after an Educational Testing Service (ETS) (Barrows, 1981) survey of global understanding, a Gallup Organization (1988) survey for the National Geographic Society and the report, Strength Through Wisdom from the Carter Administration (President's Commission on Foreign Language and International Studies, 1979).

As the twenty-first century approaches, there is support for the view that the world is a smaller place, that the people of the earth are becoming more interdependent, and are more aware of each other's presence and impact (Bragaw and Loew, 1985). As articulated by Ernest Boyer (1983), in his critique of high schools, "we may not yet be a global village but surely our sense of neighborhood must include more people and cultures than ever before" (p. 3).

In 1989, at the historic governors' summit on education with President George Bush in Charlottesville, Virginia, goals were set for the year 2000 that will make the United States "internationally competitive" (The President's Education Summit with Governors, 1989, p. 73). Six education goals were set with

geography included in the third goal, Student Achievement and Citizenship. By the year 2000, "American students will leave grades four, eight, and twelve having demonstrated competency in . . . English, mathematics, science, history, and geography" (p. 62). Second languages are also highlighted in this goal with one of the objectives: "The percentage of students who are competent in more than one language will substantially increase" (p. 63).

While curriculum linkages and education connections may abound for geography learning, teachers of second languages and teachers of social studies share a heavy responsibility to help their students move toward meeting this goal of global understanding and multicultural awareness. Bragaw, Loew, and Wooster (1983) wrote that "of all the faculty, foreign language and social studies are the most naturally inclined to help gain knowledge and skills for the twenty-first century" (p. 48). They must help students at all levels to realize and accept their global responsibility. The International Geographic Congress Prospectus (ICG, 1990) alluded to the two disciplines in suggesting: "Geography's continuing quest is to understand the physical and cultural features of places" (p. 2). Although that quest may be geography's goal, second language courses offer an ideal setting to also understand the physical and cultural features of the places where the target language is spoken. Geographers can play a creative role in such education of the world around as can second language teachers. Each discipline

has a unique body of knowledge but also offers many interdisciplinary connections.

A Geography Perspective

The pure geography course offers the most obvious place for students to gain geographic awareness. However, there are few true geography courses taught in high schools today, and many states have no state curriculum requirement mandating geography courses. There is a true lack of geographic education in public schools today (Cramer & Gritzner, Jr., 1990). In a nationwide survey published in 1988, only five states of the 49 states and territories responding to the survey required geography for high school graduation (Council of Chief State School Officers, 1991). In Indiana, only one school requires geography credits for graduation (Bein, 1990). In Nebraska, according to 1987 state requirements, geography is not required as an independent subject (Janovy, 1988). As reported in National Survey by the Council of State Social Studies Specialists, (CS4, 1990) among the fifty states, no geography requirement in high school exists in several states including Florida, Kansas, Louisiana, Mississippi, and Michigan. More and more, geography content has been integrated and "mish-mashed into this huge umbrella called social studies" (Gildersleeve, quoted in Janovy, p. 34).

Geography is inclusive of many other disciplines. In the social studies area, multiple course offerings may include geography, as well as history, political science, international relations, and economics. However, as indicated by recent

national tests of geographic knowledge, that knowledge appears to be getting lost in the schools. With the recent interest in geography learning as well as the interdependent nature of our world, geography is again beginning to be considered as worthy of much more extensive treatment in the classroom.

To aid in the advancement of geography learning, five themes for geographic education have been agreed upon recently by several national geographic groups. These are:

1. LOCATION--Location is the geographic treatment of location and the positions of people and places on the earth's surface. Absolute and relative location are two methods of describing location. In some instances, it is necessary to identify absolute points on the earth. Latitude and longitude are critical to determining precise positions of fresh water or of active volcanos. Relative location provides location in reference to some other place. The relative location of a volcano might be expressed as in the northwestern quadrant of the state, about 30 miles from the state's border with another state, and in a particular range of mountains.
2. PLACE--This includes places and their descriptions based on physical or human characteristics. The distinct physical and human characteristics that give meaning to the place and that distinguish that place from other places are represented by many features. Climate, weather, soils, geology, animal life, human actions, languages, and ideologies are significant segments of place. Also

important are relationships among places and their different groups of people.

3. HUMAN-ENVIRONMENTAL INTERACTIONS--The advantages and disadvantages or reasons of human settlement are identified in this theme. The focus is on the physical and social forces that are involved with environmental change. Environmental changes from agriculture, growth of cities, and mining are of interest here, as well as the importance of these environmental changes to global and national relationships and policies. The ways people adapt and change the environment reveal cultural values, and political and economic factors. Each place has distinctive patterns of human-environmental relationships.

4. MOVEMENT--The movement of humans interacting on the earth produces geographical and societal changes. People interact through communications, travel, and transportation. These movements between people and places create networks that encourage the flow of ideas and cultural values and traditions. Furthermore, these human movements are shaped by physical characteristics of the places. A desert area or mountain region will influence the human movements to, from, and through these areas.

5. REGIONS--A region is an area that has a common set of characteristics that distinguish it from other areas. Some regions are identified by a single common characteristic such as language, landform, or climate. Other regions may

be defined by a set of many common characteristics. This concept of region allows a geographer to examine and analyze sections of the Earth. Regions may be considered, at a simplistic level, as building blocks of the world (Joint Committee on Geographic Education of the National Council for Geographic Education [NCGE] and the Association of American Geographers [AAG], 1984).

These themes are helpful in guiding those who attempt to teach geography today or to integrate geography into other disciplines of the curriculum. Indeed a number of subjects or courses in schools today may often include these five themes. However, the themes, "in themselves, are not geography, but they are important for the reinfusing of geographical components into education" (Gildersleeve, 1990, p. 2). This infusion of geography may come in a history class, in a science class, in an art class, or quite easily in a French or Spanish class.

A Perspective on Second Language Study

Second language study focuses on the communicative aspect, reading, writing, listening and speaking but also emphasizes the people of the second language, their location and their relationships within places and among other cultures (Geno, 1981; Simon, 1991). Bullard (1979) suggested that besides the use and comprehension of the second language, another, equally important goal is a sounder, more sympathetic understanding of other cultures. That is the cultural component of language study which can, some educators may argue, must include geography.

An Interdisciplinary Perspective

Salter (1989) suggested that a variety of cultures and perspectives is the business of both disciplines. The interchange of knowledge "between disciplines is, of course, a natural outgrowth of any study" (Borchert, 1965, p. 247). Social studies and second language teachers may borrow or share material, ideas, and talents as they teach about the earth and its inhabitants (Geno, 1981). Second language courses have been an interdisciplinary subject all along, according to Conner (1977). "The multidisciplinary approach that includes foreign language study should be pushed" (Simon, 1991, p. 15). "Because the foreign language class involves communication skills, it can be combined with study in any other field" (Conner, 1977, p. 101). But is geography a part of second language classrooms? Geography and second languages, the combination appears to be possible, according to many researchers and educators including McMullen, Murphy, Natoli and Gritzner, and Peyre (McMullen, 1970; Murphy, 1987; Natoli & Gritzner, 1988; Peyre, 1975).

Three competencies that Leetsma (1979) offered as necessary for each citizen for the next century indicate obvious connections between the two disciplines.

1. Some basic cross-cultural understanding, empathy, and ability to communicate with people from different cultures.
2. A sense of why and how mankind shares a common future, global issues and dynamics and the calculs of interdependence.

3. A sense of stewardship in the use of the earth and acceptance of the ethic of intergenerational responsibility for the well-being and fair chance of those who will come after us (p. 5).

Despite second language learning opportunities and cross disciplinary possibilities in today's schools, do second language students actually demonstrate a greater global awareness or more geographic competence than a student who does not study a second language? Are second language students acquiring geographic knowledge that other students do not demonstrate?

Statement of the Problem

The purpose of this study was to compare the geographic knowledge of students who have studied a second language with the geographic knowledge of students who have not studied a second language. The null hypothesis to be tested, then, is that there is no significant difference in the geographic knowledge between selected secondary students who study a second language and selected secondary students who have not studied a second language. If data analysis causes rejection of the null hypothesis, then the hypothesis can be accepted.

Hypothesis to be Tested

There is a significant difference in the geographic knowledge between selected secondary students who study a second language and selected secondary students who have not studied a second language.

Significance of the Problem

Americans' ignorance of their own country and of the world may have dire consequences for our nation's welfare, strength and global interdependence, and for the effects we have on people in other nations. In 1990, Gilbert Grosvenor, president of the National Geographic Society asserted:

> How important is all this? Vitally, because an informed citizen must have a fundamental knowledge of geography. Such a person is able to make intelligent decisions about issues that are best understood in a geographic context. And all of us need to be prepared to meet the future in a complex world (poster).

Hufstedler in 1980 wrote in a Change Magazine editorial: "America's young face a set of new national and international circumstances about which they have only the faintest of notions. They are, globally speaking, blind, deaf, and dumb; and thus handicapped, they will soon determine the future directions of this nation" (p. 15).

Geographic knowledge is vital to correct this ignorance and can give future generations the knowledge and understanding they need to manage the earth's resources wisely. Moreover, geographic knowledge can also satisfy our deep need to know about other people and places and about the capacity of the earth to support human life. This knowledge also serves to inform our own individual understanding of places and people. Certainly, to counteract the prevailing geographical illiteracy as evidenced by

the ETS and Gallup studies, major reforms may be necessary (AAG, 1965; Gritzner, 1981; Kean, 1991).

Because of the cultural and geographic component of second language learning, one place to examine geographic knowledge and subsequently to examine teaching techniques and instructional goals is in the second language classroom. This research offers data that will have implications for second language educators and offers possible methods to incorporate geography into the language classroom.

Assumptions

The following assumptions are associated with this study.

Assumption I. The subjects of this study come from second language classrooms where all five traditional second language skills are taught--oral, aural, reading, writing, and culture.

Assumption 2. Second language teaching goals include understanding the target culture and its people.

Assumption 3. Although the cultural and geographic component taught in a second language classroom is that of the second language, geographic knowledge and information about peoples of the world other than of that second language is acquired as well.

Limitations

The following limitations are associated with this study.

Limitation 1. The subjects in the experimental group come from various levels of French, German, Japanese, Latin, Russian, and Spanish classes. The geographic knowledge they may have obtained from second language study may be limited to the target

culture, perhaps they do not demonstrate much geographic knowledge about other areas of the world.

Limitation 2. Subjects in both groups, experimental and control, may have contacts with second languages outside of the classroom.

Limitation 3. Subjects who attended primary school in the same district received required second language instruction in Spanish in the primary grades.

Limitation 4. Subjects of this study who attended middle school in this district were required to study a second language during their seventh grade year. Language choices are French, Spanish, or German.

Definition of Terms

Second language. Often termed foreign language, the use of the words second language puts the language and people of that language in a less confrontational position. The perspective becomes not them and us, one foreign and one non-foreign, but simply two cultures. The term foreign language defeats the goal of a global perspective. Bragaw (1991) suggested the terms second languages, multicultural languages, or world languages as more appropriate and certainly less offensive. A "we-they" perspective only reinforces certain exotic aspects of languages and cultures. In the text of this study, the phrase foreign language will only be used as part of a direct quotation, the term second language will be used at all other times.

The term second language does not imply, for purposes of this study, that the subjects have studied only one language,

other than their own. Contact with third or fourth languages (or perhaps even more languages) may be found in some subjects' backgrounds.

Geographic knowledge. This term refers to knowledge of the world, in the general categories of geographic skills, physical geography and human geography, as measured by the National Council for Geographic Education Competency-Based Geography Test, Secondary Level, 1983.

Summary

From a geography perspective as well as a second language viewpoint, geographic knowledge and second language learning have connections. This inquiry seeks to examine the relationship between knowledge about the world and the formal study of a second language. In Chapter Two, related research and literature offer close connections between the two disciplines as well as data that demonstrate the weak geographic knowledge in the U.S. today.

CHAPTER TWO

Review of Related Research and Literature

The research and literature firmly support the inadequacy of geographic knowledge as well as geographic education in the United States. However, few research studies have examined a second language-geographic knowledge connection. And while many second language experts recommend a cultural component in the second language classroom, there exists little agreement on a framework for teaching culture or even what cultural facets to teach.

In a language classroom, geography may seem an obvious objective; students should know where the target language is spoken throughout the world. Without knowing geographic facts of location, place names, movement, region and human-environmental interactions as they relate to the target language, students may not have a complete understanding of the target culture. To understand the events of the world including events taking place in the target culture area, students need a geographic perspective.

Indeed, those subjects who set out to learn a second language are already seeking global links outside of their immediate sphere (Torres, 1991). Second language educators who are interested in teaching the full range of skills in a second language are encouraged to provide adequate emphasis on the people of the target language and their location and place in the world.

For the purposes of this inquiry, the following eight subsections of literature review and research are presented: an historical perspective of the development of geography, an historical perspective on second language instruction, geography in the secondary schools, a review of geographic knowledge research, several factors associated with geographic knowledge, culture in second language instruction, an interdisciplinary connection, and a summary.

The Development of Geography

Historically, the geographic perspective was the earth and earth space. Geos, meaning the earth, was studied in the earth science tradition with emphasis on physical geography. As an academic discipline, geography is approximately 100 years old. And yet human's interest in earth space can be traced back to ancient times. Throughout the development of geographic theories and ideas, the boundaries of the discipline are quite fuzzy. Early specialists embraced more than one discipline, Herodotus studied history and geography while Ptolemy examined astronomy, mathematics, and geography (Fischer, Campbell, & Miller, 1967). While straddling the social and physical sciences, the discipline has undergone several periods represented by various definitions of geography as well as by several approaches and philosophies.

Eratosthenes, in the third century B.C., who calculated the first highly accurate circumference of the earth and devised a system of lines of latitude and longitude, used the term geography and developed a base of geographic ideas (Broek,

1965). Homer was called the "father of geography" by other Greek writers, including Strabo, in part because of the Odyssey. In this epic poem, people and places on the outer limits of the Greeks' world are the focus, representing an emergence of geographic ideas in a literary sense (Hill & McCormick, 1989). Broek and Fischer et al. (1967) refer to another Greek, Herodotus (484-425 B.C.) as the "father of geography" because, while Herodotus studied history, he always "placed historic events in their geographic setting" (Fischer et al., p. 10)

From the Roman time period, Strabo, a Greek (64 B.C.-20 A.D.), wrote Geographia, an encyclopedic work that presented information about the various countries of the inhabited world as known in Strabo's time (Dickinson and Howarth, 1933). Strabo was considered the first and for a long time, the only regional geographer (Fischer et al., 1967). In addition, Ptolemy, an Egyptian who lived around 150 A.D., improved methods of map projection and the mathematical construction of maps. Continuing with Arab and Renaissance explorers and writers, geography took a mathematical or scientific orientation.

It was Kant (1724-1804) who secured geography's "foundations within the framework of the contemporary philosophy of science" (Broek, 1965, p. 14). His philosophical determination that all knowledge can be organized into three different sections gave honorable status to geography (Broek). According to Kant, the first section is the systematic sciences, that is the study of groups or categories. Botany, geology, and sociology fit here. Secondly, Kant suggested the historical

(chronological) sciences which look at facts and their relationship through time. Finally, the geographic (chorological) sciences or the study of things as they are related spatially, offer another way to view knowledge (Broek; Hill & McCormick, 1989). As a result of Kant's work, this philosophic focus has become the justification for geography. Kant's work set the tone for scientific geography (Broek, p. 15). He is believed to be the first university teacher to give classes in geography (Fischer et al., 1967).

Two other Germans, Von Humboldt (1769-1859) and Ritter (1779-1859) brought great prestige to geography. Fischer et al. (1967) considered Von Humboldt and Ritter to be the founders of modern geography. Von Humboldt's interest was in physical and biological features; he was a traveler, explorer and field worker. On the other hand, Ritter concentrated on the human experience within regions that he identified (Dickinson & Howarth, 1933).

Not until the nineteenth century did professional geography as a field of study appear. In Germany, in 1874, the Prussian government established a chair of geography at each of the Prussian universities (Hill & McCormick, 1989). Soon, Britain, the U.S., and other countries saw the growth of geography as a field of study. However, within the discipline, physical geography was the main focus. With Darwin's research, and the general growth of natural sciences in the eighteenth and nineteenth centuries, there was not only tremendous enthusiasm but great interest in nature and in natural laws. The physical

world was studied by many geographers with the role of human culture often ignored.

Processes within the environment were examined; some geographers left man out altogether. In examining the physical environment in which man lived, historically man-land relationships were looked at in terms of how the environment controlled or influenced man. Geologists and geomorphologists, especially in Germany, were most influential in building this man-land tradition in geography. These ideas were not necessarily new; the Greeks had believed that "culture was linked to climate" (Hill & McCormick, 1989, p. 48). Environmental Determinism, the belief that the physical world controls human ways of life developed; it was a natural outgrowth of the man-land tradition in the second half of the nineteenth century. In fact, in 1892, the Committee of Ten, sponsored by the National Education Association, reported that its geography conference statement emphasized the teaching of physical geography. But as population densities increased in the world, the omission of man was impractical.

The pendulum began to swing to an examination of man's influence on the environment. Possibilism or the influence of the environment but with reminders that human choice was not to be ignored was one slight move away from the physical geography tradition. In fact, a German, Hettner, suggested that geography was misconstrued when nature was considered as dominant and when human beings were considered subsidiary (Hill & McCormick, 1989).

The early twentieth century saw geography change slowly; a physical orientation was replaced by a more human focus. Hill and McCormick (1989) suggested that the pendulum had swung completely from the physical tradition, to the other side, with the emphasis on regionalism during the period between the two world wars. Characteristics of regions were of great interest to geographers then. Hartshorne's book, The Nature of Geography (1939) attempted to synthesize the influences of geographers and answer the age-old question, "What is geography?" He concluded that physical and human features are both significant.

Pattison's (1964) four themes or four traditions were offered at a time when geography was in the midst of great change. Science was in vogue after World War II and dissatisfaction with regional studies led many geographers to seek to connect geography with the scientific world and to make the discipline scientific. However, the four themes expressed by Pattison: 1. spatial, 2. area studies, 3. man-land, and 4. earth science helped to reduce the problem of defining the broad scope of the discipline.

The years between 1930 and 1960 found cultural geographers, including Sauer, Brookfield and others influenced by anthropologists, focusing more on cultures and less on quantitative studies (Hill & McCormick, 1989). Looking at social organizations and human behavior and beliefs, the form and content of the land was less important. Tuan used the term humanistic geography to refer to a geography that is removed from the physical and social sciences; according to him,

geography belongs in the humanities because "geography is to know ourselves" (Tuan, in Hill & McCormick, 1989). Thus, the state of the discipline has come to be quite pluralistic with continued evolution of approaches and methods (Hill & McCormick).

Geography in the Secondary Schools

Of course, the changing nature of the discipline has not made it easy for schools to decide how and what to focus on in the teaching of geography. As early as 1965, the Association of American Geographers (AAG) recommended changes in educational programs. The 1960s and 1970s brought not only the loss of pure geography courses in the schools, merged into the fold of "social studies" but also brought the continuing dilemma of defining and separating the central core of the geography discipline from that which is often on the boundaries and overlaps with other disciplines. The decline in geographic knowledge in the last 25 years may be due in part to the competition from other social studies topics for time in the school classroom. Because geography is the "synthesis of many courses or disciplines" (Nowak, 1970, p. 402), educators may have assumed that geography would be learned in the course of studying other disciplines simply because geography is a part of so many other disciplines.

While Dewey (1917) recognized geography as well as history as the center of the curriculum, for decades there has been little continuity in geography education. Perhaps some geography topics were taught in junior high grades, then

geography was forgotten; a few high school courses were in place, but little geography articulation, and few goals or guidelines were in evidence (National Association of Secondary School Principals [NASSP], 1986). Robinson (1976) suggested that because of the knowledge explosion of the past few decades, many disciplines were in a state of flux as attempts were made to organize knowledge into separate components for study. Geographers knew little about the human part of the geography discipline; moreover, asserted Robinson, they knew little about the "totality of the land" (p. 529) and needed better and more accurate study of the two together. Those connections between the natural world and the human world that this study examines, may have hindered the acceptance of the discipline in a curriculum traditionally compartmentalized.

Today geography appears in curriculum outlines but generally lacks any identification as a separate subject until the middle school years (Hill & McCormick, 1989; Natòli Gritzner, 1988). Being a part of many disciplines without a separate identity and with few distinct pure geography courses may have contributed much to the geography ignorance today.

> To individuals lacking a global 'mental map' the world must be little more than a confusing hodge podge; places without location, quality or context, faceless people and cultures void of detail, character or meaning; vague physical features and environments . . . Such individuals are prisoners of their own ignorance or provincialism (Gritzner, 1981, p. 264).

This same provincialism, from a slightly different perspective is found in the general American outlook towards second languages.

The Historical Perspective of Second Language Instruction

Historically, second languages in the United States were considered inconsequential and superfluous. Perhaps the United States' position between two oceans was the basis for linguistic as well as geographic and political isolationism. Although methodological shortcomings, lack of teacher training or inadequate funding may have all contributed to Americans' lack of linguistic training, Omaggio (1986) examined an attitudinal reason that may be the root of all other reasons. The concept of "Americanization" grounded in the last century suggested that the American society is superior to all others and that ethnocentricity is acceptable. Public schools were expected to produce citizens " . . . obliterating from the very earliest moment all the distinguishing foreign characteristics and traits, which the beginners may bring with them, as obstructive, warring and irritating elements" (Commissioner of the Common Schools of New York City, 1896, cited in Simon, 1980, p. 11). Hitler 's ethnocentric perspective (1923, cited in Simon, 1980) and his writings on "why millions of people must learn two or three foreign languages, a subject which later is without value and meaning for them" (Simon, p. 11) remind people today of the serious threat to world peace and security that extreme ethnocentric insularity represents.

The "melting pot" philosophy of the United States did not assign much value to ethnic differences, cultural values or other

languages but English. Second language teachers had to fight long and hard to maintain a place for languages in the curriculum.

Although second languages have been termed the "glue of civilization or culture" (Bragaw, Loew, & Wooster, 1981, p. 63), culture has never been of prime importance in language instruction. Literature and grammar study were historically the chief foci. While enrollment in languages peaked in the early 1920s, enrollment did increase after the 1957 National Defense Education Act (NDEA), passed by Congress in response to the launch of Sputnik. The NDEA directed massive funds to math and science as well as to second language instruction. However, second languages received only temporary impetus, they were overshadowed by the thrust at the natural sciences. Funds and interest languished as soon as the United States caught up with the Soviet Union (Futrell, 1991). One deduction that can be made is that after the economic challenge was met, Americans were not much interested in second languages or other cultures. In fact, in the late 1960s almost all colleges dropped second language requirements (Boyer, 1983).

After changes in methodology in the 1960s to drill and practice and to the audio lingual method, with literature still an important focus, pleas for attention to the teaching of culture in language classes began in the late 1960s. The large 'C' culture of museum collections, fine arts, architecture and literature which had represented the cultural focus was pushed aside in favor of the small 'c' culture, understood to fall along socio-anthropological lines. Lives, customs, crafts, and contemporary

music were introduced to second language classes as "compatible with educating for a global perspective because it [small 'c' culture] stresses universality of cultural institutions across geographic and political boundaries" (Bragaw & Loew, 1985). Culture became understood as an alternative to literature, the traditional focus for many language courses. However, this cultural component was never intended to supplant the social studies program; the cultural focus was to provide an additional approach to world understanding (Grittner, 1974).

A global perspective and an infusion of cultural goals in second language instruction were called for in the late 1970s and early 1980s (Strasheim, 1981a). However, in 1981, Lafayette and Strasheim found that language and culture had not yet been successfully integrated in the classroom; the general instructional orientation up until the early 1980s was technical mastery (Goodlad, 1984). Bragaw agreed in 1991 that the inclusion of global education in second language programs today remains at a low level.

While in the late 1980s and early 1990s, oral proficiency has become the dominant teaching framework, Crawford-Lange and Lange (1984) have designed an integrated interaction model that combines culture and cultural values and communication into a dynamic process that allows the second language teacher to include geographic materials and other cultural topics without sacrificing language goals.

On the international scene, the Helsinki Accords in the Final Act in 1975 committed the signatory states "to encourage

the study of foreign languages and civilizations as an important means of expanding communication among peoples" (President's Commission on Foreign Language and International Studies, 1979, p. 5). Learning a lesson from the late 1950s and the NDEA funding episode,

> Utilitarian value and pragmatism have never been able to ensure permanent support for the primacy of foreign language study. On the basis of the fact that our shrunken world will continue to shrink and that understanding our neighbors within the global community will become even more necessary, we must make the case for the importance of foreign language study (Futrell, 1991, p. 24).

And, this author would add, educators must make the case, as well, for study towards other facets of a global understanding, including geography.

The Association of American Teachers of French (AATF) compiled during the late 1980s professional standards for the teaching of French. One of the competencies listed as basic in the cultural section is knowledge of French geography (Murphy, 1987). Teachers competent to teach geographic concepts in their classrooms are a prerequisite for increased geographic learning in the schools.

Current constraints that inhibit interest in second languages and other cultures include:

1. tradition of self-sufficiency
2. tradition of acculturation of immigrants
3. fear of world government

4. lag in teacher education for the twenty-first century
5. return to basics movement in education
6. lack of authentic instructional materials
7. territorial imperative
8. overburdened curriculum
9. tradition of literature as the only goal of language study

(American Council on the Teaching of Foreign Languages (ACTFL) and the National Council for the Social Studies (NCSS), 1979).

Whether because the teaching of culture, including geography is still relatively ineffective or because so many students do not study any second language or because the teaching of geography has been insubstantial and sporadic, it seems clear from the research that graduates of our nation's schools are uninformed about other peoples and nations. Franklin (1979) perhaps stated it best, "Our disinterest in language is a clear reflection of our parochialism that makes it virtually impossible for us to see ourselves as integral parts of a larger unit" (unpublished remarks). The disinterest and ignorance in geography is also a firm illustration of the very parochialism of which Franklin spoke. From the standpoint of American education as a whole, a second language and culture study hold the main chance of strengthening several weak dimensions (Murphy, 1987).

Geography education combines the physical and also human aspects of the world into one discipline. A primary goal of geography according to the 1994 National Assessment of

Educational Progress (NAEP) Consensus Planning Committee (Council of Chief State School Officers, 1991) is developing understandings among different peoples, in different places, and in response to different events. In similar fashion, this goal might easily be accepted for second language instruction. With a bit of rewording and a slant towards languages, this goal might read: One goal of second language training is to understand the people of the target culture, in the different places where the language is spoken, and in response to various events, of daily life, in world situations, and in an historical as well as in a futuristic perspective.

Geographic Knowledge Research

The National Geographic Society's survey by the Gallup organization in spring of 1988 made clear that while Americans have an awareness of the importance of geography, they seemed to be lacking in basic geographic knowledge and skills. This was particularly true of the youngest group tested, those between the ages of 18 and 24. While 90 percent of American adults think it is important to know something about geography in order to be considered a well-rounded person, only half of all U.S. adults knew that the Sandinistas and Contras had been fighting in Nicaragua, despite heavy U.S. involvement in Central America at the time of the survey. Thirty-two percent of Americans could not name any of the members of NATO (The Gallup Organization, 1988). Examining geographic knowledge closer to the cultural components of French and Spanish classes, the average American adult could identify from outline maps, about four of twelve

European countries and less than three of eight South American countries.

The Gallup survey (1988) was able to compare place-location results with similar Gallup surveys in the late 1940s. The young American adults of today scored significantly lower than young adults in the 1940s. While the survey was international in scope, results were still admittedly embarrassing for the American education system. The American respondents between the ages 18 and 24 scored the worst of all the nine countries surveyed in world map locations. Indeed, this 18-24 age group, those closest to their secondary school education, ranked near the bottom in all the international comparisons. Perhaps, even more disturbing is the fact that the United States was the only one of the nine countries in which the youngest age group (18-24 years) did not do better than the oldest age group (55 years and over).

In an ETS survey (Barrows) of global understanding done in 1981, for NAEP, among college students, second language majors who might have been expected to be among the highest scorers on the test, finished behind history majors who had the best performances, as well as behind math and engineering majors. Social science and second language majors finished almost at the same level of knowledge as measured by the test, still in the top half of the distribution of mean scores by major or intended major.

Examining the results of a high school geography quiz given in New Orleans in 1988 (Hymel, 1988), from a sample of 1511

students, 66 percent did not know that Alaska was the largest state, 42 percent could not locate the Soviet Union on a map and 70 percent could not find Panama. Principal Joe Bucaran's reaction after reviewing the test results with a mean score of 31 percent was to ask his faculty to bring geography into every class.

Examining a younger set of students, 51 sixth-graders at the beginning of their academic year were asked to draw a map of the world. One-half of the student sample, 26 students, drew South America. Only three students labeled any South American countries. At the end of the year, after general teaching of South America, the posttest showed a different overall picture of the class' knowledge about South America. Just two out of the 51 students did not include South America on their maps. Most students labeled more than five South American countries and drew the continent with a high degree of accuracy and detail. Wise and Kon (1990) found that comparing the students' maps from the pretest to the posttest indicated an effective instruction about the region during that academic year. Before this classroom instruction, South America was virtually unknown to a majority of the students tested.

Focusing on secondary students, including a similar educational level as the sample for this study, a geography literacy test administered in the Fresno area in 1988 to students ranging from 7th-grade to 12th-grade revealed that basic locations such as the U.S., the Soviet Union, and the Pacific Ocean were mislabeled or left blank by 18 to 28 percent of the students

(Quinn, 1989). The results were so appalling to one faculty group that the group proposed to take immediate remedial action, advocating incorporating geographic principles and knowledge throughout the curriculum at their high school to supplement the existing geography course. One recommendation by the group was that "foreign language teachers will require more study about the countries and places where that language is spoken" (Quinn, p. 181).

Bein's (1990) research of 3000 freshmen in 18 Indiana universities and colleges in 1987 suggested glaring deficiencies "given the intricate global networks and world leadership role of the United States" (Bein, p. 260). Mean scores ranged from 75 percent correct for place names to a low of 58 percent correct on physical geography test questions.

Cramer and Gritzner's report of research (1990) at East Carolina College in North Carolina also reveals the inadequacies of college freshmen in geographical knowledge. Thirty-eight percent of the subjects failed to locate Alaska, 40 percent mislocated China, 61 percent could not locate England, and 86 percent could not put the Rocky Mountains within 500 miles of their location. In fact, one-fifth of the subjects placed the Rocky Mountains east of the Mississippi River. And this nation's largest city was placed in New Orleans' position by 19 percent.

As reported by Drake (1986), most students tested at Old Dominion University located fewer than seven places in Europe and many did not know whether Switzerland and Austria were first or second world countries.

Factors Associated with Geographic Knowledge

Factors commonly associated with geographic knowledge have been studied by few researchers. Although travel would seem to have connections with geographic knowledge, Cross (1987) found that travel experiences were not associated with place location knowledge. Geography classes might be expected to be related to greater geographic knowledge; however, Cross' research indicated that high school geography classes were not associated with greater student awareness of place location. Helgren (1983) and Bein (1990) did however, find a significant correlation with these two factors. Cross' study at the University of Wisconsin-Oshkosh in 1985 and 1986 used a map test. Students with no previous university geography course were asked to locate places and label the map. Thirty-six percent of the students could locate 50 percent of the countries. No student could locate all of the countries and a full 25 percent mislocated the Soviet Union.

Other factors were examined by Cross (1987). Studying gender, male knowledge was greater than for females. A subset of travel, foreign travel was weakly associated, not with geographic knowledge but with place name ignorance. Also, not boding well for the reputation of educators, education students as well as human services students had the lowest rating of all groups. Cross did not study second language study as a factor in place location knowledge. However, his findings indicate that the use of mass media was significantly related to student scores. Newspaper or news magazine readership as well as

regular television news watching were positively correlated with a rise in student scores.

The ETS survey (Barrows, 1981) compiled a general profile of second language proficient students based upon factors including study of a second language in a formal educational setting, as well as participation in an organized summer abroad program, family members or people in the neighborhood speaking another language, and living abroad. This profile was considered by the ETS as an "acid test" of contribution of developed language proficiency to increased "global understanding" to carry out the relevant comparisons on the global understanding test. Examination of the mean total score on the test obtained by the second language proficient students showed scores not appreciably different from those of the total "native English speaking" groups or total study sample groups. The hypothesis that students "proficient" in a modern second language will show higher levels of global knowledge did not appear to be upheld. ETS concluded that on the basis of the data available for study, there is essentially no relationship between proficiency in a modern language and overall level of global knowledge on the part of U.S. college freshmen, seniors and two-year college students.

While little research has specifically examined a second language-geography connection, Bein (1990), using the same testing instrument as used for this study, looked at related variables such as travel influence. Among Bein's findings was the number of places visited and test success are statistically

significant. An unanswered question remaining from Bein's research was do frequent travelers have better geographic understanding or do those who know more geography try to travel more?

The recent report, Charting a Course: Social Studies for the 21st Century prepared by the National Commission on Social Studies in the Schools (NCSSS, 1989), suggested that geography "is one of the twin disciplines" along with history, and that both are central subjects upon which the content of social studies can be organized (NCSSS, p. x). The Commission continued:

> In a world in which corporations operate transnationally, communication around the globe can be virtually instantaneous, and the most important problems will have to be solved on an international basis, in such a world the multi-disciplinary study of humankind in its variety, rootedness and interrelatedness becomes even more essential (p. x).

The report, however, does not address teacher preparation with regard to the proposed changes nor does it discuss materials availability. Without these two components, attempts to improve geography learning and teaching, may be impossible to realize.

The NCSSS (1989) as well as Salter (1989) and Durham (1980) found that cultural heritages, peoples' interactions, and global perspectives are all the domain of geography as well as second language classrooms. In fact, Durham suggested that culture studies should be the focus of the language instruction

with communication serving as the "vehicle of delivery" (Durham, p. 222).

Culture in Second Language Instruction

Turning from the geographic knowledge perspective to the second language perspective, for some second language teachers, language is culture and culture is language (Lenard, 1971). The French teacher wove language and culture together, teaching about France. Then perhaps the teacher was encouraged or became interested in enlarging the culture focus to include other Francophone areas, North Africa, the Caribbean, or Canada. And in recent years, this French teacher with global education swirling around teacher conferences and workshops, was encouraged to teach culture by comparing and contrasting France with other cultures, perhaps referring to Spanish, German or British culture and values. Throughout the above scenario, geography is a necessary part of the teaching.

While the goals of second language study have changed throughout the years, and are even today, topics of debate for second language educators, one of the goals is cultural. That culture can lead to links with the themes of geography. The Presidential report from the President's Commission on Foreign Language and International Studies (1979) suggested that "it is going to be far more difficult for Americans to survive and compete in a world where nations are increasingly dependent on one another if we cannot communicate with our neighbors in their own languages and cultural contexts" (p. 28).

Carduner contended that "la culture que l'on doit enseigner est bien évidemment liée à la langue" (Carduner, 1987, p. 10). (The culture that ought to be taught is obviously well linked to language.) Among his six grand themes for French language instruction, he suggested that "la France est un pays très varié et des notions de géographie sont nécessaires" (p. 10) and that "la France a une population qui change (notions de démographie, le problème d'insertion des étrangers)" (p. 10). (France is a very varied country and geography is necessary and France has a population that changes, demographic notions, the problem of the assimilation of foreigners.)

What about the teaching of culture, geography included, in the second language classroom? Hopper (1985) suggested that the teaching of geography is one of the least successful activities in a second language classroom. "Filmstrips, maps, and fact-sheets have their place, but it is evident that the students have difficulty relating to them. The essential ingredient of successful language learning, communication, is lacking and interest lags" (Hopper, p. 6). While one might doubt that films and fact-sheets represent geography, they do represent a sample of methods that second language teachers employ in their attempts at integration of geographic facts into the language classroom. Lack of formal training and lack of materials, as well as little emphasis on geography in second language perspectives may well contribute to the low success of geography teaching that Hopper mentioned. Hopper's suggestions

for bringing the geography and people of France "alive" are included in Chapter Five.

Sometimes second language study ties the cultural component too closely to our own American culture. "Despite Brooks, Nostrand, and Seelye, language texts continue to show American teen life through the prism of a second language" (Bragaw, 1991, p. 117). He suggested that the target culture, geography included, is not being treated; textbooks attempt to use the language but with a focus on American situations. Cultural values, interactions of culture, language, social, geographical, and political values of the target culture are sometimes being ignored.

An Interdisciplinary Connection

The interdisciplinary link cannot be denied according to Bragaw and Loew (1985) and Carduner (1987) and should be emphasized (Kneip, 1986). It is difficult to compartmentalize knowledge into convenient boxes for study purposes. What are the boundaries between geography and second languages? "People who care about other cultures, languages and places know where those places are located" (Shirey, 1990). The study of people and places leads to and includes the language of a people. Second language instruction at any level must be more humanistic and sensitizing, not just with the goal of communication. The Presidential Commission on Foreign Language and International Studies (1979) reported that it was difficult to separate second language and international studies

and social studies topics. Culture and language are woven together.

While there is difficulty in defining the lines between the two disciplines, students and teachers always face the dilemma that knowledge is so vast that it must be divided in order to understand some part of it. Yet Robinson asserted that "all knowledge is related and we must try to understand the links and interaction" (Robinson, 1976, p. 523). Geography is not the sole property of geographers "but for all who attempt to teach an understanding of the Earth upon which we live" (Gildersleeve, 1990, p. 1).

The cultural approach in second language classes provides an intellectual link between two subject areas; there is much similarity in goals and objectives as well as in content between parts of the social studies discipline and parts of the second language discipline (Bragaw and Loew, 1985). However, "far more collaboration is needed between teachers of social studies and teachers of foreign languages" (Presidential Commission on Foreign Language and International Studies, 1979, p. 50). The connection is there between the two disciplines, but more work is necessary to assist in developing a satisfactory link between the two disciplines and between the two groups of instructors. Weak geographic knowledge of second language students may indicate that interdisciplinary connections are not as strong as they might be. Nevertheless, "students have much to gain from such interdisciplinary cooperation as they perceive the relationships between language and culture through both

language studies and social studies culture topics that incorporate historical, geographic, political and economic understanding" (Bragaw and Loew, p. 93).

While much research exists in geography as well as in the second languages, few researchers have examined connections between the two areas. The magnitude of geographic ignorance in the American society indicates that perhaps those linkages are worthy of examination. Drake (1987) suggested that educators and researchers may lose sight of the general geographic ignorance situation because of four basic reasons:

1. The world is so big and complex,
2. Confusion about where to start,
3. Feelings of helplessness in the face of the problem and the diversity, and
4. Questions about where to go for information and resources.

Turning to educators as a group, a 1973 survey revealed that only five percent of those graduating to become teachers had taken any course that exposed them to the culture of another country or to international politics (Simon, 1980). To have such a small percentage of teachers with any university course work concentrating on other cultures actually in the classrooms of this country brings to mind the phrase "insularity breeds insularity." While recognizing that we are a global village today, are the U.S. schools fostering such a world view?

Summary

The literature and research provide great evidence of the lack of geographic knowledge among U.S. citizens (Barrows, 1981; Bein, 1990; and The Gallup Organization, 1988). Evidence also exists about the disinterest and ignorance by many Americans about second languages or other cultures (Futrell, 1991; Presidential Commission on Foreign Language and International Studies, 1979; and Simon, 1980).

Much of the related research does not specifically examine geography linked with second languages. However, the ETS survey (Barrows, 1981) did not show a positive correlation between second language proficiency and global knowledge.

While second language teachers and social studies teachers alike, as well as educators of many other disciplines may feel helpless and overwhelmed in attempting to increase geographic knowledge among students, this research will contribute to one part of the puzzle. In particular, this study seeks to examine the geographic knowledge of secondary students who have studied a second language and of students who have not studied a second language. It is this part of the puzzle that this study examines by looking at the study design, data from descriptive research, and conclusions, and recommendations in Chapters Three, Four, and Five.

CHAPTER THREE

Design of the Study

This chapter includes a detailed explanation of the subjects of this study, a description of the study procedure and an explanation of the data processing, categorization and analyses. The problem being investigated in this inquiry is the relationship between the formal study of a second language and geographic knowledge. Despite the generally poor performance of students on various geographic knowledge tests throughout this country in the late 1980s and early 1990s, there may be a positive relationship between studying a second language and geographic knowledge. In order to conduct this study, permission was granted by the principal of a suburban midwest high school which includes grades nine through twelve, population 1280.

Hypothesis

The hypothesis is that there is a significant difference in the geographic knowledge between selected secondary students who study a second language and selected secondary students who have not studied a second language.

Subjects

The subjects in this study were 199 high school students, all between the ages of 14 and 18 years old. The population of the study was the tenth and eleventh grade students of this high school, 690 total students. The high

school is generally considered to be middle to upper class, predominantly white and with a good academic reputation.

From a roster of students in each grade level, in order by academic rank, subjects were randomly selected using a systematic selection process. Each subject was placed in the control group, not having studied a second language in secondary school or placed in the experimental group, having studied a second language in secondary school. List A and List B were used to place the students in the appropriate group. List A included those whose secondary transcripts indicated second language instruction; List B was composed of those students whose transcripts indicated no second language instruction.

Subjects in both experimental and control groups were then placed in one of four subgroups of academic standing, mathematically calculated from the academic rank list for each grade. The total number of students in each class was mathematically divided into four equal sections, then subjects were placed in one of the four sections, according to their academic rank order number, as indicated on the list of students from which subjects were randomly selected. For example, the tenth grade class had a population of 364 students. The list of students was divided by academic rank order into four equal sections, representing Quartiles 1-4. Subjects were then identified by their academic rank order number and placed in the appropriate section. For purposes of this inquiry, these four academic rank sections are referred to

as Quartile 1, Quartile 2, Quartile 3, and Quartile 4. Subjects ranked in the academic top 25 percent of that class were placed in Quartile 1, for statistical analysis. In other words, Quartile 1 consists of those students with strong academic rankings and conversely, subjects from the bottom 25 percent of that class, those students with weak academic rankings were placed in Quartile 4. In Quartile 2, therefore are subjects who are academically ranked in the second 25 percent of that class. Similarly, subjects whose academic rank is in the third 25 percent of that class were included in Quartile 3.

Academic rank at this high school is determined for each class of students on the basis of mark points. These mark points are assigned to each subject according to the quality and relative difficulty of the subject. Courses are weighted from one to five depending on the criteria and goals of the course. Second language courses that the students in the sample may have completed are all designated Group 3 courses (see Appendices A and B for further explanations pertaining to course weights and academic rank).

At this high school French, Spanish, German, Japanese, Russian and Latin are offered, with between 60 percent and 70 percent of the students enrolled in a second language each year. Although English as a Second Language and Vocabulary Enrichment are considered courses in the language department at this high school, these courses were not considered as second language classes in composing the two lists of

students with or without second language experience (Lists A and B).

After the initial random selection of the students, further selection of students was employed to fill several subgroups that had less than ten subjects. Subjects that met the criteria for second language experience and that fit the necessary academic quartiles were found to fit most of the cells. However, because of the strong second language tradition at this high school and also within the entire school district, it was impossible to fill all the control group cells with an adequate number of subjects. The experimental subgroups were not difficult to fill through random selection; however, for the control groups, it was impossible, even employing further selection techniques, to find subjects to fill Quartile 1 and Quartile 2. Most average and above average students at this high school choose to study a language in high school.

On the other hand, no pure geography course exists at this high school and no geography topics are specifically mentioned in the social studies course descriptions in the Parent-Student Handbook. For the second language course offerings at this high school, however, course descriptions for German I, German IV and Russian I, all full year courses, indicate geography as one course focus.

All parents or guardians were informed through a letter that their son or daughter had been randomly selected to participate in the geographic test for this research and that

all tests and data collected would be anonymous and confidential (Appendix C). Subjects were also informed in writing that they had been randomly selected to take part in a geography survey. A reminder note was also sent to each student the week of the test (Appendix D). Of the 199 students represented in the sample, 149 completed tests that were used in data analysis.

Procedures and Instrumentation

The students, 48 in the control group, 21 tenth graders and 27 eleventh graders and 101 in the experimental group, 53 tenth graders and 48 eleventh graders were administered a geographic knowledge test in late September, 1991. The testing instrument was the Competency-Based Geography Test, Secondary Level, Form II, developed by the National Council for Geographic Education (NCGE). The 75 item test was administered to all subjects at the same time in the same room during two homeroom class periods, with a total testing time of 60 minutes.

Directions for administering the test, as provided by the NCGE were followed. The NCGE suggests that an average student should complete this test in one hour, however, it is not intended to be a timed test and students were informed of this. Parts I, Map Skills and Part II, Physical Geography were administered one day, as suggested by the NCGE and Part III, Human Geography was administered on a second consecutive day. Preliminary activities, distribution of materials and reading specific information to the students required no more

than five minutes each day. Although the NCGE suggests that the testing place be the students' regular classroom, for purposes of this study, one central, large auditorium room was used. Verbal introductory remarks to the subjects were: "You have been randomly chosen to participate in a study about high school students and geographic knowledge" (see Appendix E for further test instructions).

The NCGE Competency-Based Geography Test includes questions from all the five themes of geography. Part I, entitled Map Skills and Locations, encompasses location, regions, and place. Part II of the test, Physical Geography covers the themes of regions, human-environmental interactions, movement, and location. All five themes, movement, human-environmental interactions, regions, location, and place were represented in Part III, Human Geography.

The final section of the test was comprised of 10 subject information questions written by the researcher. For purposes of this study, data collected included languages studied, number of years a language had been studied and means by which subjects reported that they had learned geography (Appendix F). All students completed the entire test within the allotted time on both days.

Null Hypothesis

The null hypothesis tested is that there is no significant difference in the geographic knowledge between selected secondary students who study a second language and selected

secondary students who have not studied a second language. If the null hypothesis can be rejected based upon data analysis, then the hypothesis, that there is a significant difference in geography knowledge between these two groups can be accepted.

Analysis of Data

Individual tests were scored by computer, the total number correct out of the 75 geography test questions was reported. By usage of student code numbers, verification was made of the grade, academic quartile, and group, for each completed test. Using the SPSS computer program, mean scores were compared between the experimental and control groups, as well as between academic quartiles, and within the experimental group by languages studied. Statistical t tests were used to analyze the statistical significance of the data.

The data analysis, presented in Chapter Four, will provide information to accept or reject the hypothesis. Based upon the analysis of data, conclusions and recommendations will be offered in Chapter Five to strengthen geography knowledge in the schools.

CHAPTER FOUR

Presentation and Analysis of Data

This chapter examines the data collected from 149 subjects' completed geography tests. Data is presented in six different tables to facilitate understanding of the results. Mean test scores by group and quartile as well as standard deviations and t-values are presented. For purposes of this inquiry, the quartiles represent academic rank within the class with Quartile 1 representing subjects ranked in the academic top 25 percent of that class. Again, Quartiles 2, 3, and 4 include subjects from the academic second 25 percent, third 25 percent and fourth, or last 25 percent of the class, respectively.

Presentation and Data Analysis

Table 1 shows the comparison of the scores achieved by the control group and the experimental group on the Competency-Based Geography Test. The mean test scores indicate that the experimental group scored higher on the test than the control group. Throughout this data analysis, the mean is to be understood as the arithmetic average. The mean test scores for the two groups, experimental group with 47.89 and the control group with a mean test score of 42.93 represent an absolute difference of 4.96. To educators in the classrooms, a difference of almost five questions on a 75 question test, may not be viewed as of great importance. Perhaps of more importance is the fact that the mean test scores for both groups indicate between 57 percent and 64 percent of the questions were answered correctly. These scores indicate that, for this

sample, student geographic knowledge is poor, paralleling results of other geography knowledge tests given in recent years.

Table 1

Comparative Data for Control Group (N=48) and Experimental Group (N=101) for Competency-Based Geography Test

	Control	Experimental
Mean test score	42.93	47.89
Mean expressed as a % of total possible correct	57%	64%

Note. Maximum score = 75.

The values in Table 2 represent a comparison of the control group and the experimental group's mean test scores, by academic quartile. However, for the control group, the one test score in each of Quartiles 1 and 2, does not provide sufficient data for analysis. The other subgroups with over 20 test scores in each do contain an adequate number of scores for statistical examination. Small sample size restricted data analysis of Quartile 1 and Quartile 2. The mean test score in Quartile 3, for the experimental group is 44.89 as compared to 37.43 for the control group. Furthermore, in Quartile 4, the mean test score

for the experimental group is 42.48, while the control group's mean test score in the same quartile is 30.32. If t tests reveal that these differences between the experimental group and the control group are significant, then the null hypothesis, that there is no significant difference in geographic knowledge between the control and experimental group must be rejected, at least for these two lower academic quartiles. (See Table 4)

The mean test scores for Quartile 1 indicate a generally low level of geographic knowledge. For the control group in Quartile 1, the mean calculated as a percentage of questions correct was 61 percent as compared to the experimental group's mean percentage of questions correct of 72 percent. The highest academically ranked group, Quartile 1, which includes subjects from the top 25 percent of their class, in this sample scored at the low end of many schools' grading scales. Examining the mean scores for the lowest academic quartile, Quartile 4, reveals the control group's mean percentage to be 40 percent as compared to the experimental group's mean percentage of 57 percent. Despite the fact that the hypothesis is partially upheld, in two academic quartiles, the knowledge level, in general, is quite low.

Table 2

Mean Test Scores by Academic Quartile for Control Group (N=48) and Experimental Group (N=101)

	Control		Experimental	
Quartile	Mean	Number of test scores	Mean	Number of test scores
1	46.00	1	54.23	30
2	58.00	1	49.97	32
3	37.43	23	44.89	18
4	30.32	22	42.48	21

Table 3 shows comparative data for the entire sample. The mean indicates that for this sample using the Competency-Based Geography Test, geographic knowledge is poor. The distribution of scores appears to be almost bimodal, with the actual mode at 51 but with another group of scores at 41. This may be explained by the fact that two groups were tested. The hypothesis stated that there is a significant difference between the two groups in geographic knowledge, perhaps the almost bimodal nature of the distribution reflects and upholds the hypothesis. A large group of test scores is at 41; the mean for

the control group is 42.93 and another large group of test scores is at 50 and 51, the mean for the experimental group is 47.89, almost 48.

Table 3

Comparative Data of Test Scores (N=149)

Range	Frequency
0-14	0
15-25	12
26-35	24
36-45	33
46-55	51
56-65	28
66-75	1

Mean = 44.32 Mode = 51 SD = 11.802 Range = 55

The data in Table 4 represent comparisons between Quartiles 3 and 4 for both the control and experimental group. Quartiles 1 and 2 did not include enough test scores for statistical analysis. Using a two-tailed probability, both Quartiles 3 and 4 indicate, at the .05 level of probability that

differences between test scores are not due to sampling error. In fact, in Quartile 4, the difference, .000, is very significant. Apparently, the differences in test scores are due to something other than sampling error. There is a positive relationship between language study and geographic knowledge in Quartiles 3 and 4.

Table 4

Comparative Data by Academic Quartile for Control Group (N=48) and Experimental Group (N=101)

	Control		Experimental		t value	2-tailed prob.
Quartile	Mean	SD	Mean	SD		
3	37.43	11.17	44.89	8.94	-2.37	.023
4	30.32	11.19	42.48	9.27	-3.89	.000

Note. 2-tailed probability was computed using separate variance estimate.

Table 5 presents mean test scores from the experimental group by quartile and language studied most since seventh grade. The data indicate that across the spectrum of languages most studied by the students in the experimental group, the Russian students had significantly higher test scores than students who

study or had studied other languages, although the Russia figures are suspect because of small sample size in the Russian subgroup, two test scores, one in Quartile 1 and one in Quartile 3.

French and Spanish students' scores indicate an anticipated pattern from Quartile 1 through Quartile 4 with a decrease in scores in relation to a decrease in the academic rank. The test scores indicated weaker geographic knowledge as one moved down the academic rank quartiles. Mean test scores for German suggest an increase in scores between Quartiles 1 and 2 and again an increase between Quartiles 2 and 3. This increase represents an unexpected inverse relationship between test scores and academic rank.

Examining differences between the languages, excluding Russian because of small sample size, Quartile 3 has the largest difference in geography knowledge among languages. Perhaps this can be attributed to large differences in student achievement and ability among students in the lower quartiles. Because grades and academic achievement are often not meaningful to some students, a student's academic ranking in Quartile 3 or Quartile 4 may not be an accurate reflection of their knowledge and ability. Test scores indicate that for this sample, Quartile 3 included students who have geography knowledge above the mean for Quartile 3 (see Table 2), 44.89, but whose academic ranking is low.

Table 5

Mean Test Scores by Quartile and Language Most Studied (N=142)

	Language Most Studied					
Quart.	French	German	Russian	Spanish	Japanese	Other
1	53.33(9)	52.80(5)	69.00(1)	53.29(17)	NR	NR
2	47.00(8)	53.50(2)	NR	51.04(23)	NR	NR
3	46.50(6)	55.50(2)	59.00(1)	39.96(25)	32.00(1)	28.25(3)
4	51.00(1)	38.75(4)	NR	36.83(30)	15.00(1)	35.00(3)

Note. Quart. = academic quartile. NR = no reported scores.

Note. Latin was reported by 1 subject, in Quartile 4, score = 23.

Note. Numbers in parentheses are n sizes for each language group by quartile.

The data in Table 6 represent a rank order of mean test scores by quartile and language most studied. To arrive at the rank order, the mean scores by language most studied and by quartile, were arranged from the language with the greatest mean score down to the language with the lowest mean score. From this data, a rank order of languages, that is the mean test scores within each language group, can be examined. The rank orders of languages most studied differ from quartile to quartile. No pattern is apparent. Within Quartile 1, the differences in mean test scores between three languages, French, Spanish, and German--rank order 2, 3, and 4--is less

than 1.00. However, within other quartiles, the differences in mean test scores are much greater. In Quartile 3, the differences between rank order 1 and 2, Russian and German is 3.50 and between rank order 2 and 3, German and French, the difference in mean test scores is 9.00. There appears to be no relationship between specific languages most studied and geographic knowledge with regard to the entire academic range.

Table 6

Mean Test Scores in Rank Order 1-4 by Quartile and Language Most Studied (N=137)

Quartile	Rank			
	Rank 1	Rank 2	Rank 3	Rank 4
1	Russian	French	Spanish	German
	69.00(1)	53.33(9)	53.29(17)	52.80(5)
2	German	Spanish	French	- -
	53.50(2)	51.04(23)	47.00(8)	
3	Russian	German	French	Spanish
	59.00(1)	55.50(2)	46.50(6)	39.96(25)
4	French	German	Spanish	Other
	51.00(1)	38.75(4)	36.83(30)	35.00(3)

Note. All subjects in Quartile 2 reported languages studied most were German, Spanish, or French.

Note. Numbers in parentheses are n sizes for each language group by quartile.

Summary

From the data analysis, the null hypothesis can be rejected for the lower academic quartiles, Quartile 3 and Quartile 4. Therefore for Quartile 3 and Quartile 4, the hypothesis, that there is a significant difference in geographic knowledge between the two groups, can be accepted. For this population, in the subgroups of Quartile 3 and Quartile 4, there is a positive relationship between the study of a second language and geographic knowledge. However, low test scores throughout the inquiry indicate that geographic knowledge is weak and that steps must be taken to increase the geographic competence for students.

The following chapter, Chapter Five, offers discussion and conclusions about this inquiry. Recommendations for further examination of this hypothesis as well as recommendations for educators with regards to the implementation of geography are presented. Specific learning activities are also offered to aid in the inclusion of geography in second language classrooms.

CHAPTER FIVE

Discussion, Conclusions, and Recommendations

This final chapter offers discussion of the test results and data analysis as well as conclusions. Recommendations are also offered for more and better geography instruction in second language classrooms and for further study of the relationship between second language study and geographic knowledge.

Discussion and Conclusions

The analysis of the mean test scores and standard deviations as well as *t* tests for the experimental and control groups indicates that there is a difference for Quartiles 3 and 4 in geography knowledge as measured by the Competency-Based Geography Test. Quartile 3 and Quartile 4 represent subjects from the two lowest academic sections of the class. On the basis of this analysis, the null hypothesis must be partially rejected, for the lower academically ranked students. Therefore the hypothesis that there is a significant difference between experimental and control group geographic knowledge is accepted for these two lower academic quartiles.

However, in all academic quartiles for both groups, the mean test scores, calculated as a percentage of total responses on the test were never above 72 percent which represents a low average score in many school districts. Educators, parents and other interested individuals, for the most part, will agree that a score of 72 percent represents inadequate geography knowledge. The conclusion is that

geographic knowledge for the subjects who participated in this study is weak. Considering that the subjects for this inquiry come from a high school with, in general, a strong academic reputation, what might be another population's geographic knowledge?

From the data of Table 6, the ranking of the languages studied by mean test scores, the language required by all elementary students in the school district, Spanish, did not appear in the first position in any quartile. In fact, the rankings were third in Quartile 1, second in Quartile 2, fourth in Quartile 3 and third in Quartile 4. One conclusion is that there is no relationship between the elementary Spanish studies of this population and secondary level geographic test scores. One might expect students who have studied one language for six years, even though at the elementary level, to exhibit more geographic knowledge than others studying another language at the secondary level. The exposure at the primary level did not make a difference in geographic test scores for this inquiry.

While geographic knowledge was not examined related to one language more than any other languages studied, it is interesting to note that the two languages, French and Spanish, with many varied locations throughout the world where they are spoken, overall did not have higher mean scores than other languages such as German and Russian, that are spoken in only a few locations in the world. Perhaps that suggests another

area of inquiry for further study, an in-depth examination of geographic knowledge by language studied.

One conclusion from this inquiry is that geographic education alone cannot remedy deficiences in geographic knowledge. More international education, in general, and specifically a new emphasis on geography in many and varying educational settings are important goals for schools. While "all events occur within a geographic context, to understand them fully, we must subject them to geographic scrutiny" (Joint Committee on Geographic Education, 1984, p.1). This geographic scrutiny will allow Americans to learn "how 'place' influences cultures and economies" (Southern Governors' Association Advisory Council in International Education, 1986, p. 10). And while this research focuses on pieces of the puzzle, one must not lose sight of the whole, that is, the entire problem of lack of geographic awareness among Americans which this research demonstrated for the inquiry's population.

"To deal effectively with the multiplicity of problems we face in this shrinking world requires an increasing international competence" (Commission on International Education, 1984, p. 2). Educators must not shirk this reponsibility but become better prepared to help students develop an international competence. As Brooks pointed out, "As Americans, we cannot afford to have an isolationist attitude as far as not wanting to know foreign languages, not wanting to know where other countries are. That is impractical and even ignorant" (Brooks, as quoted in Skowron,

1990, grid 7). The Commission on International Education (1984) declared:

> To maintain and increase this competence means the education and preparation of an ever increasing number of Americans who understand other peoples and societies well enough to be able to work effectively with them on a broad range of economic, political, and security issues (p. 2).

Although many second language instructors and social studies teachers have attempted to stress international understanding and related matters and although global and multicultural objectives are more in evidence than before (ACTFL and the NCSS, 1979), the basic lack of geographic understanding, as indicated in this inquiry demands more than simply stressing international understanding. Geography education is on the way; the inclusion of geography in the national goals adopted by President Bush and the nation's governors presents special opportunities for geography and to teachers interested in the international arena.

Geography has, oftentimes in the past, seemed to have been left out. In writing about study abroad opportunities and their value towards the development of global citizens, Bragaw and Loew (1985) listed history, current events, economics and culture study as especially important in preparation for study abroad. Geography was not mentioned although the subject may be implicitly included. That is precisely part of the problem. Geography is sometimes

forgotten or slighted when geographic topics are expected to be included during the study of a related topic. Perhaps the generally low level of geography knowledge of the experimental group, in this inquiry, is due to the fact that geography in second language classes is not included to the degree that second language teachers would intend it to be. Perhaps the geographic information for the target culture is implicitly included in classwork, but actually slighted in actual teaching or learning activities as well as in textbooks and learning materials.

Because geography allows man to compare and contrast places and people of the world, in an educational setting, there are many places where geography learning may take place. The significance of geographic understanding for other disciplines is tremendous. Disciplinary knowledge must not supersede all else in the curriculum. While geography is eclectic in nature, this does not mean that a clear articulation of geography goals in the curriculum is not necessary. Indeed, that is another part of the problem of geography ignorance. While geography has been viewed as a part of many disciplines, and because pure geography courses have become fewer over the past years, geography topics have filtered into other courses. Furthermore, often no clearly defined geography goals and objectives have been developed for these courses. And at the same time these courses are being taught by teachers, generally with little geographic instructional training and who view their primary responsibility as teaching their major

topics, perhaps history, economics, art history, or second languages.

While there are arguments for geography to be a separate school subject, because of the direct relationship it has with many other subjects, some interrelated, systematic study of people in societies would be highly advantageous. While it has been clearly identified that interrelationships exist in social studies, so it is with other areas as well. These areas of interrelatedness must be recognized and utilized to present geography interwoven with the other topics, so as to provide a sense of "place and relationship in time to historical and current events" (NCSSS, 1989, p. viii).

These global perspectives are not necessarily to be developed at the expense of national perspectives. Those fearful of the development of a one world government or concerned about an emphasis on other countries, on other cultures, and on other peoples must know that geography and other cultures can be presented with emphasis on the students' own boundaries. (See Recommendations)

Second language classrooms offer a place for the schools to acquaint young people with the global dimensions of the world today and the truly global interconnectedness of nations and peoples. While one of the first tasks towards geographic knowledge is the theme of location, second language classrooms can go far beyond location and place. The themes of human-environmental interactions, movement and regions can be studied by explaining the physical and human

characteristics of the target culture, by discussing the relationships as people respond to and shape their environment, by learning about the regions where the target language is spoken, and by discovering patterns of the physical and cultural features of the target language. Second language teachers will be guiding students to a broader perspective on human actions and to an appreciation of cultural and environmental variety.

With the nation's focus in the 1980s and 1990s on the lack of geographic awareness and the great geographic ignorance of the American people, it is important for schools, in various disciplines to examine how and where they attempt to teach geographic knowledge and to continue to look for ways to improve the geographic component in their school. This study offers to second language educators some specific data to increase second language contributions to geographic knowledge.

Recommendations

Recommendations for Further Study

Recommendations for further study related to this inquiry include analysis of other data collected for this inquiry. Reported ways by which students in the sample have obtained geographic knowledge as well as student travel to other countries could be examined for possible positive correlations with geographic knowledge. A similar study with a larger sample from a high school population with a lower percentage of students studying a

second language could yield more data from control groups for analysis of Quartile 1 and Quartile 2.

Secondary analysis of the geography tests by question may indicate even more data about the acquisition of geography knowledge in a second language classroom. Various questions that specifically pertain to a language and culture could be analyzed to see if, for example, students studying Spanish were more likely to answer correctly Spanish questions (related to Spain, Mexico, Central America or South America) than students studying other languages. This data might provide strong evidence about geography learning and specific language study.

The implications for this study are that while second language study appears to make some difference in geographic knowledge, geographic knowledge remains at a low level. A close examination of the major second language textbooks used at the secondary level could reveal interesting information about the presentation and importance of the geographic information appropriate to each language. A related inquiry examining the amount of emphasis in time, resources or instructional objectives related to geographic knowledge in the high school second language classroom could reveal essential information. This inquiry of instructional resources and goals could offer data useful for the improvement of geographic awareness in the second language classroom as well as necessary information for curriculum decisions at many levels.

Recommendations for Geography Instruction. A second and more basic implication from the data of this inquiry is that geography must be emphasized or better taught for students to better know the world and their place in it. What follows are specific recommendations for increasing geographic knowledge.

"All aspects of international education, including foreign languages, must be linked to efforts to drastically improve the quality of America's schools" (Kean, 1991, p. 25). With a growing interest in second language instruction, as evidenced by the 1990 Gallup Poll, Opinions on Education, (Elam, 1990) in which slightly over 50% of those surveyed would require second languages for college bound high school students, now is a favorable time to call for, but more importantly to develop, ways to connect the second language classrooms to the five themes of geography.

Perhaps overlooked but important nevertheless, early language programs can assist in developing an earlier global view of the world, earlier curiosity about the places and people of this world, and a generally earlier geographic awareness (Bragaw and Loew, 1985). While various delivery approaches exist for second languages in the primary grades, each teaching approach can easily include geographic concepts.

The National Geographic Society launched a ten year campaign in 1988 to restore geographic education to the classroom and geographic literacy to the citizens. GENIP, the Geographic Education National Implementation Project, with

general goals to improve the status and quality of geography instruction at all school levels has made some impact already with pre- and inservice teacher training, course and curriculum outlines, networks for information exchange and support of other activities that will improve geographic literacy. This effort must be continued and perhaps, expanded to reach all school districts.

A world geography assessment planned for 1994 by NAEP will measure students' knowledge of geography in fourth grade, eighth grade, and twelfth grades. Here is an opportunity for geographers and educators to be involved in establishing testing objectives for each grade. These assessments will provide new data to be used in further development of geography education and geographic instructional materials.

Incentives and involvement by the business community for promoting geography literacy can be expanded and encouraged. In 1991-92, the Pizza Hut company, mirroring the Library of Congress' theme for the annual national reading promotion, "Explore New Worlds--READ!" rewards students who meet their monthly reading goals with free pizza certificates. Participating teachers may encourage students to choose geography related books; second language teachers have an opportunity to suggest geography related books that focus on the target culture. Many other local and national companies might be motivated to become involved in geography related activities as they become more aware of the need for

geography education, from many perspectives and at many levels.

Integrating geography and other disciplines is a daunting challenge in most schools. Problems from a potpourri problem to the polarity problem (Jacobs, 1989) have been apparent in curriculum integration attempts for many years. The linkage between second languages and geography should not be viewed as an intrusion into the instructional time of both social studies and language classrooms. The interdisciplinary connection is complementary, not a substitution of one topic for another topic (Bragaw and Loew, 1985).

Jacobs and Borland (1986) recommended a systematic approach, the Interdisciplinary Concept Model (ICM) that appears to have the potential to work well in integrating geography and other disciplines. In the ICM, a target theme, issue, or problem is chosen. The theme is at the center and all other disciplines, like spokes of a wheel, radiate out from the theme and feed into the theme.

Using the ICM, a theme, the fall of the Berlin wall and a new Germany might be chosen for a semester's emphasis throughout an entire school. While it may be easy to understand how a German language class could integrate geography and this schoolwide topic, it may be less easy to understand integration with other disciplines and with other second languages. French and Spanish language classes after studying the geography and physical relationships of the German area to the target country, could investigate the

immigrant question in the target culture, the economic possibilities related to the target culture's economy and a new German economy. The new unified Europe of 1992, and the implications for the target nation with one Germany, instead of two are other areas that a second language classroom could examine using the ICM.

Other disciplines might focus on the history of the German area, the political forces before and the political possibilities and problems after the fall of the Wall, the arts in the two Germany's and changes that may take place with one Germany, scientific contributions related to the two Germany's and the scientific possibilities of a united Germany, and finally, athletes and athletic training and performances before the fall of the Wall. The theme is a clear focus for each discipline, with geography as a cornerstone of the theme. While some may reject interdisciplinary courses or emphases, this model exemplifies how the student sees the whole picture; there is a unity of subject matter around a theme, not fragmented parts of a picture that students may see in art class, then in science class, in French class and perhaps then in history class.

On a smaller or shorter scale, schoolwide activities for Geography Awareness Week will focus attention on the topic. This awareness week, usually in December, can include fun, educational, and motivational activities based on the five themes for geography. (See Chapter 1)

Areas of cooperation between second language teachers and geography, or social studies teachers, can range along a spectrum. At one extreme might be found the teaching of geography in a school in French, using the language as the communication vehicle. At the other end of the spectrum could be the teaching of geography from the perspective of both the U.S. and other nations using not only U.S. prepared maps, but maps from French, Spanish, German, Russian, or other cultures. In the middle of the spectrum might be the incorporation of language awareness segments into each area study in a world cultures course. Of course here, one would expect to find much geography taught as well as language and other cultural topics. Small 'c' culture capsules, including geography themes, could also be taught by social studies teachers in language classes (Bragaw, Loew, and Wooster, 1983). Cooperation is the key element here, from scheduling and planning, through implementation and evaluation.

Other recommendations include the training of second language teachers. Pre-teacher training as well as in-service training must include cultural emphasis, with some actual training in geography related areas. The quality of teachers and an increase in the number of qualified teachers in second languages were recognized by the Presidential governors' summit in 1989 as important parts of meeting the ambitious goals of America 2000, the national education goals. Inservice and preservice with social studies teachers and second

language teachers together, might serve to coordinate gaps and avoid needless overlaps of geographic and cultural material.

Development of an awareness of global education and creation of global curriculums and the development of leadership roles for second language teachers are other recommendations, which are not possible to be treated here, but in other inquiries. Certainly, the development of global activities or global objectives must involve geography. Furthermore, those developing global curriculum must not operate under the assumption that geography is learned someplace else in the schools.

For the second language classroom, several specific methodological possibilities follow. Creative teachers may simply utilize these recommendations to spark other ideas on opportunities to bring geography into the second language classroom.

Literature and Geography in a Second Language Classroom

Using Cone's (1990) model of the systematic use of cultural geography as the focus in mixed ability English classes, the second language instructor can guide the students on a journey around the world of the target language (Meyer, 1984). Through reading, writing, and talking, the class can move in and out of countries, cities, regions, and perhaps various cultures, or even through centuries. Dependent on the second language ability of the class, poems, essays, excerpts from novels, plays and travelogues may be chosen to illustrate various geographical themes or points of the target language

and culture. These literature choices may be in the target language as much as possible. A map and cultural geography test may be used as a pre- and posttest.

Video Pen pals

While pen pal correspondence is not a new idea, video pen pals take advantage of the newest technology and allow students to use the target language while communicating about their world and delving into the target culture. Simply changing to a second language focus allows second language students to use language and video as the methods of delivery. Sending videos describing the students' area, way of life, customs, and thoughts and questions about the target culture enables students to see, hear, as well as almost experience another place and another people.

Culture Through Notebooks

Many second language teachers have paraphernalia collected from various sources, all to help illustrate cultural aspects of the target language. But few apparently have a good system for organizing and actually using the paraphernalia beyond pulling postcards out of a file folder to illustrate regions, cities or monuments or beyond constructing bulletin boards with various paraphernalia to help "teach" the unit. Cultural notebooks can systematically present in-depth cultural information of all types, including geography, to students. Hodgins (1984) suggested the following steps for preparing cultural notebooks.

1. Decide on topics for the notebooks, either topics of the current text or other topics appropriate to the target language and culture.
2. Prepare an outline of each topic.
3. Cut, rip, and paste the paraphernalia appropriate to each topic.
4. File the material by topic.
5. Label each file Chapter One, Chapter Two, etc. with Chapter One being geography, the most logical place to start. Files would not only have authentic material from the paraphernalia collection but also other readings, worksheets, and related material.
6. Include specific geographic information, related to each topic in each file.

Students work during class in pairs on a folder, in the back of the room, or even out of the regular classroom. One pair per day would work on Chapter One. When all students have completed Chapter One, the instructor would grade worksheets, conduct oral discussions (in the target language, if possible) and review the chapter with additional slides, films, or other large group presentations. An oral or written quiz could follow. Students would then repeat the same process to study succeeding chapters.

Bringing the Geography of the Target Language Alive

While some have argued that the study of geography is basically a boring topic, it does not have to be that way. Combined with some teacher training in geography instruction,

Hopper's (1985) suggestion may make the people of the target language almost stand up and speak. Students must choose a town, each from a different state, département, stadt, or other political division. They then research the area and begin to learn about the city. After getting to know the area a bit, students write to the mayor of the city asking for specific information. By knowing a bit about the city, students will have a better idea of what more they would like to know about the city and can ask appropriately in the letter. Each letter will be in the target language, with corrections and suggestions from the instructor. Excitement during the next few weeks in the classroom builds as first one student, then another receives a reply. Hopper's experience was that replies are usually fairly quick in arriving, often full of more than what the student requested and many times, including personal notes and "real people" communications. Students whose requests are not answered in a reasonable time, use material supplied by the teacher. All students then prepare an oral report, in the target language, if possible, and a display (booklet, bulletin board, or collage) to teach about the city.

Hopper (1985) emphasized that an obvious but perhaps often overlooked topic is geographic information for the report and for the display. He suggested that a trip to the specific city is devised along with a specific itinerary. All the products are presented to the class with time allotted for student inspection and study of the display material. One of the goals for all students is to get a geographic perspective of

the target culture, not only of the themes of location and place but also of human-environmental interactions, movement, and regional formation and changes. A geography posttest along with a pretest may be used.

World Wise Schools

The Peace Corps World Wise Schools program begun in 1989 matches U.S. classrooms with Peace Corps volunteers living and working in nearly 70 countries (Ficklen, 1991). Over 2,000 correspondence matches were made during the 1990-91 school year involving both public and private schools from all 50 states. Teachers in U.S. schools reported that map skills and writing skills increased as letters were exchanged between U.S. students and students from the volunteer's Peace Corps country. Cultural information was, of course, fascinating to both sets of students: pictures, posters, and information about the students' local area were sent. One of this program's goals is to promote the study of geography. Linked with a country of the target language, this program could be a welcome addition to a second language classroom.

Visitors Like Us

Building on many student exchange programs, second language teachers invite guests into the classroom, guests who are experienced travelers or citizens of other nations or regions. The school district could collect and make available names of those who would be willing to visit classrooms and who could draw from first hand living experience. Former Peace Corps volunteers who live near the school district might

be contacted. Goals for the visit would be clarified in advance by the teacher; however, goals for each visit should include the following:

1. Students will be able to locate and name the geographic area the guest represents.
2. Students will be able to ask questions of the guest, in order to, at a later date, tell or write in what ways the guest is like themselves or in what ways the place the guest represents is like the students' locale.

Teachers might invite students from other courses to sit in on the visits; after all, the topics are not exclusive to second language classes. Having no guests on the district list from the target culture has in the past prevented some second language teachers from inviting guests to the classroom. However, the guest from a country, not of the target language, might certainly discuss geographic, political, economic, social or other relationships between his country and the target culture as well as presenting a picture of his own country.

How Others See Us

Map skills within the students' own boundaries can be practiced but expanded by including attention to how people of the target culture pronounce place names within the students' own area. Students are often quite interested in how the states, mountain areas, water bodies and cities are pronounced in the target language. These map skill exercises can be further developed by studying the perceptions and knowledge that people in the target culture have of the students' area,

then, perhaps contrasting that knowledge with what the second language students know of the target area. An entire unit might be developed about how areas of the U.S. are represented in the second language media. Interviews or written letters with people from the second culture about their perceptions of New York, Chicago, the Midwest, California and other areas of the U.S. could reveal much not only on a geographic level, but on many other levels as well.

These recommendations are but a few of many possibilities available to second language teachers. Choices may be difficult as to the incorporation of geography into second language classrooms and generally, into the schools. But the challenge should not be avoided. Geography in the curriculum needs to be clearly articulated. Further research focusing on connections between geography and other disciplines needs to be conducted. Adequate teacher training and materials for geography instruction must be available to teachers in all disciplines. The transition to teaching for responsible citizenship in the twenty-first century will be considerably eased with mutual support from both geography and second language disciplines.

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APPENDIX A

Appendix A

Group Weighting of Courses

The group is determined by the difficulty or intensity of the course. For example, Group 5 courses are the highest intensity; Group 3 are of average intensity with the majority of the school's offerings in this group. Group 1 are of lowest intensity. From the group number, the amount of outside classroom preparation time (homework) can also be estimated.

Following are selected course offerings and group weight at the subjects' high school.

Group 1

- Notetaking/Study skills
- Audio-visual aide
- Art appreciation
- Show choir

Group 2

- Pottery II
- Foods I
- Basic auto repair
- Current events

Group 3

- Business law
- Freshman composition
- French I
- Geology

Group 4

German IV

Pre-calculus

Zoology

Advanced placement American government

Group 5

Advanced accounting

Junior composition and American literature (honors)

Advanced music theory

Spanish V

APPENDIX B

Appendix B

Academic Rank as Calculated at Subjects' High School

Total Mark Points

Mark points are assigned to each subject according to the quality and relative difficulty of the subject. For example; a grade of B+ in Advanced Placement U.S. History (a Group 5 course) yields 9.0 grade points for each credit earned from that course. In this case, AP History is a 4 credit, Group 5 course. With a grade of B+ a student would earn 36 grade points. Another student taking the regular U.S. History course, still 4 credits, but a Group 3 course, also earns a B+. However, each credit for a B+ in a Group 3 course yields 6.0 grade points, or 24 total grade points. Both grades appear as B+ on the permanent record card, but have different weight for class rank. Total mark points are found by applying the above formula to all courses taken at this high school and totaling their sums. Grades taken from all courses taken in grades 9-12 are used in the calculations.

Mark Point Table

Grade	Group 5	Group 4	Group 3	Group 2	Group 2
A+	11	9	8	7	6
A	10	8	7	6	5
B+	9	7	6	5	4
B	8	6	5	4	3
C+	7	5	4	3	2
C	6	4	3	2	1

D+	4	3	2	1	0
D	3	2	1	0	0
F	0	0	0	0	0
Inc.	0	0	0	0	0

Example:

Course	Group	Grade Received	Which Yields Mark Points	Credit Hours	Mark Points
Soph Lit.	3	B	5.0	4	20
World Hist.	3	B+	6.0	4	24
Geometry	3	C+	4.0	5	20
Physiology	4	C	4.0	5	20
French II	3	B	5.0	5	25
Phys. Ed.	2	A	6.0	3	18
Orchestra	3	A+	8.0	2	16
Typing	2	B+	5.0	3	15
			Total Credits Attempted		31
			Total Mark Points		158

This example student above would be ranked higher on the academic rank list than students who earned 157 mark points or less. The more mark points a student has earned, the higher the academic rank of that student.

APPENDIX C

Appendix C

Parent/Guardian Information Letter

September 15, 1991

Dear Parent or Guardian,

Your son or daughter has been randomly selected, along with over 100 other students from this high school, to participate in a research study, in conjunction with work towards a master's degree at the University of Nebraska-Omaha. University advisors include Dr. Neal Grandgenett and Dr. Ivalyn Vanevery.

The Competency-Based Geography Test prepared by the National Council for Geographic Education will measure students' knowledge of geography. The test consists of 75 multiple choice questions in the areas of physical geography, human geography, map skills and place names.

The test will be given at the high school during the students' homeroom period on September 26 and 27. All tests and data collected will be anonymous and confidential. An analysis of the data collected will be available through the school upon completion of all research.

If you have questions, please call the principal at 390-3300 or myself at 592-5999.

Sincerely,

Cyndi Berve

APPENDIX D

Appendix D

Student Information Note

September 15, 1991

On Thursday, September 26 and Friday, September 27, you are to report immediately following attendance taking in homeroom to Room 217 for a geography survey administered by the school. The survey will take only 25-30 minutes each day; please bring a #2 pencil with you. Your promptness and best efforts during the survey will be most appreciated. Please report to homeroom on these two days and then quickly report to Room 217. We will expect to see you at 8:05. Thank you in advance.

Dr. _____* and Cyndi Berve

Student Reminder Note

September 23, 1991

This is a reminder that you are to report this week to Room 217 immediately following attendance taking in homeroom on Thursday, September 26 and on Friday, September 27. Please come prepared to quickly get started on a geography survey administered by the school. We will expect to see you at 8:05 in Room 217.

Dr. _____ and Cyndi Berve

Note. Because of desired anonymity of the school district, the principal's name has been omitted from Appendix D.

APPENDIX E

Appendix E

Verbal test instructions

Test instructions were provided by the NCGE. Verbal instructions were made; in addition, many of the instructions were also written on large chalkboards at front of the testing area. Instructions included:

1. You are about to take a geography test. All answers to questions on this test must be marked on the separate answer sheet found inside your test booklet. You are not to make any stray marks on your answer sheet. Write only where I instruct you to write. Now clear your desks of all materials.

2. You will need a number two pencil for this test. If you do not have one, please raise your hand now.

3. Because the test results are anonymous but because you will complete the second half of the test tomorrow, in order to return your test booklet to you tomorrow, fill in the card attached to your test booklet with your name, grade, and seat number. (Example to be held and shown to the students.)

4. Look at the answer sheet. Notice that questions are numbered down the page in three columns. Each question has four lettered choices in parentheses. Be sure that the number of the set of answer spaces is the same as the question you are answering on the test. Use only pencil when marking your answers. Be sure to fill in the area of the letter of your choice. Erase completely if you decide to change an answer. If your pencil breaks, raise your hand, and I will give you another one.

5. I have placed a practice test question on the chalkboard. Read this practice question silently while I read it aloud. What is the number of the correct answer? (Select one student to answer.)

6. Is there anyone who does not understand how he or she is to mark the answer sheet? (Pause for questions.)

7. Before you begin your test, please remember you are not to write on the test booklet. Please read the information for students on the front cover of the test. (Pause for a few minutes.)

8. Turn to pages 2 and 3 of your test. Notice that questions are printed on the front and back of each page. Be careful not to skip a page of the test. Notice, too, that each question has four suggested answers. You are to read each question carefully and decide which of the answers is correct. Then fill in the lettered space on the answer sheet that is the same as the one you have chosen in the test booklet. There is only one correct answer for each question. Do you have any questions? (Pause briefly for questions.)

9. This test is not timed, but you should work as fast as you can without making mistakes. Try to answer all questions, but do not spend too much time on any one question. Read each question carefully. If you have trouble with reading, raise your hand.

10. Today, you will complete Part I and Part II. When you finish, Part II, make sure the card with name and grade is attached to the front of your test booklet, then raise your

hand, and I will pick up the booklet. Thank you in advance for your best efforts on this test. You may begin.

APPENDIX F

Appendix F

Student Demographic Questions

STUDENT DATA-UPON COMPLETION OF THE GEOGRAPHY TEST, PLEASE QUICKLY ANSWER THESE QUESTIONS ON YOUR ANSWER SHEET. ANSWER EACH QUESTION WITH THE MOST CORRECT RESPONSE. BE SURE TO BLACKEN ONLY ONE RESPONSE FOR EACH QUESTION.

76. What grade are you in now?
A. 10th grade
B. 11th grade

77. Are you male or female?
A. Male
B. Female

78. Which best describes you?
A. White (not Hispanic)
B. Black (not Hispanic)
C. Hispanic
D. Asian
E. American Indian
F. Other

79. Counting what you are taking now, how much foreign language course work have you taken since the beginning of 7th grade?
A. None
B. 1 year
C. 2 years
D. 3 years
E. 4 years
F. 5 or more years

80. How much foreign language course work did you have in primary/elementary school?
A. None
B. 1 year
C. 2 years
D. 3 years
E. 4 years
F. 5 or more years

81. In how many foreign countries have you travelled?
A. None
B. 1 foreign country
C. 2 foreign countries
D. 3 foreign countries
E. 4 foreign countries
F. 5 or more foreign countries

82. In how many foreign countries have you lived?
A. None
B. 1 foreign country
C. 2 foreign countries
D. 3 foreign countries
E. 4 foreign countries
F. 5 or more foreign countries

83. How many different foreign languages have you studied since 4th grade?
A. None
B. 1 foreign language
C. 2 foreign languages
D. 3 foreign languages
E. 4 foreign languages
F. 5 or more foreign languages

84. Where have you gotten most of your geographic facts, understanding of maps and knowledge about places in the world?
A. Foreign language class
B. Social studies and other classes
C. Personal reading
D. Personal travel and/or from others who have travelled
E. TV, radio, newspapers and other media
F. Other

85. Since 7th grade, which foreign language have you studied for the most number of years or semesters?
A. French
B. German
C. Japanese
D. Latin
E. Russian
F. Spanish
G. Other