1977

An Analysis of Louisiana Teachers' Knowledge of Selected Map and Globe Skills, Grades Kindergarten Through Four.

Maura R. Garvida

Louisiana State University and Agricultural & Mechanical College

Follow this and additional works at: https://digitalcommons.lsu.edu/gradschool_disstheses

Recommended Citation
https://digitalcommons.lsu.edu/gradschool_disstheses/3108

This Dissertation is brought to you for free and open access by the Graduate School at LSU Digital Commons. It has been accepted for inclusion in LSU Historical Dissertations and Theses by an authorized administrator of LSU Digital Commons. For more information, please contact gradetd@lsu.edu.
INFORMATION TO USERS

This material was produced from a microfilm copy of the original document. While the most advanced technological means to photograph and reproduce this document have been used, the quality is heavily dependent upon the quality of the original submitted.

The following explanation of techniques is provided to help you understand markings or patterns which may appear on this reproduction.

1. The sign or "target" for pages apparently lacking from the document photographed is "Missing Page(s)". If it was possible to obtain the missing page(s) or section, they are spliced into the film along with adjacent pages. This may have necessitated cutting thru an image and duplicating adjacent pages to insure you complete continuity.

2. When an image on the film is obliterated with a large round black mark, it is an indication that the photographer suspected that the copy may have moved during exposure and thus cause a blurred image. You will find a good image of the page in the adjacent frame.

3. When a map, drawing or chart, etc., was part of the material being photographed the photographer followed a definite method in "sectioning" the material. It is customary to begin photoing at the upper left hand corner of a large sheet and to continue photoing from left to right in equal sections with a small overlap. If necessary, sectioning is continued again — beginning below the first row and continuing on until complete.

4. The majority of users indicate that the textual content is of greatest value, however, a somewhat higher quality reproduction could be made from "photographs" if essential to the understanding of the dissertation. Silver prints of "photographs" may be ordered at additional charge by writing the Order Department, giving the catalog number, title, author and specific pages you wish reproduced.

5. PLEASE NOTE: Some pages may have indistinct print. Filmed as received.

University Microfilms International
300 North Zeeb Road
Ann Arbor, Michigan 48106 USA
St John's Road, Tyler's Green
High Wycombe, Bucks, England HP10 8HR
GARVIDA, Maura R., 1933-
AN ANALYSIS OF LOUISIANA TEACHERS' KNOWLEDGE
OF SELECTED MAP AND GLOBE SKILLS, GRADES
KINDERGARTEN THROUGH FOUR.

The Louisiana State University and
Agricultural and Mechanical College,
Ph.D., 1977
Education, elementary

Xerox University Microfilms, Ann Arbor, Michigan 48106
AN ANALYSIS OF LOUISIANA TEACHERS' KNOWLEDGE OF SELECTED
MAP AND GLOBE SKILLS,
GRADERS KINDERGARTEN THROUGH FOUR

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

in

The Department of Education

by
Maura R. Garvida
B.S.E.Ed., Arellano University, 1965
B.S.E., Arellano University, 1965
M.Ed., Louisiana State University, 1973
August, 1977
DEDICATION

In memory of my dear Mother, whose stoic fortitude in the face of the adversities of this life has ever served as the fountainhead of inspiration for me to try my utmost to make good, I lovingly and proudly dedicate this Dissertation, a piece of work that I hope will bring me nearer to my goal and to the realization of my fondest dream - to be better qualified and be of efficient service to the youth and to the molders of this youth, especially in this part of the globe!

Maura R. Garvida
ACKNOWLEDGEMENTS

The writer expresses her most profound gratitude and appreciation to her Committee: Dr. Sam Adams, Dr. Ollie Fuglaar, Dr. Charlie Roberts, Jr., Dr. Eric Thurston, and Dr. Alvin Bertrand for their valuable advice, suggestions, and cooperation. She is especially indebted to her Major Professor, Dr. Joe Parker for his continuous assistance, guidance, and encouragement during her doctoral program.

Grateful appreciation is extended to Dr. Barton Farthing for his vital assistance on the statistical aspects of her study, to the consultants who validated the test items, to the parish superintendents, supervisors, and principals who cooperated, to the teachers who responded, and to Ms. Christine Angelloz who typed this manuscript.

Special recognition is accorded to Mr. Wallace Davis, Mr. Sam Distefano, Sr., and to Mr. Louis Nicolosi for their letters of recommendation to the Parish Superintendents.

Finally, special appreciation and gratefulness is expressed to the Iberville Parish Schools, relatives, co-workers, and friends who acted as sources of encouragement to the writer to embark upon this professional venture.
TABLE OF CONTENTS

ACKNOWLEDGEMENTS ....................................... ii
LIST OF TABLES ......................................... vii
ABSTRACT ................................................ x

Chapter

1. INTRODUCTION ................................... 1

STATEMENT OF THE PROBLEM ...................... 3
Questions to be Researched ..................... 4
Delimitation of the Problem ................. 5
Procedures Used in the Study .............. 5
Importance of the Study ..................... 8
Definition of Terms Used .................... 9
Social Studies Teacher ....................... 9
Map and Globe Knowledge and Skills .... 9
Map and Globe Survey Instrument ....... 9
Map and Globe Questionnaire ............ 9
ORGANIZATION OF THE STUDY ............. 10

2. REVIEW OF RELATED LITERATURE .............. 11

MAP AND GLOBE SKILL INSTRUCTION IN THE LOWER ELEMENTARY GRADES 11
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>THE PREPARATION OF TEACHERS FOR MAP AND GLOBE SKILLS INSTRUCTION</td>
<td>27</td>
</tr>
<tr>
<td>SUMMARY</td>
<td>40</td>
</tr>
<tr>
<td>3. PROCEDURE</td>
<td>41</td>
</tr>
<tr>
<td>DEVELOPMENT OF THE SURVEY INSTRUMENT</td>
<td>41</td>
</tr>
<tr>
<td>DEVELOPMENT OF THE QUESTIONNAIRE</td>
<td>43</td>
</tr>
<tr>
<td>PRETESTING AND REVISION</td>
<td>46</td>
</tr>
<tr>
<td>METHOD OF SAMPLE SELECTION</td>
<td>47</td>
</tr>
<tr>
<td>COLLECTION OF DATA</td>
<td>55</td>
</tr>
<tr>
<td>TREATMENT OF DATA</td>
<td>57</td>
</tr>
<tr>
<td>SUMMARY</td>
<td>58</td>
</tr>
<tr>
<td>4. PRESENTATION AND ANALYSIS OF DATA</td>
<td>60</td>
</tr>
<tr>
<td>DESCRIPTION OF THE SAMPLE</td>
<td>61</td>
</tr>
<tr>
<td>DATA CONCERNING GENERAL PERSONAL AND PROFESSIONAL VARIABLES</td>
<td>65</td>
</tr>
<tr>
<td>SUMMARY</td>
<td>99</td>
</tr>
<tr>
<td>5. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS</td>
<td>101</td>
</tr>
<tr>
<td>SUMMARY</td>
<td>101</td>
</tr>
<tr>
<td>CONCLUSIONS</td>
<td>103</td>
</tr>
<tr>
<td>RECOMMENDATIONS</td>
<td>105</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>107</td>
</tr>
<tr>
<td>Chapter</td>
<td>Page</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>APPENDIXES</td>
<td>116</td>
</tr>
<tr>
<td>A. Letter to Dr. Lloyd Armand Stjernberg Requesting Permission to Utilize Survey Instrument</td>
<td>116</td>
</tr>
<tr>
<td>B. Letter from Lloyd Stjernberg Granting Permission to Use Survey Instrument</td>
<td>117</td>
</tr>
<tr>
<td>C. Letter to Superintendents of School Systems Requesting Permission to Survey Teachers</td>
<td>118</td>
</tr>
<tr>
<td>D. Return Letter of Approval from Superintendents Designating a Member of the Systems' Staff</td>
<td>119</td>
</tr>
<tr>
<td>E. Letter from Social Studies Supervisor Louis Nicolosi Indicating Cooperation of Louisiana State Department of Education</td>
<td>120</td>
</tr>
<tr>
<td>F. Letter of Iberville Parish Superintendent Sam Distefano, Sr. Requesting Fellow-Superintendents' Assistance and Cooperation</td>
<td>121</td>
</tr>
<tr>
<td>G. Cover Letter to Supervisor Appointed by Parish Superintendent to Conduct Survey</td>
<td>122</td>
</tr>
<tr>
<td>H. Cover Letter to Principal Appointed by Parish Superintendent to Conduct Survey</td>
<td>123</td>
</tr>
<tr>
<td>I. Cover Letter to Teacher Taking the Survey Conducted by Supervisor</td>
<td>124</td>
</tr>
<tr>
<td>J. Cover Letter to Teacher Taking the Survey Conducted by Principal</td>
<td>125</td>
</tr>
<tr>
<td>Chapter</td>
<td>Page</td>
</tr>
<tr>
<td>---------</td>
<td>------</td>
</tr>
<tr>
<td>K. Cover Letter to Validating Personnel for Survey of Map and Globe Skills (Grade 4)</td>
<td>126</td>
</tr>
<tr>
<td>L. Survey of Map and Globe Skills for Grade 4</td>
<td>127</td>
</tr>
<tr>
<td>M. Form of Questionnaire and Survey of Map and Globe Skills (Grades K-4) as Used in Pretesting the Device</td>
<td>134</td>
</tr>
<tr>
<td>N. Questionnaire and Survey of Map and Globe Skills (Grades K-4) as Sent to Sample Population</td>
<td>148</td>
</tr>
<tr>
<td>O. Original Form of Survey of Map and Globe Skills - Primary Grades (K-3) by Lloyd Stjernberg</td>
<td>165</td>
</tr>
<tr>
<td>P. Louisiana Assessment of Educational Progress Sampling Frame</td>
<td>176</td>
</tr>
<tr>
<td>Q. IBM Code Sheet</td>
<td>181</td>
</tr>
<tr>
<td>VITA</td>
<td>182</td>
</tr>
</tbody>
</table>
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Percentages of Public School Enrollment for Congressional Districts of Louisiana and Corresponding Numbers of Teachers Appropriate for Balanced Sampling</td>
<td>49</td>
</tr>
<tr>
<td>2. Louisiana Assessment of Educational Progress Sampling Frame Group Number Designations, Descriptive Public School Populations, and Corresponding Percentages of Public School Enrollment</td>
<td>50</td>
</tr>
<tr>
<td>3. School Systems Selected for Survey Listed by Congressional Districts, with Numbers of Recipients Per System Arranged in &quot;Size of Parish&quot; Groupings</td>
<td>52</td>
</tr>
<tr>
<td>4. Means and Standard Deviations of Teachers' Knowledge of Map and Globe Skills with Respect to Teaching Levels</td>
<td>67</td>
</tr>
<tr>
<td>5. Analysis of Variance for Differences Among Teaching Levels with Respect to Teachers' Knowledge of Map and Globe Skills</td>
<td>68</td>
</tr>
<tr>
<td>6. Means and Standard Deviations of Teachers' Knowledge of Map and Globe Skills with Respect to Age Groups</td>
<td>70</td>
</tr>
<tr>
<td>7. Analysis of Variance for Differences Among Age Groups with Respect to Teachers' Knowledge of Map and Globe Skills</td>
<td>72</td>
</tr>
<tr>
<td>8. Means and Standard Deviations of Teachers' Knowledge of Map and Globe Skills with Respect to Teaching Experience</td>
<td>73</td>
</tr>
<tr>
<td>Table</td>
<td>Page</td>
</tr>
<tr>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>9. Analysis of Variance for Differences Among Teaching Experience with Respect to Teachers' Knowledge of Map and Globe Skills</td>
<td>74</td>
</tr>
<tr>
<td>10. Means and Standard Deviations of Teachers' Knowledge of Map and Globe Skills with Respect to Degrees Held</td>
<td>75</td>
</tr>
<tr>
<td>11. Analysis of Variance for Differences Among Degrees Held with Respect to Teachers' Knowledge of Map and Globe Skills</td>
<td>77</td>
</tr>
<tr>
<td>12. Means and Standard Deviations of Teachers' Knowledge of Map and Globe Skills with Respect to College Credits in Geography</td>
<td>78</td>
</tr>
<tr>
<td>13. Analysis of Variance for Differences Among College Credits in Geography with Respect to Teachers' Knowledge of Map and Globe Skills</td>
<td>80</td>
</tr>
<tr>
<td>14. Means and Standard Deviations of Teachers' Knowledge of Map and Globe Skills with Respect to College Credits in History</td>
<td>81</td>
</tr>
<tr>
<td>15. Analysis of Variance for Differences Among College Credits in History with Respect to Teachers' Knowledge of Map and Globe Skills</td>
<td>84</td>
</tr>
<tr>
<td>16. Means and Standard Deviations of Teachers' Knowledge of Map and Globe Skills with Respect to College Credits in Social Studies Methods</td>
<td>87</td>
</tr>
<tr>
<td>17. Analysis of Variance for Differences Among College Credits in Social Studies Methods with Respect to Teachers' Knowledge of Map and Globe Skills</td>
<td>89</td>
</tr>
<tr>
<td>Table</td>
<td>Page</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>18. Means and Standard Deviations of Teachers' Knowledge of Map and Globe Skills with Respect to Recency of Social Studies Methods Courses</td>
<td>90</td>
</tr>
<tr>
<td>19. Analysis of Variance for Differences Among Recency of Social Studies Methods with Respect to Teachers' Knowledge of Map and Globe Skills</td>
<td>92</td>
</tr>
<tr>
<td>20. Means and Standard Deviations of Teachers' Knowledge of Map and Globe Skills with Respect to Recency of Faculty Studies in Social Studies</td>
<td>93</td>
</tr>
<tr>
<td>21. Analysis of Variance for Differences Among Recency of Faculty Studies in Social Studies with Respect to Teachers' Knowledge of Map and Globe Skills</td>
<td>94</td>
</tr>
<tr>
<td>22. Means and Standard Deviations of Teachers' Knowledge of Map and Globe Skills with Respect to Recency of Attendance at Social Studies Workshops or Conferences</td>
<td>97</td>
</tr>
<tr>
<td>23. Analysis of Variance for Differences Among Recency of Attendance at Social Studies Workshops or Conferences with Respect to Teachers' Knowledge of Map and Globe Skills</td>
<td>98</td>
</tr>
</tbody>
</table>
ABSTRACT

The purpose of this study was to determine to what extent Louisiana classroom teachers, grades kindergarten through four, possessed knowledge of selected map and globe skills; and to determine whether significant relationships existed between possessed knowledge and skills and certain factors of professional education, teaching experience, position, and personal traits.

The inquiry was based upon the following questions:
(1) To what extent do Louisiana classroom teachers, grades kindergarten through four, know selected map and globe skills?
(2) Is the knowledge of the classroom teachers related significantly to the following factors: (a) level of teaching assignment? (b) age groups of teachers? (c) years of teaching experience? (d) types of degrees held? (e) number of college credits in geography? (f) number of college credits in history? (g) number of college credits in social studies methods? (h) recency of social studies methods courses? (i) recency of faculty studies in social studies? and (j) recency of attendance at social studies workshops or conferences?
A stratified random sampling of five hundred one teachers of grades kindergarten through four, teaching social studies in the State of Louisiana during the 1976-77 school year was surveyed. Usable returns were received from 357 teachers, or 71.26 percent of sample population from 22 parish school systems. Forty schools were represented in the responses.

The survey instruments consisted of two parts: (1) the Questionnaire which ascertained personal and professional data, and the (2) Survey of Map and Globe Skills (Grades K-4) which assessed teachers' knowledge of map and globe skills.

Returns were computer programmed. Scores were utilized for statistical analysis. Data were analyzed using the summarized means of scores within the sub-groups. Analysis of variance among personal and professional variables with respect to the 35 categories of test items was used to determine teachers' knowledge of map and globe skills. To determine the differences between any two uncorrelated means within the sub-groups, "t" tests were computed.
The following conclusions were reached:

1. Variables not significantly related to performance on the map and globe survey instrument included: (a) age groups of teachers; (b) teaching experiences of teachers; (c) types of degrees held; (d) number of college credits in geography; (e) number of college credits in social studies methods; and (f) recency of social studies methods courses.

2. Variables significantly related to performance on the map and globe survey instruments included: (a) teaching levels of teachers; (b) number of college credits in history; (c) recency of faculty studies in social studies; and (d) recency of attendance at social studies workshops or conferences.

Teachers assigned to second and third grade classrooms demonstrated more map and globe knowledge and skills than teachers who worked with youngsters in kindergarten and one. Teachers assigned to grade four demonstrated more knowledge and skills than did teachers in either of the two lower grade groups. Lowest mean scores were reported for teachers of grades kindergarten and one; teachers of grade four scored highest.
The analysis further revealed that age groups of teachers, teaching experience, and types of degrees held had no significant effect. The assumption was made that the increased knowledge and skills resulted, in part, from teaching at higher grade levels.

The number of college credits in history affected slightly teachers' knowledge of map and globe skills. Faculty studies in social studies contributed slightly to map and globe knowledge and skills. Also attendance at social studies workshops and conferences had slight effect on scores of teachers.

3. The data from the study showed that the sample of Louisiana teachers who participated in this study had a low rate of correct responses.
Chapter 1

INTRODUCTION

Many social scientists as Jarolimek (1971:472) and Broek (1965:64) have agreed on the importance of maps and globes in teaching the social studies curriculum to elementary school students. The skills were viewed as being helpful to teachers and students at succeedingly higher levels of learning. The consensus of views by Thomas and Brubaker (1971:415) and by Ord (1972:123) was that students should be introduced to map and globe skills in the elementary grades and that they should be taught and expected to apply them in their learning consistent with their level of maturation. Researchers Ploghoft and Shuster (1976:208) and Crowder (1973:274) advocated that in every succeeding grade level, each skill should be refined and extended in a manner similar to the development of reading skills. Social studies skills were considered as developmental processes. Map and globe skills were accepted as an integral part of the learner's everyday social studies language.

Social studies researchers Michaelis (1972:520) and
Stjernberg (1974:28) also found that map and globe skills should be known and mastered by classroom teachers in order that they could help children develop these skills. Bradley (1968:41) asserted that the teacher "... can not impart that which she doesn't know." Elementary teachers were expected to accept responsibility for the teaching of and the maintenance of the skills just as they were expected to treat skills and knowledge in the other elementary curriculum areas. The development of the map and globe skills were viewed as vital as were the skills in other learning areas.

Lloyd Stjernberg (1974:2) enumerated a large array of map and globe skills. He included, among them, those dealing with "... organizing data, effective listening, written communication, interpreting pictures and graphs, and working effectively with others." Michaelis (1972:526-530), Harris (1972:2), and Stjernberg (1974:127-136) cited these critical map and globe skills: directions, distance, surface features, legend, symbols, location, scale, and concepts relating to the earth.

Development of map and globe skills had been seen as needed in the initial school experiences of the child. Thomas and Brubaker (1971:415) noted that their development
was considered necessary as the child proceeded through the grade levels.

Stjernberg (1974:7) believed it imperative that teachers be acquainted with the map and globe skills. He contended that instruction should derive from a thorough knowledge of and preparation for teaching map and globes. Stjernberg (1974:7) wrote:

It is to be expected that teachers will plan lessons, implement activities, and utilize materials based upon subject matter with which they have become familiar through intensive study. Therefore, if they have experienced in-depth exposure to map skills -- whether as a result of involvement in courses concerned with the content and method of the social sciences, classroom teaching experience, or a specific curriculum -- it can be assumed that the occasion for their students to master these skills will be enhanced.

Stjernberg (1974:17) stated further:

It is apparent that inadequate map and globe skills instruction in the primary grades can be attributed to less than sufficient preparation of teachers rather than to the inability or lack of interest on the part of the youngsters.

**STATEMENT OF THE PROBLEM**

The purpose of this study was to determine to what extent Louisiana classroom teachers, grades kindergarten through four, possessed knowledge of selected map and globe
skills; and to determine whether significant relationships existed between possessed knowledge and skills and certain factors of professional education, teaching experience, position, and personal traits.

Questions to be Researched

This study attempted to answer the following questions:

1. To what extent do Louisiana classroom teachers, grades kindergarten through four, know selected map and globe skills?

2. Is the knowledge of the classroom teachers related significantly to the following factors?
   a. Teaching levels of teachers;
   b. Age groups of teachers;
   c. Teaching experiences of teachers;
   d. Types of degrees held;
   e. Number of college credits in geography;
   f. Number of college credits in history;
   g. Number of college credits in social studies
methods;

h. Recency of social studies methods course;
i. Recency of faculty studies in social studies; or
j. Recency of attendance at social studies workshops or conferences.

Delimitation of the Problem

This study was limited to a stratified random sampling of Louisiana public school classroom teachers of social studies, grades kindergarten through four, who taught during the school year 1976-1977. Five hundred one classroom teachers comprised the sample.

Procedures Used in the Study

1. Names of the schools in which the teachers taught were derived through a stratified random sampling of all schools making annual reports to the Louisiana State Department of Education for the session 1975-1976. Only public schools were included. The sample was contrived so as to include a representative distribution in each of the eight Louisiana Congressional Districts.

2. Teachers were included in the research from
each of the selected schools provided they were teaching social studies in any grade, kindergarten through four, during the 1976-1977 school year.

3. A survey instrument of map and globe skills consisting of eighty items was developed using the following steps:

   a. Verbal and then written permission was secured from Lloyd Stjernberg (Appendix A) to utilize the map and globe skills identified in his doctoral dissertation. These skills were prepared for teachers who were teaching grades kindergarten through grade three.

   b. Map and globe survey items to include skills content for grade four were developed by consulting The Rand McNally Handbook of Map and Globe Usage by Ruby Harris (1967:16-55) and the Skill Development in Social Studies, Thirty-Third Yearbook of the National Council for the Social Studies by Helen McCracken Carpenter (1963).

   c. A panel of social scientists and social studies educators assisted in the validation of the nineteen items for grade four. (Appendix L)

4. The eighty items (K-4) were grouped into thirty-five categories on the survey instrument. (Appendix N)
5. A questionnaire was developed to secure additional information from the teachers. (Appendix N)

6. The questionnaire and the survey instrument were tested in a pilot study of a group of elementary teachers in the summer of 1976. (Appendix M)

7. The Superintendent of Schools in each of the school systems from which faculties were drawn for the research was asked for permission to survey the teachers (Appendix C). Each was asked for the name of a school official or of officials to coordinate the study between the researcher and the teachers in that system. (Appendix D)

8. The school official so appointed was sent a package of questionnaires and survey instruments clearly marked by school and teachers' names. A letter of explanation accompanied the package. (Appendixes G and H)

9. A record of returns was kept by school system and by school. Eight weeks following the initial mailing, a second written request was made to those who had not responded. Four weeks after the second request, a follow-up telephone call was made to each school from which responses had not been received.

10. Responses to the questionnaires and the survey
instruments were recorded on IBM sheets. (Appendix Q)

11. A computer program was developed jointly by the researcher and personnel at the Louisiana State University Computer Center to program the data resulting from the IBM sheet summaries.

**Importance of the Study**

The writer found no research that showed the map and globe knowledge and skills of elementary teachers employed to teach social studies in the schools of Louisiana. Such evidence would assist in the preparation of courses and would provide faculty input to ensure that Louisiana youngsters were receiving adequate map and globe instruction. Further, the writer found no research showing how such map and globe knowledge and skills were related to such factors as teaching level, age, experience, degrees held, professional course work, faculty studies, and participation in workshops and conferences. Data derived from the study were deemed useful for planning professional course work, developing faculty studies, and planning workshops and conferences.
**Definition of Terms Used**

**Social Studies Teacher.** The social studies teacher was defined in this study as that person designated in the Annual School Reports of 1975-1976, of the Louisiana State Department of Education as teaching social studies and whose name appeared, as well, in the kindergarten-grade-four sampling which was developed for this research.

**Map and Globe Knowledge and Skills.** Map and globe knowledge and skills were considered evident if teachers' responses were correct in the validated Map and Globe Survey Instrument. (Appendix N)

**Map and Globe Survey Instrument.** The Map and Globe Survey Instrument was prepared by Stjernberg (1974:127-136) and the researcher which was validated by a panel of social studies experts in Appendix L.

**Map and Globe Questionnaire.** References to this questionnaire pertain to the personal and professional variables in the Map and Globe Questionnaire presented in Appendix N.
ORGANIZATION OF THE STUDY

In Chapter 1, a background was provided for the social studies skills to be investigated. Chapter 2 presents a summary of the related literature. Procedures used in the study are described in Chapter 3. These procedures included: selection of parishes and teachers involved in the study, validation of added test items, requesting permission to conduct the study, sending the questionnaires and survey instruments, recording the returns, making follow-up requests, and recording the data. Chapter 4 is a compilation of data derived from the study. The data is in tabular form and contains a narrative to coordinate the data. The final portion of the study, Chapter 5, is a brief review, followed by the conclusions, and the pertinent recommendations germane to the study.
Chapter 2

REVIEW OF RELATED LITERATURE

A search of professional literature showed pertinent and significant research studies and statements relative to the study of map and globe skills in the elementary school grades. These references gave recognition to the importance of the study. This chapter was divided into two categories: (1) map and globe skill instruction in the lower elementary grades; and (2) the preparation of teachers for map and globe skills instruction.

MAP AND GLOBE SKILL INSTRUCTION IN THE LOWER ELEMENTARY GRADES

Harrison and Solomon (1965) wrote that there was a growing body of literature on the interests and abilities of elementary school children. They discovered that children have broad interests, and that there was a need for "more effective instruction in geographic terms at an earlier age, and that even children of kindergarten age have distinct, if erroneous, concepts of some social studies terms."

Davis (1958) conducted a study to determine whether
children in the fourth, fifth, and sixth grades would profit from instruction in concepts of time and space relating to geographic time zones. Davis (1958) found that instruction in certain aspects of the concepts of geographic time and space relating to time zones was profitable earlier than formerly thought possible. Rigid grade placement of various elements in the study was considered impossible and undesirable. The researcher recommended continuity, sequence, and flexibility of planned instruction in the development of these social studies concepts.

Later, DeFigio (1970) assessed second, third, and fourth grade children's knowledge of social studies time concepts and which time concepts could be learned through reading. He also investigated whether differences in time concept learning were related to mental age or residence in inner-city, suburban, or small town communities. The results of the study demonstrated that the single most important aspect of a child's ability to grasp and increase his knowledge of time concepts was mental age. It appeared that mental age rather than chronological age was a better criterion for determining placement of time concepts in the elementary social studies curriculum.

Rabozzi (1961) attempted to determine the extent to
which fifth and sixth graders were able to use the skills of latitude and longitude for locational purposes. Results of the study showed that skills pertaining to longitude data did not appear to be more difficult for the children than did skills concerned with items relating to latitude. Rabozzi found that the farther a child traveled from his home area, the more frequently he reported observing relationships between people and the natural environment. There was evidence that children acquired, from their own outside school experiences, geographic knowledge that extended beyond the subject matter areas of their respective grade levels. Compared to the village and the semi-rural area in upstate New York, the researcher reported, however, that only the city system had a social studies course of study available and map and globe skills were developed intensively.

Schumacher (1961) investigated fifth and sixth grade students' understanding of surface features of the earth. The researcher found that students of the fifth and sixth grades generally found it difficult to understand surface terms in a written setting and that there was little or no difference in the achievement in understanding surface
feature terms between students in self-contained and departmentalized classrooms. Schumacher recommended that teachers become aware of the importance of surface terms and should assume responsibility to supplement the textbooks since the content was unable to include specific and detailed explanation of these surface features.

Davies (1962) attempted to develop a program of map skills and understandings that contributed to intermediate children's abilities to use maps as a geographic tool. This research provided a basis for teaching-learning experiences in map making, map reading, and map interpreting. These skills were developed within the framework of an established social studies program. The skills and understandings included these abilities: observe and note features; locate places and distributions; compute distances and use scale; use and understand symbols; recognize and express relative locations; use and understand map projections; and use and understand the globe as a model of the earth. The methods used to develop the above skills included field trips, reading, and interpreting maps. The children were asked to compare two or more maps that gave different information about the same area and to make inferences about the
Weinswig (1962) developed and evaluated a planned program in social studies to teach basic map skills in the fourth grade. The researcher found that fourth grade children learned the basic map skills in an intensive teaching program and retained these skills throughout the school year. Team teaching proved successful in teaching map skills and other social studies factual data. Intelligence did not appear to be a very important factor. A majority of the children who had worked in pairs and teams of three had enjoyed the lessons and wished to continue working in small groups. All teachers expressed satisfaction with the lessons.

Sorohan (1962) studied the grade placement of map skills according to the mental age of elementary school children. The eleven skills related to map learnings were: different uses of maps; a map legend, map symbols, and map abbreviations; scale of miles; a grid system for location; degrees in latitude and longitude; latitude; longitude; map projections; an atlas and the concept of one map for one purpose; position of county and state; and regions and the regional concept. He concluded that children whose mental
ages fall within the range of the elementary school level could be efficiently taught map skills.

The Rand McNally Handbook of Map and Globe Usage by Harris (1967) embodied the grade placement of map and globe skills, concepts, and activities. This handbook presented three major purposes: (1) to indicate the kinds of maps and globes appropriate for each of the grades; (2) to set up goals for learning with maps and globes; and (3) to suggest possible techniques and exercises that may be adapted to students' needs in classrooms equipped with standard maps and globes. The skills, concepts, and activities were presented according to grade placements from kindergarten through grade twelve. The handbook was intended to serve as a guide to teachers and college students preparing to be teachers. The basic concepts and skills suggested for kindergarten through six included: (1) shape and size of the earth; (2) directions; (3) distance and scale; (4) symbols; (5) earth-sun relationships; (6) location; (7) recognition of countries, regions, bodies of water, cities, etc. Also included were ideas for map making. Harris noted that if the grade placements do not agree with the teachers' curriculum, reference can be made to the other
parts of the handbook.

Another handbook of concepts and skills was that entitled "Globe Studies and Uses" by S. W. Boggs and F. K. Branon (1954). The Handbook embodied not only the different concepts and skills but also some guidelines for a teacher to use in teaching maps and globes in the different grade levels. The first part of the Handbook listed the concepts and skills which included: the globe and globe map; the shape and size of the earth; rotation of the earth and its consequences; revolution around the sun and its consequences; parallels and meridians; longitude and latitude; great circle course; and the moon and the month. The second part of the Handbook provided guidelines which is discussed in the later part of this report.

A Committee of the National Council for the Social Studies included a List of Skills in the National Council for the Social Studies Yearbook (1963). The Committee grouped the different skills into: early primary for grades 1-2 (EP); late primary for grades 2-3 (LP); early intermediate for grades 4-5 (EI); and late intermediate for grades 5-6 (LI). The skills grouped under interpreting maps and globes included: use of cardinal and intermediate
directions in classroom, neighborhood, and working with maps; use of relative terms of locations and directions; use of the compass and north arrow on a map; use of parallels and meridians in determining directions; use of latitude and longitude in locating places; identification of time zones of the United States and their relations to longitude; recognition of the home city and state on a map of the United States and on a globe; recognition of land and water masses, the equator, tropics, circles, and large islands; use and interpretation of abbreviations, map vocabulary and key; determining and estimating a map distance by using a scale of miles; use of legends on different kinds of maps; interpreting elevation, pictorial symbols, dots, lines, colors, and other symbols used in addition to pictorial symbols; and recognition of distortions involved in different map projections. Further, the Committee recommended readiness and demonstration steps in teaching the above skills. The Committee recommended that pupils be helped to feel the need for learning the particular skill. In demonstrations, the teacher was asked to explain or show the operation of the skill.

Stjernberg (1974:15-16) discussed some research
studies regarding map and globe skills instruction in the primary grades. He wrote:

In addition to an obvious interest in maps and globes, primary grade students have exhibited greater readiness to develop rather sophisticated skills than has generally been thought. George Howe showed that, "children can systematically and accurately acquire a clear concept of directions in space." Kindergarten youngsters, according to Spodek, come to school familiar with maps and are able to use them to understand geographical space. His conclusion that five year olds can differentiate among elementary map symbols supported a similar contention in an earlier study. First graders know much more about land and water forms than is commonly expected of them. Also, their geographic concepts concern an environment much larger than the school community. J. D. McAulay found that second grade children were able to use maps to obtain information, visualize different places through a map, transfer directions to a map situation, and make comparisons and judgments in simple map work. While the earlier introduction of several map and globe skills in the curriculum was implied in these studies, it has received direct attention from Rushdoony as a result of his discovery that, "Third grade children can learn many of the map-reading skills typically thought in grades four and five."

Tankersley (1965) compared the development of selected study skills in the social studies. The investigation compared two approaches to skill development in locating information. The direct approach involved in a systematic presentation of lessons on the skills of locating information, and was considered as an overview
of the skills. The indirect approach was representative of then current social studies unit work. Teachers were directed to teach the skills to classes or individuals only as the need was seen. He found that there were no significant difference between direct and indirect approaches to learning the skills of locating information.

The concepts of landforms and waterforms of children entering the first grade was investigated by Goldstein (1966). The investigation was organized to determine the extent which the development of the concepts was influenced by travel experiences, factors of chronological age, sex, and intelligence. Goldstein concluded that first graders entered school with much information about landforms and waterforms. They could identify many landscape features, and knew much more about many of the landforms and waterforms than was commonly expected of first-graders. Boys knew more concepts about landforms and waterforms than did girls. The important factor in respect to direct contacts with landforms or waterforms was not so much the number of visits but their quality. The researcher recommended that school systems should examine existing social studies program for the beginning school child with a view toward broadening and
extending the content. He advised in-service training programs to help teachers identify concepts and develop techniques to teach these concepts.

Belgum (1967) studied the extent to which abilities in interpreting geographic photographs could be developed through a series of instructional lessons with sixth graders. The researcher concluded that the skills of identifying and interpreting physical and cultural landscape features, and the synthesizing of landscape generalizations from geographic photographs could be increased significantly through instruction. The factor of sex was not significantly related to the ability to interpret geographic photographs. By contrast, intelligence was significantly related to success in interpreting such photographs.

Carswell (1968) investigated the topographic map reading and interpretation abilities of students in grades four, five, and six. He examined the relationships between map skills and such factors as intelligence, spatial ability, sex differences, socioeconomic level, grade, chronological age, and the teacher's knowledge of geography. The researcher found that children in grades four, five, and six could learn to use large-scale topographic maps
effectively. Topographic map skills and verbal mental age, non-verbal mental age, and spatial ability seemed to indicate that the teaching and learning of map skills had a highly verbal orientation which increased from grades four to six. Grade level, chronological age, socio-economic grouping, and teacher background were correlated slightly with topographic map skills, but sex differences were not significant.

Buckley (1968) compared the effectiveness of two methods of learning selected relationships in social studies content by sixth-grade pupils. Set diagrams were chosen as the basis for one method. List tabulations were selected as the prime feature of the alternate method. The researcher prepared five booklets -- lists for the list method students, diagrams for the set diagram method students, maps that were used by both groups, lessons plans for the list method teachers, and lesson plans for the set diagram method teachers. The results showed that the list method and the set diagram method did not produce significantly different results in the learning of factual relationships in social studies content.

In 1969, Pretzlaff assessed the impact of transiency and geographic mobility on the school
performance of sixth graders. The Iowa Test of Basic Skills scores in reading comprehension, map skills, and work-study skills were extracted from records and used to measure social studies skills. The findings did not indicate that all kinds of social studies understandings, attitudes, skills, and geographic orientation were affected by mobility. There were indications, however, that mobility may have had a negative effect on the overall performance in social studies and that a disruption of a sequence of learnings could account for differences in map skills between stationary and mobile groups of pupils.

A study made by Duhon (1969) on the value of simplified maps in fifth and sixth graders showed that fifth graders were better able to read simplified maps than conventional maps. By contrast, sixth graders were able to read conventional maps as well as they read simplified maps. In terms of the map skill of location, all the subjects performed better with simplified maps than with conventional maps.

Kilman (1969) investigated to ascertain the degree of relationship which existed between selected factors of intelligence and reading ability, and the ability of fourth
grade children to learn to read maps. He identified the combinations of factors which best predicted achievement of pupils in various map reading skills. As a result of the study, Kilman recommended that greater emphasis be placed by classroom teachers upon helping children see relationships and develop understandings of geographic principles rather than upon facts and locational skills. He wrote that fact-finding skills should be developed in the lower grades and higher level skills of seeing relationships and drawing inferences from maps should be taught in the intermediate grades. Kilman recommended that instruction in map reading should begin at the kindergarten level followed by a sequential program at succeeding levels. He also recommended maps, globes, map-reading skill kits, and overlays as standard teaching resources in each classroom.

Murdock (1972) studied the relationship between factors of intelligence and map inferring ability in seventh grade pupils. He found that the relationship between general intelligence and skill in map inference was strong for both boys and girls. It was also found that the relationship between chronological age and skill in map
inference ability was insignificant for both boys and girls.

Larmer (1972) evaluated student performance on the work-study skills in social studies. Her study concerned map reading, reading graphs and tables, and knowledge and use of reference materials for students involved in the pilot study using the Taba Teaching Strategies. The study revealed no significant differences in pupil achievement between those involved in the implementation of the Taba Teaching Strategies and those following traditional approaches in the development of such skills. The children from the low-income families in the experimental group which utilized the Taba Teaching Strategies made the most progress in developing reference skills. The children from the middle income families made the least progress in the experimental group which used the Taba Teaching Strategies. The children from the high socio-economic families made more progress in the group which used the traditional approaches in social studies.

The effects of graphic roles on learning geography materials in the middle grades was investigated by Pelletti (1973). In the study graphics were defined as maps, graphs, and similar visual representations. Graphic roles were
defined according to Davis' classification as primary communication or reinforcement. The researcher found significant differences among children at different grade levels. On the map skills and graph and table reading measures, seventh graders scored significantly higher than sixth and fifth graders. On the cognitive achievement measure both seventh and fifth graders scored significantly higher than sixth graders.

Burket (1973) studied the feasibility of evaluating the effectiveness of selected historical maps investigated as historical evidence by seventh graders. Ten original historical maps were selected from three centuries of American history using these four criteria: areal distribution, time sequence, geographic ideas and cartographic technique. Burket found that at the end of six weeks of work, a majority of students were not interested in studying any additional historical maps. The teachers' questionnaire revealed that the greatest student interest was with the historical maps of their own community. Those students who worked with the historical maps showed a gain in the four concepts of historical knowledge and an increase in conventional map reading skills.
Frye (1973) examined the development of map reading ability in eight- to fourteen-year-old children. The author contended that when a child knows that a map is a symbolic representation of something perceived in reality his ability to interpret it correctly is dependent on his use of a natural classification system. The researcher found that nine- to fourteen-year-old children were able to interpret maps successfully before they reached the stage of formal operations as defined by Piaget. Further, Frye reported that children seemed better able to differentiate between form and shape than they were in differentiating the various colors on maps. He found that "topographical" maps were more appropriate for instruction than were the "relief-like" maps used in the elementary classrooms.

THE PREPARATION OF TEACHERS FOR MAP AND GLOBE SKILLS INSTRUCTION

In 1962, Briggs analyzed the socialization experience of elementary teachers. He wrote that teachers entered the profession with certain preconceived ideas as to their future role as participants in a system of education. He enumerated some factors affecting these
ideas which included: orientation received in preparing institutions, personal opinions, information gained from other professional personnel, laymen, and other indirect sources. Results of the study indicated that only sixty percent of the teachers interviewed entered the profession with a prior awareness of what to expect in terms of the time they would need to give to the teaching role and that majority of the teachers did not understand the role of the Board of Education. Briggs further found that slightly more than fifty percent of the teachers interviewed indicated that they understood the roles of the Superintendent of Schools, supervisors, and principals.

Lucar (1958) studied the curricular patterns used in geography and history by selected Louisiana elementary teachers. The study was to discover the methods these teachers used in teaching geography and history and to survey materials they used. The five parishes in the study were: Caddo, Calcasieu, Catahoula, East Baton Rouge, and Orleans. Her findings revealed that the instructional program in the elementary school was based chiefly on textbook-centered activities and that supplementary materials such as maps and globes, films, and records
were used approximately thirty percent of the time. Lucar recommended that provision be made to expand the elementary social studies program to include other activities and experiences besides those gained through textbooks and that special supervisors at the state and parish level should adopt some means of suggesting to teachers how supplementary materials could be used to enrich the social studies program.

Joyce (1964) investigated the development and grade placement of map and globe skills in the elementary social studies program. He developed and validated a list of ninety-one skills. The four procedures used in developing the statement of skills were: (1) identifying the basic skills underlying the ability to read and interpret maps and globes; (2) stating the skills behaviorally; (3) classifying the skills; and (4) submitting the skills to a panel of consultants for further refinement. The panel of consultants was composed of all full-time, certified teachers actively engaged in teaching the social studies in grades one through six in six elementary school districts in the Chicago area. Joyce found that their appraisal of the skills was significantly related to the grade they were teaching,
the amount of teaching experience they had, and the amount of time they devoted to instruction in map and globe skills. He recommended the refinement and extension of the list with consideration given to grade placement and sequence.

A handbook entitled "Globe Studies and Uses" by Boggs and Branon (1954) embodied not only the different concepts and skills but also some guidelines for a teacher to use in teaching maps and globes in the different grade levels. The first part of the Handbook listed the concepts and skills. The second part of the Handbook provided guidelines which included: why globes and maps are necessary in geography work; things a teacher should consider in buying globes; how to use globes in studying the shape of the earth and in locating places; how to teach latitude and longitude, time, rotation, and revolution of the earth; how to teach the western, eastern, northern, and southern hemispheres, plus land, water, day, and night hemispheres; how to use the twelve-inch political globe and pictorial relief globe, sixteen-inch physical-political globe, and graphic project globe; how to find the area of the earth and of different regions of the earth; and how to care for maps and globes.
A study by Godwin (1967) investigated contemporary practices in selected Nebraska elementary school social studies programs. He concluded that most of the elementary teachers were using the traditional approach in teaching social studies and that a limited number of evaluation methods or techniques were used. Godwin recommended that colleges and universities in the State of Nebraska emphasize social studies methods courses by using more instructional media, and by developing and presenting workshops, institutes, and in-service programs in the social studies.

Veltkamp (1967) conducted a study for the purpose of ascertaining the status and trends of geography education in the intermediate grades of the elementary schools in a tri-state regional area in northwest Iowa, southwest Minnesota, and southeast South Dakota. One hundred thirty-seven teachers and thirty-one administrators cooperated in the study. The researcher made the following generalizations: (1) there was evidence that geography education was considered important for intermediate grades; (2) teachers were not as well prepared to teach geography as they would like to be; (3) the time spent on geography varied from school to school, however, the small schools tended to spend less time;
(4) there was some disagreement between the administrators and teachers as to the approaches used; and (5) there was a general concern among administrators for improvement in geography education but no drastic changes were planned.

Peters (1969) examined the relationships between the perceptions of professional geographers and social studies teachers on selected geographic concepts. He concluded that the social studies teachers showed a verbal response pattern which reflected a focus on distribution description in segments of space rather than the interpretation of functional relationships between patterns based on process concepts. Spatial units appeared to reflect inanimate portraits of the landscape.

Haywood (1972) studied the degree to which future teachers had attained social studies skills used in the elementary school as listed by the National Council of Social Studies. The skills were reading social studies materials, applying problem solving techniques, interpreting maps and globes, and use of time and chronology. He sought to determine if such future teachers improved in these skills by taking a social studies methods course. Haywood found that most future teachers who had completed a social studies
course scored above the ninth-grade level as shown in the skills listing. The results showed that test performance, however, provided no significant predictive relationship for success in interpreting reading materials nor in map and globe interpretation.

A relevant study closely related to this research was that of Stjernberg (1974). The study was an analysis of primary teachers' knowledge of selected map and globe skills. The purposes of the study were to determine what map and globe skills geographers and educators agreed were appropriate to primary grade social studies programs and to determine whether primary grade teachers understood the subject matter underlying these skills.

Stjernberg (1974a) employed these procedures:
(1) selecting and surveying representative statements by scholars in geography and social studies education in order to identify those map and globe skills recommended for introduction in the primary grades; (2) establishing a sequence of these skills, organized by grade level as well as major skill category; (3) analyzing the teacher's guides of the largest selling social studies textbook series to determine if selected map and globe activities were based
on the identified skills; (4) constructing an instrument comprised of problems based upon the skills identified by the scholars; and (5) examining the credentials of the selected primary grade teachers to acquire data relating to academic preparation in the content and methods of the social sciences, classroom teaching experience, and grade level assignment; (6) administering the instrument to the selected teachers in a controlled, observed setting; (7) evaluating teacher-knowledge of map and globe skills on the basis of responses to the items on the instrument; (8) tabulating and presenting data, comparing academic preparation, teaching experience, and grade level taught to knowledge of map and globe skills as indicated by the scores on the instrument, utilizing an analysis of variance technique as the statistical tool; and (9) extracting conclusions, deducing implications, and suggesting directions for further related study.

Stjernberg's (1974b) inquiry was based upon the following questions: (1) What are the map skills which the scholars have identified as essential for inclusion in the primary grade curriculum? (2) To what extent do scholars agree as to the grade placement and sequence of
these skills? (3) Have the authors of the largest selling textbooks incorporated activities based on the skills? (4) Do teachers understand the skills to the extent that they can instruct their students? (5) To what extent is teachers' knowledge of map skills related to: (a) preparation in teacher education? (b) classroom teaching experience? (c) the grade level taught?

Statements by geographers and social studies educators were surveyed by Stjernberg (1974c) to identify those map and globe skills which should be introduced before fourth grade. The grade placement of the skills were based on the consensus of these statements. The thirty skills were organized by major categories. The list served two major functions. First, it was the criterion used to judge whether the textbook authors considered the scholars' emphases in developing related activities in the leading programs. Second, it became the source of content for the instrument devised to measure teachers' knowledge of maps.

The sample consisted of 104 primary grade teachers from nine public schools comprising one district. A search of their credentials revealed information related to their professional preparation and experience. The instrument was
administered in each school without a time limitation. The resulting data were analyzed, considering effects of academic preparation, teaching experience, and grade level assignment on the teachers' knowledge of the skills.

The scholars agreed that instruction in each of the categories should be included in the primary sequence. The geographers supported the development of a limited number of skills through second grade and an increase in number and complexity in third grade. Educators favored the earlier introduction of more skills, permitting the addition of more difficult skills when students were ready.

The textbooks were inconsistent in the treatment of map and globe skills. According to Stjernberg (1974d), the inclusion of specific skills in the separate programs ranged from 16 to 26. Those planning related lessons were asked to supplement texts with a variety of materials.

The analysis of Stjernberg's (1974e) study showed that teachers' knowledge of map skills had not been enhanced by the acquisition of credit in social science courses. The assumption was that they were not exposed to such subject matter and that the standard established by the National Council of Social Studies did not insure acquisition of
specific content. Further, teachers having completed a social studies methods course did not score higher. The implications were that map skill instruction was either omitted or were incidental parts of such courses. Similarly, the extent of classroom experience did not further their understanding of maps and globes. It was concluded that improvement was the result of individual motivation.

The study revealed that teachers assigned to first, second, and third grades were more knowledgeable than were their peers in kindergarten. Stjernberg (1974f) concluded that this difference resulted because first, second, and third grade teachers actively taught more map and globe content than did kindergarten teachers.

Finally, Stjernberg (1974g) concluded that primary grade teachers were not well prepared to teach map and globe skills and that their acquisition of such skills occurred by chance.

Schneider (1976a) reported an experiment by three University of Georgia faculty members who were teaching the methods classes for prospective elementary teachers. The instrument used was the Where and Why map and globe skills
program of A. J. Nystrom and Company. The program included a 69-item multiple-choice test that was referenced to 23 cassette lessons and contained pictures of globes, inset maps, and other illustrations. In the spring of 1974, the test was administered to 32 college seniors enrolled in an elementary teacher education program. In June 1974, the test was administered to 60 elementary school teachers enrolled in a program of the master of education. Their teaching experience ranged from 1 to 24 years. In October, 1974, the test was given to 371 sixth-grade students enrolled in three middle schools in a major southeastern city. And finally, in January, 1975, the test was given to 108 sixth-grade students enrolled in a middle school in a consolidated city-county system.

Overall, the sixth-grade students scored considerably lower on the test than did the teachers. Although the teachers had substantially less difficulty with the test than did the sixth graders, they exhibited many of the same weaknesses. Schneider (1976b) contended that teachers had forgotten through lack of practice some of the geographic information and skills necessary to map and globe use or they had never learned them.
Schneider (1976c) noted that the importance of the findings of the study was two-fold. First, the number of problem areas and the pervasiveness of the deficiencies among the sample of sixth-grade students was a likely cause of concern not only to geographers and educators, but also to those parents convinced that schools be held accountable for teaching basic skills. The second area of importance was related to the teachers' own knowledge and skills. Although the teachers involved were not representative of elementary teachers in general, thirty to fifty percent of them had problems with a substantial group of test items in the same skill areas as the sixth graders. Schneider contended that it may well be that these problems were typical of elementary teachers. Schneider concluded that if teachers, through lack of academic background or practice, do not have a solid grasp of map and globe skills themselves, then to expect them to devise systematic and appropriate instructional strategies or to make maximum use of map-related instructional materials seemed overly optimistic. Schneider further noted that before it was reasonable to expect significant improvement in elementary students' performance, their teachers needed a better geography
SUMMARY

The review of literature showed gradual recognition and development of the importance of map and globe skills for both students and teachers in the elementary grades. References indicated movements toward the improvement of map and globe skill instruction for elementary grade students. Likewise, moves to improve the preparation of teachers for map and globe skills instruction were noted.
Chapter 3

PROCEDURE

The analysis of teachers' knowledge of selected map and globe skills was conducted through the use of a survey instrument and a questionnaire to a large, representative sample of teachers.

Stjernberg (1974) used a survey instrument of map and globe skills for primary grade teachers. Mouly (1970:242-263) expressed the advantages of questionnaires in securing the type of information needed in a study. Through the questionnaire design and the survey instrument, it was possible to receive somewhat uniform responses from a large group of teachers representing a broad geographic area. The validity of the study was enhanced by access to a representative sample of the population and by the structured responses to questions.

DEVELOPMENT OF THE SURVEY INSTRUMENT

Stjernberg (1974) developed a survey instrument entitled "Survey of Map and Globe Skills - Primary Grades (K-3)" (Appendix O), which he used in his study, "An Analysis
of Primary Grade Teachers' Knowledge of Selected Map and Globe Skills.

A map and globe instrument of eighty items was developed for this study using different steps. First, verbal and then written permission was secured from Stjernberg (Appendix A) to utilize the items from his doctoral dissertation instrument which covered grades kindergarten through three. Second, map and globe survey items to cover grade four were developed by consulting The Rand McNally Handbook of Map and Globe Usage by Ruby Harris (1967:16-55) and the Skill Development in Social Studies, Thirty-Third Yearbook of the National Council for the Social Studies by Helen McCracken Carpenter (1963).

The test items developed by the researcher, designed for grade four, were validated by a panel of social studies educators which included the following: Dr. Joe Parker - Associate Professor, Department of Education, Louisiana State University, Baton Rouge, Louisiana; Dr. Milton B. Newton, Jr. - Associate Professor, Department of Geography and Anthropology, Louisiana State University, Baton Rouge, Louisiana; Dr. Sam B. Hilliard - Associate Professor, Department of Geography and Anthropology, Louisiana State
University, Baton Rouge, Louisiana; Louis Nicolosi - State Supervisor of Social Studies, Louisiana State Department of Education, Baton Rouge, Louisiana; Philip B. Larimore - Instructor of Geology: Cartographer, Louisiana State University, Baton Rouge, Louisiana; Sara Helen Hair - Assistant Professor of Education, University Laboratory School, Louisiana State University, Baton Rouge, Louisiana; and Edith B. Hilton - Instructor of Education, University Laboratory School, Louisiana State University, Baton Rouge, Louisiana.

DEVELOPMENT OF THE QUESTIONNAIRE

The personal and professional data selected for inclusion in the questionnaire included:

Teaching levels. The choices (K-1, 2-3, 4) frequently described as early primary (EP), late primary (LP), and early intermediate (EI), were grouped. A fourth choice under "other" was included as a check for teachers who did not fall under the three categories. (Louisiana, 1967a)
Age groups of teachers. The choices were divided into five year spans with the exception of the youngest teachers who were placed in an "under twenty-six group". The distinction was made because teachers of this age were more likely to have been exposed to social studies methods, history, and geography courses with map and globe teaching in their teacher education programs.

Years of teaching experience. The choices were divided into five year spans up to twenty years of experience. Twenty-or-more-years responses were grouped in one group.

Types of degrees held. The choices for this item were intended to differentiate not only between levels of degrees held but also between major studies for each degree. The respondents were asked to mark all degrees held. The options were: bachelor's with elementary education major, bachelor's with other education major, bachelor's with other major, master's with other major, master's plus thirty hours, specialist certification, a doctorate, and other. A blank was provided for "other" with space to specify such degree.
College credits in social studies. The responses to this item reflected the teacher's number of hours of work in: geography; history; and in social studies methods. A blank was provided for "other" with space to specify such courses.

Recency of social studies methods course with map and globe teaching. In this question, the teachers were asked to respond to the recency of their course work in social studies methods with map and globe teaching. The options were: currently, one to five years, six or more years, and never.

Recency of faculty studies in social studies with map and globe teaching. The teachers were asked to respond to the recency of faculty studies attendance in social studies relating to map and globe teaching. The options were: currently, one to five years, six or more years, and never.

Recency of attendance at social studies workshops or conferences with map and globe teaching. In this question, the teachers were asked to respond to the recency of workshops or conferences attendance with teaching maps
and globes. The options were: currently, one to five years, six or more years, and never.

PRETESTING AND REVISION

The original form of the survey instrument by Stjernberg for grades kindergarten through three (Appendix O), and the validated survey instrument for grade four (Appendix L) resulted in a survey instrument composed of eighty items grouped into thirty-five categories (Appendix M). This was designed, in part, to locate the maps referred to in the various questions. The survey instrument was tested in a pilot study using students enrolled in a course "Modern Principles and Practices in the Elementary School" at Louisiana State University, in the summer of 1976. All students in the class were graduate students though not all were teaching social studies at the elementary level. Nineteen samples were completed, with time involvement of no more than forty-five minutes. Responses to the sample showed the highest score as 71 and the lowest as 12, out of 80 items. The scale showed a mean of 51.3; range of 59; and a median of 56. The samples in which differentiation in responses appeared were carefully analyzed by the
researcher. Write-in comments were given consideration and the following changes were made:

1. The test items were rearranged so that items that referred to the same maps in the survey instrument were placed together.

2. Test items were shifted so as to include similar items on the same page, in order to avoid distortion of items and to insure ease in answering.

3. Additional words of explanation were provided for clarity.

4. Test items were renumbered and changed in sequence so as to provide space for items that were grouped together.

A sample of the questionnaire and the survey instrument, as revised, may be found in Appendix N.

METHOD OF SAMPLE SELECTION

The names of the schools in which the teachers taught were derived through a stratified random sampling of all schools making annual reports to the Louisiana State Department of Education for the session 1975-76. Only public schools were included. A stratified random sample
of approximately five hundred elementary teachers was designed so as to include a representative distribution in each of the eight Louisiana Congressional Districts and to insure balance among urban, rural, industrial, farming, and various other ethnographic regions within the State of Louisiana. Information from the Congressional District Data Book, 93d Congress (Lerner, 1972) and the Louisiana Assessment of Educational Progress Sampling Frame (LaAEP Sampling Frame by Size of Parish, 1974a; Appendix P) formed the basis for the sampling.

Percentages of public school enrollment for each congressional district were determined according to the population figures presented in the Data Book (Lerner, 1972). The percentages were applied to the tentative sample of five hundred and appropriate numbers of recipients for each congressional district were computed. A total figure of five hundred one teachers was obtained as shown by data in Table 1.
### Table 1

Percentages of Public School Enrollment for Congressional Districts of Louisiana and Corresponding Numbers of Teachers Appropriate for Balanced Sampling

<table>
<thead>
<tr>
<th>Congressional Districts</th>
<th>Percent of State Public School Enrollment</th>
<th>Appropriate Number for Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>11.61</td>
<td>58</td>
</tr>
<tr>
<td>II</td>
<td>9.93</td>
<td>50</td>
</tr>
<tr>
<td>III</td>
<td>12.15</td>
<td>61</td>
</tr>
<tr>
<td>IV</td>
<td>12.75</td>
<td>64</td>
</tr>
<tr>
<td>V</td>
<td>13.63</td>
<td>68</td>
</tr>
<tr>
<td>VI</td>
<td>12.97</td>
<td>65</td>
</tr>
<tr>
<td>VII</td>
<td>13.94</td>
<td>70</td>
</tr>
<tr>
<td>VIII</td>
<td>13.02</td>
<td>65</td>
</tr>
<tr>
<td>Totals</td>
<td>100.00</td>
<td>501</td>
</tr>
</tbody>
</table>

The sixty-six school systems in the State of Louisiana were grouped according to the congressional district in which each was located. Each school system was also assigned the group number designated as described by the Louisiana Assessment of Educational Progress Sampling.
Frame (LaAEP Sampling Frame by Size of Parish, 1974a; Appendix P). These groups numbers were indicators of the size of the system as shown in the data in Table 2. The data in Table 2 reveal the percent of public school population appropriate for each group size.

Table 2

Louisiana Assessment of Educational Progress Sampling Frame Group Number Designations, Descriptive Public School Populations, and Corresponding Percentages of Public School Enrollment

<table>
<thead>
<tr>
<th>LaAEP Sampling Frame Designation</th>
<th>Population in Public Schools</th>
<th>Percent of State Public School Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOP ** I</td>
<td>24,501 - up</td>
<td>45.6</td>
</tr>
<tr>
<td>SOP II</td>
<td>14,501 - 24,500</td>
<td>19.2</td>
</tr>
<tr>
<td>SOP III</td>
<td>9,501 - 14,500</td>
<td>12.3</td>
</tr>
<tr>
<td>SOP IV</td>
<td>5,001 - 9,500</td>
<td>15.1</td>
</tr>
<tr>
<td>SOP V</td>
<td>Up to - 5,000</td>
<td>7.8</td>
</tr>
<tr>
<td>**Total</td>
<td></td>
<td>100.0</td>
</tr>
</tbody>
</table>

*LaAEP - Louisiana Assessment of Educational Progress

**SOP - Size of Parish (Parish is used to indicate the Louisiana school system)
Selection of school systems was accomplished in the following manner:

1. All school systems in Size of Parish (SOP) I were selected as representing forty-five percent of the population in the public schools.

2. Each of the seven systems was assigned the number of recipients in exact proportion to the percentage of public school population for the system.

3. The remaining number of recipients for each congressional district was obtained to insure balance.

4. Congressional Districts I and II were combined for computation in order to avoid splitting the metropolitan New Orleans area.

5. School systems from Size of Parish (SOP) II through Size of Parish (SOP) V were selected to complete the number needed for each congressional district.

Table 3 contains the names of school systems selected for the study arranged by congressional district. The number of recipients appropriate for each system was also shown. Recipients were arranged in columns according to appropriate "Size of Parish" groupings. The data revealed that the assigned numbers of recipients totaled
### Table 3

School Systems Selected for Survey Listed by Congressional Districts, with Numbers of Recipients Per System Arranged in "Size of Parish" Groupings

<table>
<thead>
<tr>
<th>Congressional Districts</th>
<th>Selected Parish (Appropriate or City School Number of Systems Recipients)</th>
<th>Size of Parish (System) Groupings from Louisiana Assessment of Educational Progress Sampling Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>II (50): Jefferson: 39, Plaquemines: -</td>
<td></td>
</tr>
<tr>
<td></td>
<td>III (61): Terrebon: -</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IV (64): Caddo: 31</td>
<td></td>
</tr>
<tr>
<td></td>
<td>V (68): City of Monroe: 31</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VI (65): East Baton Rouge: 40</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>VII (70): Calcasie: 23</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VIII (65): Assumption*: 11</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals (501)</td>
<td>228, 96, 62, 74, 41</td>
<td></td>
</tr>
</tbody>
</table>

Percent of Sample: 45.51 19.16 12.38 14.77 8.18

++Percent of total population

* Parishes that replaced Madison and Allen Parishes
five hundred one which included:

1. Two hundred twenty-eight (45.51 percent of the sample) were from Size of Parish (SOP) I which represented 45.6 percent of the school population.

2. Ninety-six (19.16 percent of the sample) were from Size of Parish (SOP) II which represented 19.2 percent of the school population.

3. Sixty-two percent (12.38 percent of the sample) were from Size of Parish (SOP) III which represented 12.3 percent of the school population.

4. Seventy-four percent (14.77 percent of the sample) were from Size of Parish (SOP) IV which represented 15.1 percent of the school population.

5. Forty-one percent (8.18 percent of the sample) were from Size of Parish (SOP) V which represented 7.8 percent of the school population.

The Louisiana School Directory for 1975-76 school year (Publication Number 1453) provided a comprehensive listing of schools within the State. Schools in each school district were listed in alphabetical order. The researcher numbered the schools containing one or more of the elementary grades, kindergarten through four, and randomly
selected the schools using a table of random numbers (Mouly, 1970:187-188).

Through the help of the State Supervisor of Social Studies, Louis Nicolosi, cooperation of the Louisiana State Department of Education was obtained. Permission was obtained to utilize the 1975-76 annual report from various systems to ascertain names of teachers of grades kindergarten through four. The checking of schedules contained in the annual reports made it possible to eliminate the teachers not actually responsible for the teaching of social studies.

Entire faculties were selected wherever possible. Two criteria were met: (1) the teacher must teach an elementary grade (grades kindergarten through four), and (2) the teacher must be responsible for the teaching of social studies. When the number of teachers needed for the sample in a particular school system was approached, a table of random numbers (Mouly, 1970:187-188) was used to select the remaining teachers from the faculties.

The Superintendent of Schools in each of the school systems from which faculties were drawn for the study was asked for permission to survey the teachers (Appendix C). Included in the request were letters of endorsement from
Louisiana State Supervisor of Social Studies, Louis Nicolosi (Appendix E) and Iberville Parish Superintendent, Sam A. Distefano, Sr. (Appendix F). Each superintendent was asked for the name of a school official or of officials to coordinate efforts between the researcher and the teachers in a given system. Among the twenty-two parishes, two Superintendents denied permission for the study, Madison and Allen Parishes.

The Superintendent of Madison Parish Schools approved of the survey but the principal of the school involved felt that his faculty was "over-involved" in research projects over the past years and therefore, he asked permission not to participate. The Superintendent of Allen Parish Schools denied permission due to time factor on the part of the teachers involved in the survey. Madison Parish School System was replaced by Catahoula Parish School System and Allen Parish School System was replaced by Assumption Parish School System.

COLLECTION OF DATA

Each school official appointed by the Superintendent to coordinate the efforts in a given school system was sent a package of material which included: (1) a cover letter
of explanation (Appendixes G or H), (2) a copy of the letter to the Parish Superintendent (Appendix C), (3) a return letter of approval from the Parish Superintendent (Appendix D), (4) a list of the names of teachers included in the study, and (5) a complete package of questionnaires and survey instruments properly numbered (Appendix N). Forty-three schools were contacted for the study.

A record of returns was made which listed returns from each school system and from each school. Two weeks after the initial mailing, forty-four or 8.78 percent returns had been received. As soon as the permission from the Parish Superintendent had been received, the complete package of questionnaires and survey instruments was sent. Eight weeks following the initial mailing, a second request was made in writing to those systems not yet responding. By that time, 311 or 62.08 percent returns had been received. Four weeks after the second request, telephone follow-up calls were made to schools or school systems who had not responded. When these telephone follow-up calls were made, 337 or 67.27 percent usable returns had already been received. The last return was received four months after the initial mailing, with a total of 372 or 74.25 percent
of the original sample. Fifteen or 2.99 percent of the questionnaires and survey instruments returned were not usable. The usable returns consisted of 357 questionnaires and survey instruments. This represented 71.26 percent of the original sample.

TREATMENT OF DATA

Responses to the questionnaires and the survey instruments returned were recorded on IBM sheets (Appendix Q). A computer program was developed jointly by the researcher and personnel at the Louisiana State University Computer Center to program the data resulting from the IBM sheet summaries.

The responses were considered and placed into proper categories. Keys were used for grouping and totaling responses.

Computation of means of scores was performed as was a correlation of responses to the test items.

Analysis of variance was performed in those variances of personal and professional models by the computer. These included: (a) teaching levels; (b) age groups of teachers; (c) teaching experience of teachers; (d) types of degrees
held; (e) number of college credits in geography; (f) number of college credits in history; (g) number of college credits in social studies methods courses; (h) recency of social studies methods courses; (i) recency of faculty studies in social studies; and (j) recency of attendance at social studies workshops or conferences. Summarized means among these variables were compared using Fisher's F statistics (Garrett, 1971:284-285). Summarized means of scores were used by the researcher to compute the "t" test to determine which differences among means of variables were significant.

**SUMMARY**

A personal and professional questionnaire and a skills survey instrument were designed for the collection of the data for the study. The questionnaire consisted of personal and professional data, while the survey instrument was composed of test items on map and globe skills.

The questionnaires and survey instruments were sent to a stratified random sample of grades kindergarten through grade four teachers of social studies in the State of Louisiana during the 1976-77 school year.
Responses from the questionnaires and survey instruments were computer programmed for means, correlations to the test items, analysis of variance, and demographic data.

Means among the variables were compared using the Fisher's F statistics. To determine the difference between any two significant means, the "t" test was computed by the researcher.
Chapter 4

PRESENTATION AND ANALYSIS OF DATA

Chapter four reports and analyzes data pertaining to the relationships among the teachers responses to the test items on the Questionnaire and to the Survey of Map and Globe Skills (Grades K-4). From a total teacher population of 23,906, grades kindergarten through six, a sample of five hundred-one teachers was selected. Three hundred fifty-seven usable replies were received from the teacher samples, or 71.26 percent of the sample population.

The types of analyses applied to the data included: description of sample; observation of the responses; noting the summarized means and standard deviations of responses within the sub-groups; application of "t" tests to determine which differences were significant; and an analysis of variance among personal and professional data variables with respect to a summary of the thirty-five categories of test items used to determine teachers' knowledge of selected map and globe skills.
DESCRIPTION OF THE SAMPLE

Returns were received from three hundred seventy-two teachers of the five hundred-one teachers included in the sample. This represented 74.25 percent of the total sample. Responses were received from forty selected schools; three schools failed to respond. Some personnel from at least one school in every parish responded. Fifteen of the questionnaires and survey instruments returned were not usable because the teachers responding were not at that time teaching social studies or because the responses were incomplete. The final group of usable returns consisted of three hundred fifty-seven questionnaires and survey instruments or 71.26 percent of the original sample.

Teaching levels. Usable returns were received from 143 kindergarten and first grade teachers, 144 second and third grade teachers, 69 fourth grade teachers, and one teacher who taught a combined class of fourth and fifth grade children.

Age groups of teachers. Fifty-two teachers in the sample were under twenty-six years of age, 78 were in the
twenty-six through thirty age group, 46 were in the thirty-one through thirty-five age group, 50 were in the thirty-six through forty age group, 43 were in the forty-one through forty-five age group, 30 were in the forty-six through fifty age group, and 58 were over fifty years of age.

Teaching experience of teachers. Eighty-seven teachers had four or fewer years of experience prior to 1976-77. Ninety-four teachers had five to nine years experience, 65 had ten to fourteen years of experience, 49 had fifteen to nineteen years, and 62 had twenty or more years of experience.

Types of degrees held. As to the types of degrees held, the responses indicated that the majority of the teachers had bachelor's degrees in elementary education (236), compared to 9 who had other education majors, and 16 with college majors other than education. Sixty-two of the teachers held master's degrees in education. Twenty-four teachers had earned a master's degree plus at least 30 graduate credits in professional education. No respondent had a specialist certificate or a doctorate degree.
College credit in geography. Over one-half of the teachers (162) had three semester hours of college credit in geography. Sixty-eight teachers reported no credit earned in geography, 1 had five hours credit, 95 had six hours credit, 16 had nine hours credit, 1 had eleven hours credit, 11 had twelve hours credit, 1 had fifteen, 1 had twenty, and 1 had twenty-three hours credit.

College credit in history. In the area of history, 87 teachers had six hours of college credit, 61 reported no college credit in history, 65 had three to five hours credit, 41 had nine, 52 had twelve, 28 had fifteen hours, and 22 had eighteen to thirty hours of course work.

College credits in social studies methods. One hundred eighty-eight teachers had three hours of college credit in social studies methods, 107 teachers had no hour credit, 3 teachers had two hours credit, 41 teachers had six hours credit, 13 teachers had nine hours credit, 4 had twelve, and 1 teacher had twenty-one hours credit.

Recency of social studies methods. Over two-thirds of the respondents had taken methods courses in social
studies. More than one-third of the teachers (157) indicated having had social studies methods within the last six years, 84 teachers had completed social studies methods course within the last five years, 12 teachers were currently enrolled in social studies methods courses; and 104 teachers indicated they had never completed a social studies methods course.

Recency of faculty studies in social studies. Approximately two-thirds of the teachers (236) had been involved in no faculty study in the area of social studies; over one third (121) had engaged in social studies faculty studies within the previous six years. Forty teachers had participated in faculty studies within the last five years, 27 teachers were currently involved in faculty studies, and 54 teachers had engaged in faculty studies in the social studies area within the last six years.

Recency of attendance at social studies workshops or conferences. Two-thirds of the teachers (238) had never attended any social studies workshop or conference; one-third (119) had attended at least one social studies workshop or conference. Twenty-five teachers were
currently involved in social studies workshops or conferences, 48 teachers had attended social studies workshops or conferences within the last five years, and 46 teachers had participated in social studies workshops or conferences six or more years previous to this study.

DATA CONCERNING GENERAL PERSONAL AND PROFESSIONAL VARIABLES

Variables relating to personal and professional data were subjected to an analysis of variance to determine their relationships to teachers' knowledge of map and globe skills. The variables were arranged into two sets of tables for presentation and analysis. Tables were developed for the summarized means and standard deviations of teachers' knowledge of map and globe skills, and other tables were developed for analysis of variance of teachers' knowledge of map and globe skills.

The variables included: teaching levels; age groups of teachers; teaching experience of the teachers; types of degrees held; number of college credits in geography; number of college credits in history; number of college credits in social studies methods courses; recency of social studies methods courses; recency of faculty studies in social
studies; and recency of attendance at social studies workshops or conferences. Summarized means and standard deviations, as well as F values are shown in Tables 4 through 23.

**Teaching levels.** Data from respondents were grouped according to teaching levels as shown in Table 4. Summarized means of scores of each teaching level (K-4) groups were found to differ significantly. The means of scores, 46.71, of kindergarten and grade one teachers were lowest of the teacher groups. Teachers of grades two and three had means of scores of 48.75, slightly above teachers in grades kindergarten and one. Teachers in grade four scored significantly higher, 56.68, than did the teachers in either of the other groups. The teacher who taught a combination of grades four and five had a mean score of 70.00, and ranked the highest. Differences among summarized means of scores were significant when grouped by grade levels taught. The teachers of succeeding higher grade levels performed at significantly higher levels on the survey of map and globe skills.

Data in Table 5 showed a significance at the .0005
Table 4

Means and Standard Deviations of Teachers' Knowledge of Map and Globe Skills with Respect to Teaching Levels

<table>
<thead>
<tr>
<th>Teaching Levels</th>
<th>Number of Cases</th>
<th>Means</th>
<th>Standard Deviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-1</td>
<td>143</td>
<td>46.71</td>
<td>1.39</td>
</tr>
<tr>
<td>2-3</td>
<td>144</td>
<td>48.75</td>
<td>1.39</td>
</tr>
<tr>
<td>4</td>
<td>69</td>
<td>56.68</td>
<td>2.00</td>
</tr>
<tr>
<td>Other*</td>
<td>1</td>
<td>70.00</td>
<td></td>
</tr>
<tr>
<td>Total Cases</td>
<td>357</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* A teacher that taught grades 4-5 in combination
Table 5

Analysis of Variance for Differences Among Teaching Levels with Respect to Teachers' Knowledge of Map and Globe Skills

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>356</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Levels</td>
<td>3</td>
<td>1723.26</td>
<td>6.23*</td>
</tr>
<tr>
<td>Error</td>
<td>353</td>
<td>276.59</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at .05 level of confidence
level of confidence among teaching levels with respect to teachers' knowledge of selected map and globe skills.

Using the formula for finding the Standard Error of Difference between two uncorrelated means (Garrett, 1966: 214), "t" tests were computed to determine which differences were significant. The "t" tests greater than 1.96 were considered significant. Findings included:

1. The "t" test between teaching levels K-1 and 4 was equal to 4.10, which was significant, in favor of grade four teachers.

2. The "t" test between teaching levels 2-3 and 4 was equal to 3.26, which was significant, in favor of grade four teachers.

The null hypothesis was rejected.

Age groups of teachers. Data in Table 6 showed that respondents were divided in their map and globe age groupings. Although there were no differences between means great enough to be significant, correct responses were highest among teachers in the "36-40" age category and in the "41-45" age category. The lowest means of scores were made by teachers in the "46-50" age category.
<table>
<thead>
<tr>
<th>Age Groups</th>
<th>Number of Cases</th>
<th>Means</th>
<th>Standard Deviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 26</td>
<td>52</td>
<td>49.50</td>
<td>2.36</td>
</tr>
<tr>
<td>26 - 30</td>
<td>78</td>
<td>50.79</td>
<td>1.93</td>
</tr>
<tr>
<td>31 - 35</td>
<td>46</td>
<td>48.04</td>
<td>2.51</td>
</tr>
<tr>
<td>36 - 40</td>
<td>50</td>
<td>51.10</td>
<td>2.41</td>
</tr>
<tr>
<td>41 - 45</td>
<td>43</td>
<td>51.28</td>
<td>2.59</td>
</tr>
<tr>
<td>46 - 50</td>
<td>30</td>
<td>43.83</td>
<td>3.11</td>
</tr>
<tr>
<td>Over 50</td>
<td>58</td>
<td>49.31</td>
<td>2.23</td>
</tr>
</tbody>
</table>

Total Cases 357
As reported in the data in Table 7, no significant differences were obtained among age groups with respect to teachers' knowledge of map and globe skills. The null hypothesis was accepted.

Teaching experience of teachers. The respondents in the sample were grouped according to their years of teaching experience. The data presented in Table 8 showed no significant differences among means. Teachers with five to nine years of teaching experience scored highest on the survey instrument of map and globe skills than did all other groups of teachers in the sample. Teachers with fifteen to nineteen years of teaching experience ranked second mean scores, 50.00. Means of scores, 47.92, were lowest among teachers who had taught for twenty or more years.

Data in Table 9 revealed no significant differences at the .05 level of confidence between teachers' length of teaching experience and their knowledge of map and globe skills.

The null hypothesis was accepted.

Types of degrees held. As shown in the data of Table 10, no significant difference among means were obtained
Table 7

Analysis of Variance for Differences Among Age Groups with Respect to Teachers' Knowledge of Map and Globe Skills

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>356</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age Groups</td>
<td>6</td>
<td>242.94</td>
<td>0.84*</td>
</tr>
<tr>
<td>Error</td>
<td>350</td>
<td>289.56</td>
<td></td>
</tr>
</tbody>
</table>

*Not significant at .05 level of confidence
Table 8

Means and Standard Deviations of Teachers' Knowledge of Map and Globe Skills with Respect to Teaching Experience

<table>
<thead>
<tr>
<th>Years of Teaching Experience</th>
<th>Number of Cases</th>
<th>Means</th>
<th>Standard Deviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 4 years</td>
<td>87</td>
<td>48.33</td>
<td>1.83</td>
</tr>
<tr>
<td>5 - 9 years</td>
<td>94</td>
<td>51.49</td>
<td>1.76</td>
</tr>
<tr>
<td>10 - 14 years</td>
<td>65</td>
<td>49.48</td>
<td>2.11</td>
</tr>
<tr>
<td>15 - 19 years</td>
<td>49</td>
<td>50.00</td>
<td>2.43</td>
</tr>
<tr>
<td>20 or More years</td>
<td>62</td>
<td>47.92</td>
<td>2.16</td>
</tr>
<tr>
<td>Total Cases</td>
<td>357</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 9

Analysis of Variance for Differences Among Teaching Experience with Respect to Teachers’ Knowledge of Map and Globe Skills

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>356</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experience</td>
<td>4</td>
<td>163.35</td>
<td>0.56*</td>
</tr>
<tr>
<td>Error</td>
<td>352</td>
<td>290.20</td>
<td></td>
</tr>
</tbody>
</table>

*Not significant at .05 level of confidence*
Table 10

Means and Standard Deviations of Teachers' Knowledge of Map and Globe Skills with Respect to Degrees Held

<table>
<thead>
<tr>
<th>Types of Degrees Held</th>
<th>Number of Cases</th>
<th>Means</th>
<th>Standard Deviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor's (Other Major)</td>
<td>16</td>
<td>44.38</td>
<td>.12</td>
</tr>
<tr>
<td>Bachelor's (Other Education Major)</td>
<td>9</td>
<td>43.00</td>
<td>.16</td>
</tr>
<tr>
<td>Bachelor's (Education Major)</td>
<td>236</td>
<td>49.95</td>
<td>.03</td>
</tr>
<tr>
<td>Master's (Other Major)</td>
<td>10</td>
<td>44.30</td>
<td>.15</td>
</tr>
<tr>
<td>Master's (Education Major)</td>
<td>62</td>
<td>52.31</td>
<td>.06</td>
</tr>
<tr>
<td>Master's plus 30</td>
<td>24</td>
<td>45.54</td>
<td>.10</td>
</tr>
</tbody>
</table>

Total Cases 357
when respondents were grouped according to types of collegiate degrees held. Means of scores, 52.31, were highest among teachers with master's degrees in education; the next highest means scores, 49.95, were made by teachers with bachelor's degrees in education. Means of scores were lowest, 43.00, among teachers with bachelor's degrees with other education majors; lower means, 47.00, were made by teachers with bachelor's degrees in areas other than education. Teachers with master's plus 30 graduate hours in education did not score as high, 45.53, as did teachers with only master's degrees in education, 52.31.

The data shown in Table 11 indicated no significant differences among types of degrees held with respect to teachers' knowledge of map and globe skills, F Value, 0.49.

The null hypothesis was accepted.

Credit hours in geography. A study of the data in Table 12 revealed no significant differences among means of teachers' knowledge of map and globe skills when teachers were grouped according to the number of college credits earned in geography. The score was highest, 71.00, for the one teacher who had eleven hours of college credit in geography; the next highest means, 70.00, was made by one
### Table 11

Analysis of Variance for Differences Among Degrees Held with Respect to Teachers' Knowledge of Map and Globe Skills

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>355</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degrees Held</td>
<td>5</td>
<td>0.12</td>
<td>0.49*</td>
</tr>
<tr>
<td>Error</td>
<td>350</td>
<td>0.24</td>
<td></td>
</tr>
</tbody>
</table>

*Not significant at .05 level of confidence
Table 12

Means and Standard Deviations of Teachers' Knowledge of Map and Globe Skills with Respect to College Credit in Geography

<table>
<thead>
<tr>
<th>College Credit in Geography</th>
<th>Number of Cases</th>
<th>Means</th>
<th>Standard Deviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>68</td>
<td>44.74</td>
<td>2.05</td>
</tr>
<tr>
<td>3</td>
<td>162</td>
<td>49.82</td>
<td>1.33</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>54.00</td>
<td>16.91</td>
</tr>
<tr>
<td>6</td>
<td>95</td>
<td>50.74</td>
<td>1.74</td>
</tr>
<tr>
<td>9</td>
<td>16</td>
<td>56.13</td>
<td>4.23</td>
</tr>
<tr>
<td>11</td>
<td>1</td>
<td>71.00</td>
<td>16.91</td>
</tr>
<tr>
<td>12</td>
<td>1</td>
<td>49.55</td>
<td>5.10</td>
</tr>
<tr>
<td>15</td>
<td>1</td>
<td>70.00</td>
<td>16.91</td>
</tr>
<tr>
<td>20</td>
<td>1</td>
<td>65.00</td>
<td>16.91</td>
</tr>
<tr>
<td>23</td>
<td>1</td>
<td>45.00</td>
<td>16.91</td>
</tr>
<tr>
<td>Total Cases</td>
<td>357</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
teacher with fifteen hours of course work. The teachers with no hours credit in geography ranked the lowest, 44.74. Next to the lowest means of scores, 45.00, was made by the one teacher who reported twenty-three college credits in geography.

The data presented in Table 13 revealed no significant differences at the .05 level of confidence among the number of college credits in geography with respect to teachers' knowledge of map and globe skills, F Value of 1.39.

The null hypothesis was accepted.

**College credits in history.** A study of the responses of teachers to the survey instrument and the variable, college credit in history, revealed significant differences among means as shown in the data in Table 14. The teachers were grouped according to number of college credits in history. Summarized means of responses were found to differ significantly. Teachers having eighteen hours of college credit in history ranked highest, 60.59, among all teachers in the sample population. The second highest mean score, 59.00, was that of the one teacher who
Table 13

Analysis of Variance for Differences Among College Credits in Geography with Respect to Teachers' Knowledge of Map and Globe Skills

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>356</td>
<td></td>
<td></td>
</tr>
<tr>
<td>College Credits in Geography</td>
<td>9</td>
<td>396.78</td>
<td>1.39*</td>
</tr>
<tr>
<td>Error</td>
<td>347</td>
<td>285.98</td>
<td></td>
</tr>
</tbody>
</table>

*Not significant at .05 level of confidence
Table 14

Means and Standard Deviations of Teachers' Knowledge of Map and Globe Skills with Respect to College Credits in History

<table>
<thead>
<tr>
<th>College Credits in History</th>
<th>Number of Cases</th>
<th>Means</th>
<th>Standard Deviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>61</td>
<td>43.41</td>
<td>2.10</td>
</tr>
<tr>
<td>3</td>
<td>64</td>
<td>48.44</td>
<td>2.05</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>54.00</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>87</td>
<td>45.52</td>
<td>1.75</td>
</tr>
<tr>
<td>9</td>
<td>41</td>
<td>57.71</td>
<td>2.55</td>
</tr>
<tr>
<td>12</td>
<td>52</td>
<td>52.23</td>
<td>2.27</td>
</tr>
<tr>
<td>14</td>
<td>1</td>
<td>38.00</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>27</td>
<td>56.59</td>
<td>3.09</td>
</tr>
<tr>
<td>16</td>
<td>1</td>
<td>23.00</td>
<td></td>
</tr>
</tbody>
</table>
Table 14 (Continued)

Means and Standard Deviations of Teachers' Knowledge of Map and Globe Skills with Respect to College Credits in History

<table>
<thead>
<tr>
<th>College Credits in History</th>
<th>Number of Cases</th>
<th>Means</th>
<th>Standard Deviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>14</td>
<td>60.50</td>
<td>4.23</td>
</tr>
<tr>
<td>20</td>
<td>1</td>
<td>35.00</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>2</td>
<td>52.00</td>
<td>11.57</td>
</tr>
<tr>
<td>24</td>
<td>2</td>
<td>45.00</td>
<td>11.57</td>
</tr>
<tr>
<td>27</td>
<td>1</td>
<td>59.00</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>2</td>
<td>56.50</td>
<td>11.57</td>
</tr>
<tr>
<td>Total Cases</td>
<td>357</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
reported twenty-seven hours of history course work. Means of scores, 57.71, of teachers who had earned nine hours of college credit in history ranked third. The one teacher who reported sixteen hours of course work in history ranked lowest, 23.00. Second lowest was the score, 38.00, of the teacher who reported fourteen college credits in history.

The data presented in Table 15 showed significant differences at the .05 level of confidence among the number of college credits in history with respect to teachers' knowledge of map and globe skills.

Using the formula for finding the Standard Error of Difference between two uncorrelated means (Garrett, 1966: 214), "t" tests were computed to determine which differences were significant. The "t" tests greater than 1.96 were considered significant. Findings included:

1. The "t" test between the group of teachers having no college credit in history and the group having nine college credits in history was equal to 4.24, which was significant, in favor of teachers having nine college credits in history.

2. The "t" test between the group of teachers having no college credit in history and the group having twelve
Table 15

Analysis of Variance for Differences Among College Credits in History with Respect to Teachers' Knowledge of Map and Globe Skills

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>356</td>
<td></td>
<td></td>
</tr>
<tr>
<td>College Credits in History</td>
<td>14</td>
<td>801.61</td>
<td>2.99*</td>
</tr>
<tr>
<td>Error</td>
<td>342</td>
<td>267.78</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at .05 level of confidence
college credits in history was equal to 2.85, which was significant, in favor of teachers having twelve college credits in history.

3. The "t" test between the group of teachers having no college credit in history and the group having fifteen college credits in history was equal to 3.53, which was significant, in favor of teachers having fifteen college credits in history.

4. The "t" test between the group of teachers having no college credit in history and the group having eighteen college credits in history was equal to 3.63, which was significant, in favor of the group of teachers having eighteen college credits in history.

5. The "t" test between the group of teachers having three college credits in history and the group having eighteen college credits in history was equal to 2.57, which was significant, in favor of the group of teachers having eighteen college credits in history.

6. The "t" test between the group of teachers having six college credits in history and the group having nine college credits in history was equal to 3.93, which was significant, in favor of the group of teachers having
nine college credits in history.

7. The 't' test between the group of teachers having six college credits in history and the group having twelve college credits in history was equal to 2.34, which was significant, in favor of the group of teachers having twelve college credits in history.

8. The 't' test between the group of teachers having six college credits in history and the group having fifteen college credits in history was equal to 3.12, which was significant, in favor of the group of teachers having fifteen college credits in history.

9. The 't' test between the group of teachers having six college credits in history and the group having eighteen college credits in history was equal to 3.28, which was significant, in favor of the group of teachers having eighteen college credits in history.

The null hypothesis was rejected.

College credits in social studies methods courses.

A study of the data in Table 16 revealed no significant differences among means of responses of teachers grouped by the number of college credits in social studies methods.
Table 16

Means and Standard Deviations of Teachers' Knowledge of Map and Globe Skills with Respect to College Credits in Social Studies Methods

<table>
<thead>
<tr>
<th>College Credit in Social Studies Methods</th>
<th>Number of Cases</th>
<th>Means</th>
<th>Standard Deviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>107</td>
<td>46.08</td>
<td>1.63</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>57.00</td>
<td>9.73</td>
</tr>
<tr>
<td>3</td>
<td>188</td>
<td>50.64</td>
<td>1.23</td>
</tr>
<tr>
<td>6</td>
<td>41</td>
<td>54.83</td>
<td>2.63</td>
</tr>
<tr>
<td>9</td>
<td>13</td>
<td>47.08</td>
<td>4.67</td>
</tr>
<tr>
<td>12</td>
<td>4</td>
<td>37.75</td>
<td>8.42</td>
</tr>
<tr>
<td>21</td>
<td>1</td>
<td>45.00</td>
<td></td>
</tr>
<tr>
<td>Total Cases</td>
<td>357</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The group having the highest means of scores, 57.00, included teachers with two hours of college credits in social studies methods; the second highest means of scores, 54.83, were made by teachers with six hours in social studies methods. Teachers who reported the completion of twelve hours in social studies methods ranked the lowest, 37.00. The next lowest, 45.00, was one teacher who reported twenty-one hours of course work in social studies methods.

Data noted in Table 17 reveal no significant differences among number of college credits in social studies methods with respect to teachers' knowledge of map and globe skills, F Value of 2.04.

The null hypothesis was accepted.

**Recency of social studies methods courses.** A study of the responses to the survey instrument of map and globe skills according to recency of social studies methods courses revealed no significant differences. Data in Table 18 indicated that the group of teachers who never had social studies ranked the highest, 51.47; second highest, 49.80, were the teachers who had completed social studies
### Table 17

Analysis of Variance for Differences Among College Credits in Social Studies Methods with Respect to Teachers' Knowledge of Map and Globe Skills

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>356</td>
<td></td>
<td></td>
</tr>
<tr>
<td>College Credits in Social Studies Methods</td>
<td>6</td>
<td>580.12</td>
<td>2.04*</td>
</tr>
<tr>
<td>Error</td>
<td>350</td>
<td>283.78</td>
<td></td>
</tr>
</tbody>
</table>

*Not significant at .05 level of significance*
Table 18

Means and Standard Deviations of Teachers' Knowledge of Map and Globe Skills with Respect to Recency of Social Studies Methods Courses

<table>
<thead>
<tr>
<th>Recency of Social Studies Methods Courses</th>
<th>Number of Cases</th>
<th>Means</th>
<th>Standard Deviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently</td>
<td>12</td>
<td>42.50</td>
<td>4.90</td>
</tr>
<tr>
<td>1 - 5 Years</td>
<td>84</td>
<td>47.67</td>
<td>1.85</td>
</tr>
<tr>
<td>6 or More Years</td>
<td>157</td>
<td>49.80</td>
<td>1.36</td>
</tr>
<tr>
<td>Never</td>
<td>104</td>
<td>51.47</td>
<td>1.67</td>
</tr>
<tr>
<td>Total Cases</td>
<td>357</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
methods courses six or more years previously. Means of scores, 42.50, of teachers who were currently enrolled in social studies methods ranked lowest.

Data in Table 19 showed no significant differences at the .05 level of confidence in terms of the recency of social studies methods with respect to teachers' knowledge of map and globe skills, F Value of 1.13

The null hypothesis was accepted.

Receun of faculty studies in social studies. Data in Table 20 presented respondents grouped according to recency of participation in faculty studies in social studies. Significant differences were found among responses of teachers. Means of scores, 51.03, showed that the group of teachers who never had a faculty study in social studies ranked the highest; ranking second, 49.54, were the teachers who had had a faculty study six or more years ago prior to this study. Means of scores of teachers who were concurrently in a faculty study ranked lowest, 40.15.

Data in Table 21 revealed significant differences at the .05 level of confidence in terms of the recency of
Table 19

Analysis of Variance for Differences Among Recency of Social Studies Methods with Respect to Teachers' Knowledge of Map and Globe Skills

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>356</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recency of Social Studies Methods</td>
<td>4</td>
<td>327.14</td>
<td>1.13*</td>
</tr>
<tr>
<td>Error</td>
<td>352</td>
<td>288.34</td>
<td></td>
</tr>
</tbody>
</table>

*Not significant at .05 level of confidence
<table>
<thead>
<tr>
<th>Recency of Faculty Studies in Social Studies</th>
<th>Number of Cases</th>
<th>Means</th>
<th>Standard Deviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently</td>
<td>27</td>
<td>40.15</td>
<td>3.24</td>
</tr>
<tr>
<td>1 - 5 Years</td>
<td>40</td>
<td>47.15</td>
<td>2.66</td>
</tr>
<tr>
<td>6 or More Years</td>
<td>54</td>
<td>49.54</td>
<td>2.28</td>
</tr>
<tr>
<td>Never</td>
<td>236</td>
<td>51.03</td>
<td>1.10</td>
</tr>
<tr>
<td><strong>Total Cases</strong></td>
<td><strong>357</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 21

Analysis of Variance for Differences Among Recency of Faculty Studies in Social Studies with Respect to Teachers' Knowledge of Map and Globe Skills

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>356</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recency of Faculty Studies in Social Studies</td>
<td>3</td>
<td>1049.74</td>
<td>3.71*</td>
</tr>
<tr>
<td>Error</td>
<td>353</td>
<td>283.11</td>
<td></td>
</tr>
</tbody>
</table>

* Significant at .05 level of confidence
faculty studies in social studies with respect to teachers' knowledge of map and globe skills.

Using the formula for finding the Standard Error of Difference between two uncorrelated means (Garrett, 1966: 214), "t" tests were computed to determine which differences among groups of teachers with respect to recency of faculty studies in social studies were significant. The "t" tests greater than 1.96 were considered significant. Findings included:

1. The "t" test between the group of teachers who concurrently had faculty studies in social studies and the group who had faculty studies six or more years prior to 1976-77 school year was equal to 2.37, which was significant, in favor of the group of teachers who had had faculty studies six or more years prior to 1976-77 school year.

2. The "t" test between the group of teachers who concurrently had faculty studies in social studies and the group who never had any faculty study in social studies was equal to 3.18, which was significant, in favor of the group of teachers who never had any faculty study in social studies.

The null hypothesis was rejected.
Recency of attendance at social studies workshops or conferences. The data in Table 22 indicated significant differences obtained when respondents were grouped according to the recency of attendance at social studies workshops or conferences. Means of scores showed that the group of teachers who never had attended a social studies workshop or conference ranked highest, 51.23; ranked next, 47.00, were the teachers who had attended such a workshop or conference six or more years previously. Means of scores, 43.08, of teachers who concurrently attended social studies workshops or conferences ranked lowest.

Data in Table 23 revealed significant differences at the .05 level of confidence in terms of the recency of attendance at social studies workshops or conferences with respect to teachers' knowledge of map and globe skills.

Using the formula for finding the Standard Error of Difference between two uncorrelated means (Garrett, 1966: 214), "t" tests were computed to determine which differences among groups of teachers with respect to recency of attendance at social studies workshops or conferences were significant. The "t" tests greater than 1.96 were considered significant. The "t" test between the group of teachers who
Table 22

Means and Standard Deviations of Teachers' Knowledge of Map and Globe Skills with Respect to Recency of Attendance at Social Studies Workshops or Conferences

<table>
<thead>
<tr>
<th>Recency of Attendance at Social Studies Workshops or Conferences</th>
<th>Number of Cases</th>
<th>Means</th>
<th>Standard Deviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently</td>
<td>25</td>
<td>43.08</td>
<td>3.37</td>
</tr>
<tr>
<td>1 - 5 Years</td>
<td>48</td>
<td>46.85</td>
<td>2.43</td>
</tr>
<tr>
<td>6 or More Years</td>
<td>46</td>
<td>47.00</td>
<td>2.48</td>
</tr>
<tr>
<td>Never</td>
<td>238</td>
<td>51.23</td>
<td>1.09</td>
</tr>
<tr>
<td>Total Cases</td>
<td>357</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 23

Analysis of Variance for Differences Among Recency of Attendance at Social Studies Workshops or Conferences with Respect to Teachers' Knowledge of Map and Globe Skills

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>356</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recency of Attendance at Workshops or</td>
<td>3</td>
<td>788.96</td>
<td>2.77*</td>
</tr>
<tr>
<td>Conferences</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td>353</td>
<td>284.53</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at .05 level of confidence
concurrently had attended social studies workshops or conferences and the group who never had attended any workshop or conference was equal to 2.29, which was significant, in favor of the group of teachers who never had attended any workshop or conference.

The null hypothesis was rejected.

SUMMARY

Data tabulated in Tables 4 through 23 summarized the responses from the sample population relative to means and analysis of variance. The "t" tests were obtained to determine which differences among sub-groups were significant.

The null hypothesis was obtained with respect to the following variables:

1. Age groups of teachers;
2. Teaching experience of teachers;
3. Types of degrees held;
4. Number of college credits in geography;
5. Number of college credits in social studies methods courses; and
6. Recency of social studies methods courses.
Each variable failed the test of significance at the .05 level of confidence.

The null hypothesis was rejected with respect to the following variables:

1. Teaching levels;
2. Number of college credits in history;
3. Recency of faculty studies in social studies;
and
4. Recency of attendance at social studies workshops or conferences.

Each variable satisfied the test of significance at the .05 level of confidence.
Chapter 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

SUMMARY

The purpose of this study was to determine to what extent Louisiana classroom teachers, grades kindergarten through four, possessed knowledge of selected map and globe skills; and to determine whether significant relationships existed between possessed knowledge and skills and certain factors of professional education, teaching experience, position, and personal traits. A stratified random sampling of five hundred-one teachers of grades kindergarten through four teaching in the State of Louisiana during the 1976-77 school year was surveyed. Usable returns were received from three hundred fifty-seven teachers, or 71.26 percent of the sample population from twenty-two parish school systems.

The survey instrument consisted of two parts. The first portion ascertained personal and professional data which included: teaching levels; age groups of teachers; teaching experiences of teachers; types of degrees held; number of college credits in geography; number of college

101
credits in history; number of college credits in social studies methods; recency of social studies methods courses; recency of faculty studies in social studies; and recency of attendance at social studies workshops or conferences. The second part contained a survey instrument of map and globe skills of teachers who taught children grades kindergarten through four. The map and globe survey items for grades kindergarten through three were derived from the "Survey of Map and Globe Skills - Primary Grades (K-3)" by Stjernberg (1974:127-136). Map and globe survey items for grade four were developed by the researcher who consulted The Rand McNally Handbook of Map and Globe Usage of Ruby Harris (1967) and the Skill Development in Social Studies, Thirty-Third Yearbook of the National Council for the Social Studies by Helen McCracken Carpenter (1963). The resulting eighty items were grouped into thirty-five categories. (Appendix N)

Returns from the questionnaires and the survey instruments were programmed by the computer. Scores for the test items on the survey instruments were utilized for statistical analysis. Data were analyzed using the summarized means of scores within the sub-groups. Analysis of variance
among personal and professional variables with respect to a summary of the thirty-five categories of test items was used to determine teachers' knowledge of selected map and globe skills. To determine the differences between any two uncorrelated means among personal and professional variables within the sub-groups, "t" tests were computed. The "t" tests greater than 1.96 were considered significant at the .05 level of confidence.

CONCLUSIONS

1. Variables not significantly related to performance on the map and globe survey instrument included:
   a. Age groups of teachers;
   b. Teaching experiences of teachers;
   c. Types of degrees held;
   d. Number of college credits in geography;
   e. Number of college credits in social studies methods; and
   f. Recency of social studies methods courses.

2. Variables significantly related to performance on the map and globe survey instrument included:
a. Teaching levels of teachers;
b. Number of college credits in history;
c. Recency of faculty studies in social studies;
and
d. Recency of attendance at social studies workshops or conferences.

Teachers assigned to second and third grade classrooms demonstrated more map and globe knowledge and skills (48.75 mean scores) than teachers who worked with students in kindergarten and first grades (46.71 mean scores). Teachers assigned to grade four classes demonstrated more map and globe knowledge and skills (56.68 mean scores) than did the teachers in either of the two lower grade groups. Lowest mean scores (46.71) were reported for teachers of grades kindergarten and one; teachers of grade four mean scores were highest (56.68).

The analysis further revealed that age groups of teachers, teaching experience of teachers, and types of degrees held had no significant effect. Based upon the lack of significant relationship, the assumption was made that the increased map and globe knowledge and skills resulted, in part, from teaching at the higher grade levels.
Faculty studies in the area of social studies contributed slightly to map and globe knowledge and skills. Also attendance at social studies workshops and conferences had slight effect on scores of teachers.

3. The means of scores of the groups of teachers were 46.71, 48.75, and 56.68 for kindergarten and first grade teachers, second and third grade teachers, and fourth grade teachers, respectively. Most teachers responding to the survey missed twenty-three to thirty-three of the eighty items. The data from the study showed that the sample of Louisiana teachers who participated in this study had a low rate of correct responses.

RECOMMENDATIONS

The following recommendations can be made from the results of this study:

1. Prospective teachers should be more broadly prepared in map and globe teaching.

2. Extensive use should be made of social studies faculty studies, workshops, and conferences for the continual updating of social studies programs and for the specific purpose of enlarging teachers' knowledge of map
and globe skills.

3. Curriculum planners should include more map and globe skill components in such courses as history, geography, other social studies work, and social studies methods in order to better prepare future teachers in social studies for map and globe teaching.

4. Additional study should be made to determine if map and globe knowledge of teachers in grades beyond kindergarten through four is influenced by such factors as teaching levels of teachers, number of college credits in history, recency of faculty studies in social studies, and recency of attendance at social studies workshops or conferences.
BIBLIOGRAPHY


Louisiana State Department of Education. Louisiana Assessment of Educational Progress Sampling Frame. Baton Rouge, 1974a. (mimeographed).

Unpublished Proceeding from Social Studies Curriculum Revision Committee meeting, Mr. Louis Nicolosi, Chairman. February 15, 1974b.


APPENDIX A

6478 Arbor Vitae Drive
Baton Rouge, Louisiana 70811
May 7, 1976

Dr. Lloyd Armand Stjernberg
5638 Waterbury Road
Des Moines, Iowa 50312

Dear Sir:

This letter is to confirm my telephone call to you last May 1, 1976, concerning your giving me permission to duplicate your test items, Survey of Map and Globe Skills - Primary Grades (K-3). I promised you I would put my request in writing because I need your written permission for my Committee, and for the dissertation itself.

If you so desire, I will be very glad to share the results of my findings with you.

Enclosed, please, find a self-addressed stamped envelope for your convenience.

I thank you very kindly for the cooperation you may be able to extend to me on the matter.

Sincerely yours,

Ms. Maura R. Garvilda

Approved:

[Signature]

Dr. Lloyd Armand Stjernberg

Date approved:

116
APPENDIX B

DRAKE UNIVERSITY
DEPARTMENT OF EDUCATION

Ms. Martha K. Pervida
5426 Arbor Vitae Drive
Jalyn Rouge, Louisiana 70811

Dear Ms. Pervida:

Please pardon the unexplained delay in responding to your request. During the summer, I spend little time in one place and my work becomes secondary -- other than surviving the coming academic year. As a result, your letter was placed in my "things:" file. I certainly hope that my delay has not deterred nor delayed your efforts.

Of course, you have my permission to utilize the test items in my dissertation. In fact, I am very pleased with your interest. I would like to know the results of your study once I will be replicating my study in Iowa at a later time.

Good fortune to you as you pursue your goals.

Inclined,

Lloyd A. Jordan, Jr.
Associate Professor

LSU
Dear Superintendent:

I am asking for your approval to request certain school faculties in your system to assist me in a professional study of map and globe skills. The data obtained will be treated confidentially in that no parish, no school, and no teacher's name will be associated with any of the results. Please look over the enclosed survey form which I propose to have the teachers complete under the direction of their administrator in a one-hour session during an early month of the coming school session. The information will be used to complete my doctoral research at Louisiana State University at Baton Rouge.

Your school system is one of the twenty-two (22) among the sixty-six (66) in Louisiana which appeared in the stratified random sample of the research design. In turn, the schools selected were also chosen randomly. It is very important to get your approval and to secure the participation of your school personnel. Schools appearing in the sample are:

Please inform me of your decision by returning, at your earliest convenience the enclosed self-addressed envelope.

Sincerely,

Maura R. Garvida

enclosures:
Supervisor Nicolosi's letter
Superintendent Distefano's letter
Maps and globes survey instrument sample
Return letter of approval
Dear Ms. Garvida:

This letter is to:

_____ Approve your survey of schools in my system relative to your doctoral research in social studies.

_____ Disapprove your survey of schools in my system relative to your doctoral research in social studies.

I am asking you to direct your efforts within my school system through the following member of my system's staff:

_______ Name _________ Position

or

_______ I am asking you to work directly with the principals of the schools within my school system.

Sincerely,
Dear Superintendent:

The Department of Education has always had a policy of assisting doctoral students in doing research when it has been determined that its value will assist in improving our educational system.

Ms. Maura R. Garvida would like to conduct such a research project concerning teacher knowledge of map and globe skills. She is soliciting your assistance in testing selected teachers in your parish.

I have conferred with Ms. Garvida on this project and feel the results of her study will be of substantial benefit to social studies education.

Thank you very much for any assistance you may give Ms. Garvida with regard to this task.

Cordially,

Louis J. Nicolosi
Supervisor of Social Studies

August 17, 1976
Dear Superintendent:

Ms. Maura R. Garvida, an elementary teacher in our school system, is conducting a research project concerning teacher knowledge of Man and Globe Skills.

She is soliciting your assistance in testing selected teachers in your parish.

We would consider it a personal favor to us if you would approve this survey in your school system by giving this dedicated teacher your full cooperation.

This survey is necessary for Ms. Garvida to complete her doctoral program at Louisiana State University, and we are certain that the results of her study will be of substantial benefit to Social Studies education.

Thank you in advance for your assistance in this most important matter.

Sincerely yours,

Sam A. Di Stefano, Sr.
Superintendent
APPENDIX G

147 Arbor Vitae Drive
Baton Rouge, Louisiana 70812

Dear Sir:

Enclosed is a copy of a letter of approval from the Superintendent authorizing you to assist me with a map and globe survey in the following schools under your jurisdiction:

<table>
<thead>
<tr>
<th>Schools</th>
<th>Number of Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please help me by supervising the administration of the survey in each of the schools. Please have the teachers who are teaching social studies in grades kindergarten through four respond to the survey in a group situation (with no outside help; otherwise, the research will not be valid).

The survey forms are assembled by school. A self-addressed stamped envelope is enclosed for their return to me. An early return will be most helpful.

Thank you for this professional assistance.

Sincerely yours,

Maura N. Servida

Enclosures:
- Return letter of approval
- Copy of letter to Superintendent
- Maps and globes survey instruments

Survey only those teachers whose names are listed; if the teacher listed is no longer employed, please ask her replacement to respond.
APPENDIX H

[Address]

Dear Principal:

Enclosed is a letter from Superintendent which authorizes you, as principal, to assist me in a map and globe survey. Please ask your teachers who are teaching social studies in grades kindergarten through four to assemble and respond to the survey in a group situation (without the benefit of outside help; otherwise, the data will not be valid).

A self-addressed envelope is enclosed for your convenience in mailing the returns. An early response will be greatly appreciated and will expedite my doctoral research.

Thank you for rendering this professional assistance.

Sincerely yours,

[Name]

Enclosures:
- Return letter of approval
- Copy of letter to Superintendent
- Maps and globes survey instruments

Survey only those teachers whose names are listed; if the teacher listed is no longer employed, please ask her replacement to respond.
Dear Teacher:

By now your supervisor has asked you to respond to a map and globe survey which I am using in my doctoral research. Thank you for assisting me. Your responses will be completely confidential in that your name and your school will not be identified in any way in my report.

It should take no longer than fifty (50) minutes at the most to complete the forms. Please allow no one to assist you because this would make my information incorrect. Hand your completed response to your supervisor who will mail all of those from your school in the same package.

Your help is greatly appreciated.

Sincerely yours,

Maura R. Garvida

6478 Arbor Vitae Drive
Unconci, Louisiana 70812
September, 1976
APPENDIX J

6178 Arbor Vitae Drive
Baton Rouge, Louisiana
70812
September, 1976

Dear Teacher:

By now your principal has asked you to respond to a map and globe survey which I am using in my doctoral research. Thank you for assisting me. Your responses will be completely confidential in that your name and your school will not be identified in any way in my report.

It should take no longer than fifty (50) minutes at the most to complete the forms. Please allow no one to assist you because this would make my information incorrect. Hand your completed response to your principal who will mail all of those from your school in the same package.

Your help is greatly appreciated.

Sincerely yours,

Maura R. Servida
Maura R. Servida
APPENDIX K

6478 Arbor Vitae Drive
Baton Rouge, Louisiana
70812
June 24, 1976

Dear Sir:

Enclosed, please find some test items which I had developed as a part of my survey test to social studies teachers in Louisiana. I would like to request you to evaluate these test items as valid or invalid, the purpose of which is to determine a teacher's knowledge or skill in some aspects of map and globe usage.

Please write in suggestions for any item you deem invalid.

I thank you very much for your most needed cooperation on this matter.

Sincerely yours,

Laura R. Garvida

Laura R. Garvida
APPENDIX L

SURVEY OF MAP AND GLOBE SKILLS (GRADE 4)

Valid ___ 1. Look at the map below (map 1). If the stream shown is a typical one, will the water flow faster at location H or J? (1) ____________

Invalid ___

Suggestion ______

Valid ___ 2. Which is the larger of the two highways shown on the map below (map 2)? Write the number of the larger highway. (2) ____________

Invalid ___

Suggestion ______
3. On the picture of the globe shown below, write the names of the numbered parallels. Select from the list: (a) Equator, (b) Tropic of Capricorn, (c) Tropic of Cancer, (d) Antarctic Circle, and (e) Arctic Circle.

(3) 1. ____________________________
(4) 2. ____________________________
(5) 3. ____________________________
(6) 4. ____________________________

Suggestion ____________________________________________

4. Which lines on the picture of the globe shown above are exactly equal in length? Those running North and South or those running East and West? Write in either North-South or East-West. (7) ____________________________

Suggestion ____________________________________________

5. Using the same picture of the globe shown above, which distance between time zones is greatest? (a) Location 1, (b) Location 2, (c) Location 3.

(8) ____________________________

Suggestion ____________________________________________
6. If the direction arrow on a map is toward the top of that map, on which wall of your classroom shall it be hung? (a) North, (b) South, (c) East, or (d) West

(9) ___________________________

Suggestion

7. Assume that you are teaching earth-sun relationships. Which movement of the earth causes day and night? Write in either rotation or revolution.

(10) ___________________________

Suggestion

8. Which movement of the earth causes the seasons? Write in either rotation or revolution.

(11) ___________________________

Suggestion

9. Where is the inset on the map of North America (map 1, page 1)? (a) Upper right, (b) Lower right, (c) Upper left, (d) Lower left. (12) ___________________________

Suggestion

10. On a sunny day, a person's shadow is shortest at what time of the day? (13) ___________________________

Suggestion
Valid __________ 

11. Look at the World Map (map 3, page 6). Land shape is distorted least at places represented toward which part of the map? (a) top, (b) middle, or (c) bottom.

Suggestion ____________________________

Invalid ________

11. Using the same map on page 6, write the name given to the lines that run from the top to the bottom of the map, (a) latitude, (b) tropics, (c) meridians, (d) longitude. (16) ____________________________

Suggestion ____________________________

Valid ________

13. On any colored map showing elevation, which color represents the highest elevation? (a) green, (b) red, (c) blue. (17) ____________________________

Suggestion ____________________________

Invalid ________

14. What length of time does it take the earth to rotate the distance between two meridians?

(18) ____________________________

Suggestion ____________________________

Valid ________

15. On the map of the neighborhood (map 5, page 7), draw a school at location 1.

Suggestion ____________________________

Invalid ________

Submitted by: ____________________________

Note: ____________________________

(Please see the attached self-addressed envelope.)

Reference:
QUESTIONNAIRE

Identifying Number

Please complete the following personal and professional information.

1.1 Teaching level

1.11 K-1
1.12 2-3
1.13 4
1.14 Other

Please explain

1.2 Age group of teacher

1.21 Under 26
1.22 26-30
1.23 31-35
1.24 36-40
1.25 41-45
1.26 46-50
1.27 Over 50

1.3 Years of teaching experience (please do not count current year)

1.31 0-4 years
1.32 5-9 years
1.33 10-14 years
1.34 15-19 years
1.35 20 or more years
1.4 Type of degree (please mark all degrees held)

1.41 Bachelor's with elementary education major
1.42 Bachelor's with other education major
1.43 Bachelor's with other major
1.44 Master's with education major
1.45 Master's with other major
1.46 Master's plus 30
1.47 Specialist
1.48 PhD or EdD
1.49 Other

Please specify _____________________________________________

1.5 Approximate number of college credit in social studies curricula

1.51 Geography
1.52 History
1.53 Social studies methods
1.54 Other

Please specify _____________________________________________

1.6 How recently have you had a course in social studies methods with map and globe teaching?

1.61 Never
1.62 Currently
1.63 1-5 years
1.64 6 or more years

Please specify _____________________________________________
1.7 How recently have you attended faculty studies in social studies with map and globe teaching?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.71</td>
<td>Never</td>
</tr>
<tr>
<td>1.72</td>
<td>Currently</td>
</tr>
<tr>
<td>1.73</td>
<td>1-5 years</td>
</tr>
<tr>
<td>1.74</td>
<td>6 or more years</td>
</tr>
</tbody>
</table>

1.8 How recently have you attended workshop(s) or conference(s) in teaching maps and globes in social studies?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.81</td>
<td>Never</td>
</tr>
<tr>
<td>1.82</td>
<td>Currently</td>
</tr>
<tr>
<td>1.83</td>
<td>1-5 years</td>
</tr>
<tr>
<td>1.84</td>
<td>6 or more years</td>
</tr>
</tbody>
</table>
SURVEY OF MAP AND GLOBE SKILLS (GRADES K-4)

1. In the map below (map # 1), assume that you live in the town of Owens, along the river. To reach the source of the river you would travel

(1) ____________________ stream.

To reach the mouth of the river you would travel

(2) ____________________ stream.

2. Look at the same map (map # 1), if the river shown is a typical stream, will the volume of water flow be greater at location H or at location J? Write H or J.

(3) ____________________

3. Using the same map (map # 1), list the directions in which you would move in following the route from Point A to Point G (dashed line).

From A, (4) ________________ to B, (5) ________________

to C, (6) ________________ to D, (7) ________________

to E, (8) ________________ to F, (9) ________________ to G.
4. Name the intermediate directions:
(10) __________________________
(11) __________________________
(12) __________________________
(13) __________________________

5. On the picture of the globe shown, draw a north-south arrow. (14)

6. Place the north arrow on each of these maps:
(15) (16) (17)

7. On the map of North America (map #3, page 6), place a star in Illinois and a dot on the location of Chicago. (18) (19)

8. Where is the inset on the map of North America (map #3, page 6)? (a) Upper right, (b) Lower right, (c) Upper left, (d) Lower left.
(20) __________________________
9. Using the map of North America (map #3, page 6), identify the numbered physical features:

(21) 1. ______________________
(22) 2. ______________________
(23) 3. ______________________
(24) 4. ______________________

Also, outline the boundaries of the United States.

(25)

10. Using the same map (map #3, page 6), tell approximately how far is it in miles between the point marked 1 and the point marked 4. (a) 400 miles, (b) 800 miles, (c) 1200 miles, (d) 1600 miles.

(26) ______________________

11. Identify the continents, oceans, major islands, and the equator on the world map (map #4, page 8). Fill in the numbered blanks on the map. (27 - 33)

12. Land size is distorted least at places represented on which part of map #4, page 8? (a) Near the North Pole, (b) Near the South Pole, (c) Near the Equator.

(34) ______________________

13. Using the same map (map #4, page 8), write the name given to the lines that run from the top to the bottom of the map.

(35) ______________________

14. On the map below (map #5), shade in the land areas.

(36) (37)
14. Identify the following features on map 76 below. Place the corresponding letter in the appropriate location on the map. A. Waterfall; B. Swamp; C. Mountains; D. Lake (36 - 41)

MAP 76

16. What is the elevation of Point X on map 77 below?

(42)

MAP 77

17. On the same map above (map 77), Point A is (43) ________ Point B.

18. The distance between the Winfield's house (W) and the Jackson's house (J) (map #6) represents (44) ________ on the earth's surface.

MAP #6
19. If it took four minutes to walk one block, how long would it take to walk the shortest distance from the Winfield's house to the Cardo's house (C)? Use map #8, page 9.

(45) ________________________

20. Identify the features that each of the following standard map symbols represents.

(46) ________ (50) ________

(47) ________ (51) ________

(48) ________ (52) ________

(49) ________ (53) ________

21. Assume that you are standing outside this room. It is 9:00 a.m. and your shadow is directly in front of you.

What is the direction to your right? (54) ______________

To your left? (55) ______________

Behind you? (56) ______________

22. The earth rotates from (57) ______________ to (58) ______________

23. Which movement of the earth causes day and night? Write in either rotation or revolution.

(59) ________________________

24. On a sunny day and when standard time is used, a person's shadow is shortest at what time of the day?

(60) ________________________

25. When using a colored map on which the International Color Scheme is utilized, which color represents the highest elevation? (a) green, (b) red, (c) blue.

(61) ________________________
26. Use map #9 below. What is the relative location of Evanston? (62) (63)

27. Use the same map above (map #9). What is the location of Maleza? (64)

28. Which is the larger of the two highways shown on the map above (map #9)? Write the number of the larger highway. (65)

29. Identify the hemispheres:

(66) ______________________ (67) ______________________

(68) ______________________ (69) ______________________
30. Use the two pictures of the globe below.
In which picture of the globe would people living in Chicago wear light clothing and go swimming?

(70) _______________

In which picture would people living in Argentina carry on these activities?

(71) _______________

In which picture would people living in Central Africa do these things?

(72) _______________

31. What length of time does it take the earth to rotate the equivalent of the distance between the 90th and 105th meridian?

(73) _______________

32. On the map of the neighborhood (map #10, page 13), draw the map symbol for a school at location K - 3.
33. On the picture of the globe shown below, write the names of the lettered parallels.

(75) a. ____________________
(76) b. ____________________
(77) c. ____________________
(78) d. ____________________

34. Which lines on the picture of the globe shown above are equal in length, those running north and south or those running east and west? Write in either N-S or E-W.

(79) ____________________

35. Using the same picture of the globe shown above, along which parallels are the time zones of greatest distance in miles? (a) Location a, (b) Location c, (c) Location d.

(80) ____________________
APPENDIX N

QUESTIONNAIRE

Identifying Number ______

Please complete the following personal and professional information.

1.1 Teaching level
1.11 K-1 1.11 ______
1.12 2-3 1.12 ______
1.13 4 1.13 ______
1.14 Other 1.14 ______
Please explain ____________________________

1.2 Age group of teacher
1.21 Under 26 1.21 ______
1.22 26-30 1.22 ______
1.23 31-35 1.23 ______
1.24 36-40 1.24 ______
1.25 41-45 1.25 ______
1.26 46-50 1.26 ______
1.27 Over 50 1.27 ______

1.3 Years of teaching experience (please do not count current year)
1.31 0-4 years 1.31 ______
1.32 5-9 years 1.32 ______
1.33 10-14 years 1.33 ______
1.34 15-19 years 1.34 ______
1.35 20 or more years 1.35 ______
1.4  Type of degree (please mark all degrees held)

1.41 Bachelor's with elementary education major 1.41
1.42 Bachelor's with other education major 1.42
1.43 Bachelor's with other major 1.43
1.44 Master's with education major 1.44
1.45 Master's with other major 1.45
1.46 Master's plus 30 1.46
1.47 Specialist 1.47
1.48 PhD or EDD 1.48
1.49 Other 1.49

Please specify ________________________________

1.5  Approximate number of college credit in social studies curricula

1.51 Geography 1.51
1.52 History 1.52
1.53 Social studies methods 1.53
1.54 Other 1.54

Please specify ________________________________

1.6  How recently have you had a course in social studies methods with map and globe teaching?

1.61 Never 1.61
1.62 Currently 1.62
1.63 1-5 years 1.63
1.64 6 or more years 1.64
1.7 How recently have you attended faculty studies in social studies with map and globe teaching?

1.71 Never
1.72 Currently
1.73 1-5 years
1.74 6 or more years

1.8 How recently have you attended workshop(s) or conference(s) in teaching maps and globes in social studies?

1.81 Never
1.82 Currently
1.83 1-5 years
1.84 6 or more years
1. In the map below (map #1), assume that you live in the town of Owens, along the river. To reach the source of the river you would travel
(1) ____________________ stream.
To reach the mouth of the river you would travel
(2) ____________________ stream.

2. Look at the same map (map #1), if the river shown is a typical stream, will the volume of water flow be greater at location H or at location J? Write H or J.
(3) ______________

3. Using the same map (map #1), list the directions in which you would move in following the route from Point A to Point G (dashed line).
From A, (4) ______________ to B, (5) ______________
to C, (6) ______________ to D, (7) ______________
to E, (8) ______________ to F, (9) ______________ to G.
4. Place the north arrow on each of these maps:
   (10) (11) (12)

5. Geographers give earth features such names as continents, islands, oceans, etc. Using the map of North America (map # 3, page 6), identify the numbered features:

   (13) 1. ____________________________
   (14) 2. ____________________________
   (15) 3. ____________________________
   (16) 4. ____________________________

   Also, outline the boundaries of the United States.

6. On the map of North America (map # 3, page 6), place a star in Illinois and a dot on the location of Chicago.

   (18) (19)

7. Where is the inset on the map of North America (map # 3, page 6)? (a) Upper right, (b) Lower right, (c) Upper left, (d) Lower left.

   (20) ____________________________

8. Using the same map (map # 3, page 6), tell approximately how far is it in miles between the point marked I and the point marked k.

   (a) 400 miles, (b) 800 miles, (c) 1200 miles, (d) 1600 miles.

   (21) ____________________________
9. Identify the continents, oceans, major islands, and the equator on the world map (map 7, page 8). Fill in the numbered blanks on the map. (14 - 20)

10. Land size is distorted least at places represented on which part of map 7, page 8? (a) Near the North Pole, (b) Near the South Pole, (c) Near the Equator.

(29) ________________________________

11. Using the same map (map 7, page 8), write the names given to the lines that run from the top to the bottom of the map.

(30) ________________________________

12. Name the intermediate directions:

(31) ________________________________

(32) ________________________________

(33) ________________________________

(34) ________________________________

13. On the picture of the globe shown, draw a north-south arrow. (35)

14. On the map below (map 7, page 8), shade in the land areas. (36) (37)
15. Identify the following features on map #6 below. Place the corresponding letter in the appropriate location on the map. A. Waterfall; B. Swamp; C. Mountains; D. Lake. (38 - 41)

16. The distance between the Winfield's house (W) and the Jackson's house (J) (map #7) represents (42) on the earth's surface.

17. If it took four minutes to walk one block, how long would it take to walk the shortest distance from the Winfield's house to the Cardo's house (C)? Use the same map above. (43)

18. When using a colored map on which the International Color Scheme is utilized, which color represents the highest elevation? (a) green, (b) red, (c) blue. (44)
19. What is the elevation of Point A on map #8 below?

20. On the same map above (map #8), Point A is (46) ____ Point B.

21. Identify the features that each of the following standard map symbols represents.

22. Assume that you are standing outside this room. It is 9:00 a.m. and your shadow is directly in front of you.

What is the direction to your right? (55) ____________

To your left? (56) ____________

Behind you? (57) ____________

23. The earth rotates from (58) __________ to (59) __________

24. Which movement of the earth causes day and night?

Write in either rotation or revolution.

25. On a sunny day and when standard time is used, a person's shadow is shortest at what time of the day?

26. ____________
26. Use map #9 below. What is the relative location of Evanston? (62) (63)

27. Use the same map above (map #9). What is the location of Miles? (64)

28. Which is the larger of the two highways shown on the map above (map #9)? Write the number of the larger highway. (65)

29. Identify the hemispheres:

(66) ______________________ (67) ______________________

(68) ______________________ (69) ______________________
30. Use the two pictures of the globe below.
In which picture of the globe would people living in Chicago wear light clothing and go swimming?

(70) __________________

In which picture would people living in Argentina carry on these activities?

(71) __________________

In which picture would people living in Central Africa do these things?

(72) __________________

31. What length of time does it take the earth to rotate the equivalent of the distance between the 90th and 105th meridian?

(73) __________________

32. On the map of the neighborhood (map #10, page 13), draw the map symbol for a school at location K - 3.
33. On the picture of the globe shown below, write the names of the lettered parallels.

34. Which lines on the picture of the globe shown above are equal in length, those running north and south or those running east and west? Write in either N-S or E-W.

35. Using the same picture of the globe shown above, along which parallels are the time zones of greatest distance in miles? (a) Location a, (b) Location c, (c) Location d.
### APPENDIX N (Cont.)

#### ANSWER KEY

<table>
<thead>
<tr>
<th>Item</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Up</td>
</tr>
<tr>
<td>2</td>
<td>Down</td>
</tr>
<tr>
<td>3</td>
<td>J</td>
</tr>
<tr>
<td>4</td>
<td>East</td>
</tr>
<tr>
<td>5</td>
<td>North</td>
</tr>
<tr>
<td>6</td>
<td>Northwest</td>
</tr>
<tr>
<td>7</td>
<td>Northeast</td>
</tr>
<tr>
<td>8</td>
<td>West</td>
</tr>
<tr>
<td>9</td>
<td>Northwest</td>
</tr>
<tr>
<td>10</td>
<td>Arrow must point to the left of the map</td>
</tr>
<tr>
<td>11</td>
<td>Arrow must point to the bottom of the map</td>
</tr>
<tr>
<td>12</td>
<td>Arrow must point to the top of the map</td>
</tr>
<tr>
<td>13</td>
<td>Peninsula (Baja California)</td>
</tr>
<tr>
<td>14</td>
<td>Strait (Bering Strait)</td>
</tr>
<tr>
<td>15</td>
<td>Bay (Hudson Bay)</td>
</tr>
<tr>
<td>16</td>
<td>Delta (Mississippi Delta)</td>
</tr>
<tr>
<td>17</td>
<td>Outline must include the 48 contiguous states, Alaska, and Hawaii!</td>
</tr>
<tr>
<td>18</td>
<td>Illinois (star)</td>
</tr>
<tr>
<td>19</td>
<td>Chicago (dot)</td>
</tr>
<tr>
<td>20</td>
<td>D (Lower left)</td>
</tr>
<tr>
<td>21</td>
<td>C (1200 miles)</td>
</tr>
<tr>
<td>22</td>
<td>Greenland</td>
</tr>
<tr>
<td>23</td>
<td>Eurasia (Asia)</td>
</tr>
<tr>
<td>24</td>
<td>North America</td>
</tr>
<tr>
<td>25</td>
<td>Japan</td>
</tr>
<tr>
<td>26</td>
<td>Indian Ocean</td>
</tr>
<tr>
<td>27</td>
<td>Atlantic Ocean</td>
</tr>
<tr>
<td>28</td>
<td>The equator is at 0° latitude</td>
</tr>
<tr>
<td>29</td>
<td>C (Near the Equator)</td>
</tr>
<tr>
<td>30</td>
<td>Meridians (Longitude)</td>
</tr>
<tr>
<td>31</td>
<td>Northeast</td>
</tr>
<tr>
<td>Item</td>
<td>Answer</td>
</tr>
<tr>
<td>------</td>
<td>--------</td>
</tr>
<tr>
<td>32</td>
<td>Southeast</td>
</tr>
<tr>
<td>33</td>
<td>Southwest</td>
</tr>
<tr>
<td>34</td>
<td>Northwest</td>
</tr>
<tr>
<td>35</td>
<td>Arrow must be parallel to the earth's axis</td>
</tr>
<tr>
<td>36</td>
<td>The land area is the west coast of Africa</td>
</tr>
<tr>
<td>37</td>
<td>The square next to &quot;Land&quot; in the legend must be shaded</td>
</tr>
<tr>
<td>38</td>
<td>A. Waterfall</td>
</tr>
<tr>
<td>39</td>
<td>B. Swamp</td>
</tr>
<tr>
<td>40</td>
<td>C. Mountains</td>
</tr>
<tr>
<td>41</td>
<td>D. Lake</td>
</tr>
<tr>
<td>42</td>
<td>Five blocks</td>
</tr>
<tr>
<td>43</td>
<td>Twenty minutes</td>
</tr>
<tr>
<td>44</td>
<td>E (Red)</td>
</tr>
<tr>
<td>45</td>
<td>Between 500' and 1000'</td>
</tr>
<tr>
<td>46</td>
<td>Higher than or above</td>
</tr>
<tr>
<td>47</td>
<td>Capital city</td>
</tr>
<tr>
<td>48</td>
<td>Church</td>
</tr>
<tr>
<td>49</td>
<td>Railroad</td>
</tr>
<tr>
<td>50</td>
<td>Stream or river</td>
</tr>
<tr>
<td>51</td>
<td>Bridge</td>
</tr>
<tr>
<td>52</td>
<td>Airport</td>
</tr>
<tr>
<td>53</td>
<td>School</td>
</tr>
<tr>
<td>54</td>
<td>Cemetery</td>
</tr>
<tr>
<td>55</td>
<td>North</td>
</tr>
<tr>
<td>56</td>
<td>South</td>
</tr>
<tr>
<td>57</td>
<td>East</td>
</tr>
<tr>
<td>58</td>
<td>West</td>
</tr>
<tr>
<td>59</td>
<td>East</td>
</tr>
<tr>
<td>60</td>
<td>Rotation</td>
</tr>
<tr>
<td>61</td>
<td>11.1/2-day or noon</td>
</tr>
<tr>
<td>62</td>
<td>Must include two facts about the relationship of Evanston's geographical setting to other places</td>
</tr>
<tr>
<td>63</td>
<td>C - 3</td>
</tr>
<tr>
<td>64</td>
<td>29F</td>
</tr>
<tr>
<td>65</td>
<td>Southern</td>
</tr>
<tr>
<td>66</td>
<td>Western</td>
</tr>
<tr>
<td>67</td>
<td>Western</td>
</tr>
<tr>
<td>Item</td>
<td>Answer</td>
</tr>
<tr>
<td>------</td>
<td>--------</td>
</tr>
<tr>
<td>67</td>
<td>Northern</td>
</tr>
<tr>
<td>70</td>
<td>7 2</td>
</tr>
<tr>
<td>71</td>
<td>7 3</td>
</tr>
<tr>
<td>72</td>
<td>Both 7 1 and 4 2</td>
</tr>
<tr>
<td>73</td>
<td>One hour</td>
</tr>
<tr>
<td>74</td>
<td>The symbol of a school must be drawn at location 9 - 3</td>
</tr>
<tr>
<td>75</td>
<td>a. Arctic Circle</td>
</tr>
<tr>
<td>76</td>
<td>b. Tropic of Capricorn</td>
</tr>
<tr>
<td>77</td>
<td>c. Antarctic Circle</td>
</tr>
<tr>
<td>78</td>
<td>d. Tropic of Cancer</td>
</tr>
<tr>
<td>79</td>
<td>S - S</td>
</tr>
<tr>
<td>80</td>
<td>C (Location 4)</td>
</tr>
</tbody>
</table>
1. In the map below, assume that you live in the town of Owens, along the river.
   To reach the source of the river you would travel
   (1) stream.
   To reach the mouth of the river you would travel
   (2) stream.

2. Using the same map (*1), list the directions in which you would move in following the route from Point A to Point G (dashed line).
   From A, (3) to B, (4) to C, (5) to D, (6) to E, (7) to F, (8) to G.

3. Briefly describe the north wall of this room. (9)

4. Name the intermediate directions:
   (10)
   (11)
   (12)
   (13)
5. On the picture of the globe shown, draw a north-south arrow. (14)

6. Place the north arrow on each of these maps: (15) (16) (17)

7. On the map of North America (map #3), place a star in Illinois and a dot on the location of Chicago. (18) (19)

8. Using the map of North America (map #3), identify the numbered physical features:

   1. __________ (20) 3. __________ (22)
   2. __________ (21) 4. __________ (23)

   Also, outline the boundaries of the United States. (24)

9. Identify the continents, oceans, major islands, and the equator on the world map (map #4). Fill in the numbered blanks on the map. (25 - 31)
10. On the map below (map 5), shade in the land areas.

11. Identify the following features on map 6. Place the corresponding letter in the appropriate location on the map. A. Waterfall; B. Swamp; C. Mountains; D. Lake

12. What is the elevation of Point X on map 7? 

13. On the same map (8) Point A is Point B.
14. On the map of the neighborhood (#8), draw this school in its proper location. (40)

15. Complete map #9 (on the left) by using the picture (on the right). (41) (42)

16. The distance between the Winfield's house (W) and the Jackson's house (J) (map #10) represents ______ on the earth's surface. (43)

17. If it took four minutes to walk one block, how long would it take to walk the shortest distance from the Winfield's house to the Cardo's house (C)? Use map #10. (44)
18. Identify the features that each of the following symbols represents.

- (45)  
- (46)  
- (47)  
- (48)  
- (49)  
- (50)  
- (51)  
- (52)  

19. Assume that you are standing outside. It is 9:00 a.m. a.m. your shadow is directly in front of you.
What is the direction to your right? (53)  
To your left? (54)  Behind you? (55)  

20. The earth rotates from (56) to (57). 

21. Use map #11. What is the relative location of Evanston? (58) (59)  

Map #11

22. Use the same map (#11). What is the location of Niles? (60)
23. Identify the hemispheres:

- (61)
- (62)
- (63)
- (64)

24. Use the two pictures of the globe below. In which picture of the globe would people living in Chicago wear light clothing and go swimming? (65)

In which picture would people living in Argentina carry on these activities? (66)

In which picture would people living in Central Africa do these things? (67)
25. In the space provided below, draw a simple sketch map of this room (map #12). Be sure that it includes a legend, and is properly oriented as to direction.

(map #12)

26. During the academic training for the teaching profession, have you been enrolled in any college courses that prepared you for introducing and developing map and globe skills at the primary grade levels?

Yes ____  No ____
APPENDIX O (Cont.)

ANSWER KEY

<table>
<thead>
<tr>
<th>Item</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Up</td>
</tr>
<tr>
<td>2</td>
<td>Down</td>
</tr>
<tr>
<td>3</td>
<td>East</td>
</tr>
<tr>
<td>4</td>
<td>North</td>
</tr>
<tr>
<td>5</td>
<td>Northwest</td>
</tr>
<tr>
<td>6</td>
<td>Northeast</td>
</tr>
<tr>
<td>7</td>
<td>West</td>
</tr>
<tr>
<td>8</td>
<td>Northwest</td>
</tr>
<tr>
<td>9</td>
<td>Depends on room where the test is administered</td>
</tr>
<tr>
<td>10</td>
<td>Northeast</td>
</tr>
<tr>
<td>11</td>
<td>Southeast</td>
</tr>
<tr>
<td>12</td>
<td>Southwest</td>
</tr>
<tr>
<td>13</td>
<td>Northwest</td>
</tr>
<tr>
<td>14</td>
<td>Arrow must be parallel to the earth's axis</td>
</tr>
<tr>
<td>15</td>
<td>Arrow must point to the left of the map</td>
</tr>
<tr>
<td>16</td>
<td>Arrow must point to the bottom of the map</td>
</tr>
<tr>
<td>17</td>
<td>Arrow must point to the top of the map</td>
</tr>
<tr>
<td>18</td>
<td>Illinois (star)</td>
</tr>
<tr>
<td>19</td>
<td>Chicago (dot)</td>
</tr>
<tr>
<td>20</td>
<td>Peninsula (Baja California)</td>
</tr>
<tr>
<td>21</td>
<td>Strait (Bering Strait)</td>
</tr>
<tr>
<td>22</td>
<td>Bay (Hudson Bay)</td>
</tr>
<tr>
<td>23</td>
<td>Delta (Mississippi Delta)</td>
</tr>
<tr>
<td>24</td>
<td>Outline must include the 48 contiguous states, Alaska, and Hawaii</td>
</tr>
<tr>
<td>25</td>
<td>Greenland</td>
</tr>
<tr>
<td>26</td>
<td>Eurasia (Asia)</td>
</tr>
<tr>
<td>27</td>
<td>North America</td>
</tr>
<tr>
<td>28</td>
<td>Japan</td>
</tr>
<tr>
<td>29</td>
<td>Indian Ocean</td>
</tr>
<tr>
<td>30</td>
<td>Atlantic Ocean</td>
</tr>
<tr>
<td>31</td>
<td>The equator is at 0° latitude</td>
</tr>
<tr>
<td>32</td>
<td>The land area is the west coast of Africa</td>
</tr>
<tr>
<td>33</td>
<td>The square next to &quot;Land&quot; in the legend must be shaded</td>
</tr>
</tbody>
</table>
### APPENDIX 0 (Cont.)

<table>
<thead>
<tr>
<th>Item</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>34</td>
<td>A. Waterfall</td>
</tr>
<tr>
<td>35</td>
<td>B. Swamp</td>
</tr>
<tr>
<td>36</td>
<td>C. Mountains</td>
</tr>
<tr>
<td>37</td>
<td>D. Lake</td>
</tr>
</tbody>
</table>

38. Between 500' and 1000'
39. Higher than or above
40. Depends on building where test administered
41. Symbols must be drawn from the bird's-eye view
42. Symbols must be drawn to scale
43. Five blocks
44. Twenty minutes
45. Capital city
46. Church
47. Railroad
48. Stream or river
49. Bridge
50. Airport

51. School
52. Cemetery
53. North
54. South
55. East
56. West
57. East
58. Must include two facts about the relationship of Evanston's geographical setting to other places
59. C-3
60. Southern
61. Eastern
62. Western
63. Northern
64. #2
65. #1
66. Both #1 and #2
67. Room and contents must be drawn correctly
68. Must include a legend or key
69. Direction must be indicated
APPENDIX P

**LaAP Sampling Frame by Size of Parish**

<table>
<thead>
<tr>
<th>SIZE</th>
<th>PARISH</th>
<th>PARISH CODE</th>
<th>POPULATION IN PUBLIC SCHOOLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOP I 24,501 - up</td>
<td>Caddo</td>
<td>09</td>
<td>54,816</td>
</tr>
<tr>
<td></td>
<td>Calcasieu</td>
<td>10</td>
<td>39,703</td>
</tr>
<tr>
<td></td>
<td>East Baton Rouge</td>
<td>17</td>
<td>70,573</td>
</tr>
<tr>
<td></td>
<td>Jefferson</td>
<td>26</td>
<td>67,686</td>
</tr>
<tr>
<td></td>
<td>Lafayette</td>
<td>28</td>
<td>28,909</td>
</tr>
<tr>
<td></td>
<td>Orleans</td>
<td>36</td>
<td>107,111</td>
</tr>
<tr>
<td></td>
<td>Rapides</td>
<td>40</td>
<td>29,407</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>398,205</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Percentage</strong></td>
<td></td>
<td><strong>45.6%</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SIZE</th>
<th>PARISH</th>
<th>PARISH CODE</th>
<th>POPULATION IN PUBLIC SCHOOLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOP II 14,501 - 24,500</td>
<td>Bossier</td>
<td>08</td>
<td>19,248</td>
</tr>
<tr>
<td></td>
<td>Iberia</td>
<td>23</td>
<td>15,486</td>
</tr>
<tr>
<td></td>
<td>Lafourche</td>
<td>29</td>
<td>19,903</td>
</tr>
<tr>
<td></td>
<td>Ouachita</td>
<td>37</td>
<td>18,935</td>
</tr>
<tr>
<td></td>
<td>St. Landry</td>
<td>49</td>
<td>22,404</td>
</tr>
</tbody>
</table>

*Louisiana Assessment of Educational Progress*
<table>
<thead>
<tr>
<th>SIZE</th>
<th>PARISH</th>
<th>PARISH CODE</th>
<th>POPULATION IN PUBLIC SCHOOLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. St. Mary</td>
<td>51</td>
<td>16,076</td>
<td></td>
</tr>
<tr>
<td>7. St. Tammany</td>
<td>52</td>
<td>17,899</td>
<td></td>
</tr>
<tr>
<td>8. Tangipahoa</td>
<td>53</td>
<td>15,782</td>
<td></td>
</tr>
<tr>
<td>9. Terrebonne</td>
<td>55</td>
<td>21,818</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>167,551</td>
<td></td>
</tr>
<tr>
<td>Percentage</td>
<td></td>
<td>19.2%</td>
<td></td>
</tr>
<tr>
<td>SOP III</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9,501 - 14,500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Acadia</td>
<td>01</td>
<td>12,018</td>
<td></td>
</tr>
<tr>
<td>2. Ascension</td>
<td>03</td>
<td>10,535</td>
<td></td>
</tr>
<tr>
<td>3. Avoyelles</td>
<td>05</td>
<td>9,733</td>
<td></td>
</tr>
<tr>
<td>4. City of Monroe</td>
<td>65</td>
<td>10,248</td>
<td></td>
</tr>
<tr>
<td>5. Livingston</td>
<td>32</td>
<td>11,313</td>
<td></td>
</tr>
<tr>
<td>6. St. Bernard</td>
<td>44</td>
<td>13,967</td>
<td></td>
</tr>
<tr>
<td>7. St. Martin</td>
<td>50</td>
<td>9,455</td>
<td></td>
</tr>
<tr>
<td>8. Vermilion</td>
<td>57</td>
<td>9,893</td>
<td></td>
</tr>
<tr>
<td>9. Vernon</td>
<td>58</td>
<td>9,707</td>
<td></td>
</tr>
<tr>
<td>10. Webster</td>
<td>60</td>
<td>10,357</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>107,226</td>
<td></td>
</tr>
<tr>
<td>Percentage</td>
<td></td>
<td>12.3%</td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>PARISH</td>
<td>PARISH CODE</td>
<td>POPULATION IN PUBLIC SCHOOLS</td>
</tr>
<tr>
<td>------------</td>
<td>-------------</td>
<td>-------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>SOP IV</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5,001 - 9,500</td>
<td>Allen</td>
<td>02</td>
<td>5,891</td>
</tr>
<tr>
<td></td>
<td>Assumption</td>
<td>04</td>
<td>5,909</td>
</tr>
<tr>
<td></td>
<td>Beauregard</td>
<td>06</td>
<td>6,898</td>
</tr>
<tr>
<td></td>
<td>City of Bogalusa</td>
<td>66</td>
<td>5,437</td>
</tr>
<tr>
<td></td>
<td>Concordia</td>
<td>15</td>
<td>5,542</td>
</tr>
<tr>
<td></td>
<td>DeSoto</td>
<td>16</td>
<td>5,707</td>
</tr>
<tr>
<td></td>
<td>Evangeline</td>
<td>20</td>
<td>7,320</td>
</tr>
<tr>
<td></td>
<td>Franklin</td>
<td>21</td>
<td>6,413</td>
</tr>
<tr>
<td></td>
<td>Iberville</td>
<td>24</td>
<td>7,874</td>
</tr>
<tr>
<td></td>
<td>Jefferson Davis</td>
<td>27</td>
<td>7,945</td>
</tr>
<tr>
<td></td>
<td>Lincoln</td>
<td>31</td>
<td>6,255</td>
</tr>
<tr>
<td></td>
<td>Morehouse</td>
<td>34</td>
<td>8,345</td>
</tr>
<tr>
<td></td>
<td>Natchitoches</td>
<td>35</td>
<td>8,736</td>
</tr>
<tr>
<td></td>
<td>Plaquemines</td>
<td>38</td>
<td>5,999</td>
</tr>
<tr>
<td></td>
<td>Pointe Coupee</td>
<td>39</td>
<td>5,425</td>
</tr>
<tr>
<td></td>
<td>Richland</td>
<td>42</td>
<td>6,435</td>
</tr>
<tr>
<td></td>
<td>St. Charles</td>
<td>45</td>
<td>8,844</td>
</tr>
<tr>
<td></td>
<td>St. James</td>
<td>47</td>
<td>5,409</td>
</tr>
</tbody>
</table>
**LaASP Sampling Frame by Size of Parish**

<table>
<thead>
<tr>
<th>Size</th>
<th>Parish</th>
<th>Parish Code</th>
<th>Population in Public Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 5,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Bienville</td>
<td>07</td>
<td>4,198</td>
</tr>
<tr>
<td>2.</td>
<td>Caldwell</td>
<td>11</td>
<td>2,521</td>
</tr>
<tr>
<td>3.</td>
<td>Cameron</td>
<td>12</td>
<td>2,283</td>
</tr>
<tr>
<td>4.</td>
<td>Catahoula</td>
<td>13</td>
<td>3,313</td>
</tr>
<tr>
<td>5.</td>
<td>Claiborne</td>
<td>14</td>
<td>3,788</td>
</tr>
<tr>
<td>6.</td>
<td>East Carroll</td>
<td>18</td>
<td>2,996</td>
</tr>
<tr>
<td>7.</td>
<td>East Feliciana</td>
<td>19</td>
<td>3,819</td>
</tr>
<tr>
<td>8.</td>
<td>Grant</td>
<td>22</td>
<td>3,784</td>
</tr>
<tr>
<td>10.</td>
<td>LaSalle</td>
<td>30</td>
<td>3,516</td>
</tr>
<tr>
<td>11.</td>
<td>Madison</td>
<td>33</td>
<td>4,058</td>
</tr>
<tr>
<td>12.</td>
<td>Red River</td>
<td>41</td>
<td>2,127</td>
</tr>
<tr>
<td>13.</td>
<td>Sabine</td>
<td>43</td>
<td>4,880</td>
</tr>
<tr>
<td>14.</td>
<td>St. Helena</td>
<td>46</td>
<td>2,480</td>
</tr>
</tbody>
</table>
### LaAEP Sampling Frame by Size of Parish

<table>
<thead>
<tr>
<th>SIZE</th>
<th>PARISH</th>
<th>PARISH CODE</th>
<th>POPULATION IN PUBLIC SCHOOLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.</td>
<td>Tensas</td>
<td>54</td>
<td>2,445</td>
</tr>
<tr>
<td>16.</td>
<td>Union</td>
<td>56</td>
<td>4,566</td>
</tr>
<tr>
<td>17.</td>
<td>West Baton Rouge</td>
<td>61</td>
<td>3,940</td>
</tr>
<tr>
<td>18.</td>
<td>West Carroll</td>
<td>62</td>
<td>3,714</td>
</tr>
<tr>
<td>19.</td>
<td>West Feliciana</td>
<td>63</td>
<td>2,045</td>
</tr>
<tr>
<td>20.</td>
<td>Winns</td>
<td>64</td>
<td>4,135</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td></td>
<td>68,312</td>
</tr>
<tr>
<td></td>
<td>Percentage</td>
<td></td>
<td>7.8%</td>
</tr>
</tbody>
</table>
Maura R. Garvida, daughter of Inocencio and Severina R. Garvida, was born in the Philippines. She completed her elementary and secondary education in that country. She graduated with a Bachelor of Science in Elementary Education and a Bachelor of Science in Education degrees from Arellano University, Manila, Philippines, in 1965. After immigrating to the United States of America in January of 1968, she attended Louisiana State University, Baton Rouge, Louisiana, where, in 1973, she received a Master of Education at the elementary level. She became certified by the State of Louisiana as a reading specialist in August of 1975.

Her professional experiences included seventeen years as an elementary teacher in Philippine and Louisiana schools. In the Philippines, she served one semester as acting principal and for four years as a supervisor. She also served there as a demonstration supervisor and as an education and English teacher at the college level. In 1968, she joined the Iberville Parish School System, at Shady Grove School and in 1969, she transferred to Thomas A. Levy School as an elementary teacher.
EXAMINATION AND THESIS REPORT

Candidate: Maura R. Garvida

Major Field: Education

Title of Thesis: AN ANALYSIS OF LOUISIANA TEACHERS' KNOWLEDGE OF SELECTED MAP AND GLOBE SKILLS, GRADES KINDERGARTEN THROUGH FOUR

Date of Examination: June 13, 1977

Approved:

Jesse J. Parker
Major Professor and Chairman

James B. Fragnham
Dean of the Graduate School

EXAMINING COMMITTEE:

Alice A. Englaar

Dean Adam

E. L. Huston

Charlie W. Roberto, Jr.

Alvin L. Bertrand

Date of Examination:
June 13, 1977