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ABSTRACT

A sample of 112 secondary school teachers were sent a questionnaire addressing the following topics: (1) teacher's educational background; (2) classes taught; (3) texts and media being used; (4) awareness of professional organizations; (5) suggestions for curriculum development; and (6) willingness of teachers to participate in improving teacher-training programs at the collegiate level and through in-service programs. The return rate was 43%. Results were compared with similar surveys conducted in 1952 and 1965. The status of geography in North Dakota's secondary schools has diminished since 1952. At that time 53% of the schools had one or more geography classes; in 1978-79, only 42% taught geography. The bulk of geography enrollments continues to be in world regional courses. Traditional texts continue to be popular, and maps and films are widely used by teachers today as supplementary aids. Current professional memberships are not high among teachers. Since 1952, teachers have expressed an interest in teaching specific regional geography courses. The majority of teachers in 1978 were willing to train student teachers. (A model for improving the secondary school system is presented.) (RM)

# The Status of Geography in North Dakota Secondary Schools

by

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Paper presented at the Annual Meeting of the Association of American Geographers (Philadelphia, PA, 1979).

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If the discipline of geography were to be diagrammed in terms of strengths at various educational levels from elementary grades to post-doctoral programs, the paradigm would be an inverted triangle at worst or an hourglass at best. As pointed out by Wilbanks and Libbee in the February, 1979, issue of the Professional Geographer, geography "shares the distinction of having the smallest number of students entering college as declared majors" (Wilbanks and Libbee, 1979). Geography appears to be weakest in the secondary schools, and in the current period of retrenchment afflicting so many institutions of higher learning, the absence of a strong base in geography at the high school level will continue to be a limiting factor in most programs designed to maintain or build enrollments at the collegiate level. Of course, the status of geography in the public schools varies by states. This difference has been emphasized in the landmark study of Connecticut compared to Michigan, a long-time leader in geographic education at the pre-collegiate level (Snaden, 1978). The status of geography at the pre-collegiate level in North Dakota is a primary concern of the staff at the Department of Geography at the University of North Dakota as enrollments in geographic education have dropped substantially within the last five years--more so than normally would be expected with the general downward trend in teacher training programs. The purpose of this paper is to assess the condition of high school geography in the state of North Dakota and to outline possible strategies for strengthening the discipline in the high schools of that state.

North Dakota is in many ways still a frontier state. The economy of the 70,000 plus square mile political entity continues to be oriented toward primary production. Energy-related extractive industries are beginning to play a more dramatic role than agriculture which provided the base of the Great Dakota booms of the late nineteenth and early twentieth centuries. There are approximately 630,000 persons in the state with the greatest density of population in the Valley of the Red River of the North. Geography is a critical discipline in the state's secondary school programs, but of

the 253 high school districts in North Dakota in 1978-79, only 105 or 42 percent have one or more classes in geography being taught.

The status of geography in the state of North Dakota appears to have diminished since 1952 when Anderson investigated the discipline's position. He found that out of a total of 364 secondary and consolidated school systems, 193 or 53 percent had one or more geography classes (Anderson, 1952). Despite significant school mergers between 1952 and 1965, Willard found in his 1965 study of the status of geography that 121 high schools were teaching at least one geography class (Willard, 1965). Willard, however, was dealing only with then accredited schools, and the total number of geography programs in the high schools probably was slightly more than he cited. In August, 1978, a survey was begun to determine the extent of change between 1952 and 1978, and this paper is based upon the data secured through that questionnaire.

Concentrated efforts were made to gain a statistically significant sample, and by January, 1979, a total of 48 surveys, all from different schools, were returned out of 112 potential responses. Surveys were sent directly to the teachers rather than to the school administrators, as had been done by both Anderson and by Willard; the point was to gain contact with the actual instructors. The questionnaire addressed the following topics: 1) teacher's educational background; 2) classes taught; 3) texts and other media being used in the classroom; 4) awareness of professional organizations; 5) suggestions for curriculum development; and 6) willingness of teachers to participate in improving teacher-training programs at the collegiate level and through in-service programs.

The educational background of those who responded are as follows:

Table 1. Academic Degress of the 1978-79 North Dakota High School Geographers Sample

| | | | |
|---|---|---|---|
| B.A./B.S. | 19 | M.A.+15 | 1 |
| B.A.+15 | 10 | M.A.+30 | 2 |
| B.A.+30 | 4 | M.A.+45 | 0 |
| M.A./M.S. | 9 | D.Ed/D.A. | 0 |

However, the majority of these teachers did not have a substantial background in geography, as revealed by the table below:

Table 2. Number of Semester Hours in Geography of the 1978-79 North Dakota High School Geographers Sample

| | |
|---|---|
| 0-6 hours | 14 |
| 7-12 hours | 10 |
| 13-18 hours | 1 |
| 19-24 hours | 9 |
| 25-30 hours | 6 |
| 31+ hours | 5 |

Both the level of academic degrees and the number of geography hours in the 1978 sample is similar to that of Anderson's findings for 1952, and to those of Willard's in 1965. However, years of teaching experience averaged 12 years for the 1978 sample as compared to 4 years in 1952, and 5 years in 1965. It would appear that there has been a decrease in faculty turnover rates in high school geography.

One facet that neither Anderson nor Willard considered in their separate studies was where the teachers received their academic training. The majority of the teachers in the 1978 sample had been trained at a state college within North Dakota, and those with graduate training had earned credits at one of the two state universities, as can be deduced from the table below:

Table 3. College Background of the 1978-79 North Dakota High School Geographers Sample

| Place of Academic Training | Undergraduate | Graduate |
|---|---|---|
| Valley City State College (ND) | 13 | 1 |
| Mayville State College (ND) | 9 | 0 |
| Minot State College (ND) | 6 | 0 |
| University of North Dakota | 6 | 7 |
| Dickinson State College (ND) | 4 | 0 |
| North Dakota State University | 4 | 4 |
| Other | 6 | 7 |

The institutions identified in the above table have different professional academic emphases, but the teachers in the sample basically teach the same subject--world regional geography.

Geography's justification for inclusion in school programs at the pre-collegiate level in North Dakota has centered upon the need for an understanding of different places, as pointed out by both Anderson and by Willard. Due to a lack of staff, a lack of time and competition from other courses, the bulk of enrollments in geography in North Dakota high schools in 1978, as in 1952 and 1965, has been in world regional courses. Anderson noted that 175 world regional courses were taught in 1952 (Anderson, 1952), and Willard mentioned 121 such courses in 1965 (Willard, 1965). Only 39 world regional geography courses were identified as being taught in this current study. This would tend to indicate that even with the decline in total number of high schools in North Dakota, there has been a critical drop in the number of opportunities for students to be exposed to geography. Physical geography, cultural geography, geography of the United States and geography of North Dakota are being taught in three different school systems in 1978, but Anderson noted seventeen school systems teaching economic and/or physical geography courses in 1952 (Anderson, 1952). This further substantiates the degree to which course offerings in geography have become even more limited in North Dakota high schools.

Examination of the classes taught in North Dakota secondary schools reveals that traditional texts continue to be popular. The world regional books of Pounds and Taylor, Jones and Murphey, and Israel and Wood which generally were introduced in North Dakota before 1965 continue to be as favored as Willard had found in 1965 when these texts were replacing John H. Bradley's World Geography, the dominant text in the state in 1952 (Willard, 1965; Anderson, 1952).

Films and maps continue to be effectively employed by North Dakota high school geography instructors as supplements to texts. The supplemental media used by geography teachers in 1978 has been ranked as follows:

Table 4. Supplemental Media Used by the 1978-79 North Dakota High School Geographers Sample

| | |
|---|---|
| Maps | 45* |
| Films | 43 |
| Newspapers | 27 |
| Slides** | 26 |
| Television | 17 |
| Visiting Speakers | 16 |
| Field Trips | 14 |
| Professional Journals | 4 |
| Air Photos | 3 |

*only 45 out of 48 surveys were filled

**includes filmstrips

However, not all high school geographers were pleased with these supplements. Most complaints centered on the inability to obtain satisfactory desk outline maps, filmstrips, slides, and transparencies. The basis for complaints is as much financial as a lack of materials for the high school level.

Professional memberships amongst the sample group in 1978 did not tend to be high, and because neither Anderson nor Willard addressed this issue per se, comparisons cannot be made. High school geography instructors could utilize recognized geographical groups for awareness of professional growth, but this does not appear to be the case:

Table 5. Awareness of Professional Geography Organizations by the 1978-79 North Dakota High School Geographers Sample

| | Awareness | Membership | Use of Materials |
|---|---|---|---|
| Association of American Geographers | 17 | 0 | 1 |
| National Council for Geographic Education | 17 | 1 | 1 |
| Association of North Dakota Geographers | 27 | 1 | 0 |
| National Geographic Society | 35 | 7 | 17 |
| American Geographical Society | 17 | 1 | 1 |

Geographical societies's published materials, for use by high school teachers, are not being disseminated effectively through the academic hierarchy. Curriculum development materials which would strengthen the number of incoming majors to collegiate geography programs especially are not reaching this market in North Dakota.

Suggestions as to the type of geography programs which should be developed in North Dakota high schools were sought by Anderson and by Willard in their studies. It appears that since 1952 there is a long standing interest amongst high school personnel for courses in physical geography, economic geography, conservation, and meteorology. A major push for specific regional geography courses, particularly for a geography of North Dakota, is in the offing as 36 out of 48 high school teachers in the 1978 sample indicated they were interested in such a course if materials were produced which would update existing materials.

Recognition of the need for greater classroom teacher input to the development of such materials as well as to teacher-training programs was included in the 1978 survey, unlike those of Anderson and of Willard. It was discovered that 30 out of 48 teachers were willing to allow college students into their classroom for observational purposes, and these same 30 respondents indicated they would be willing to consider acting as a supervising teacher for such college students. Only 20 of the 48 respondents indicated a desire to serve as consultants in programs to develop curriculum materials for use in teaching; 23 of these teachers indicated they themselves would be interested in further geographic education. When given options for further geographic education, the teachers ranked these opportunities as follows:

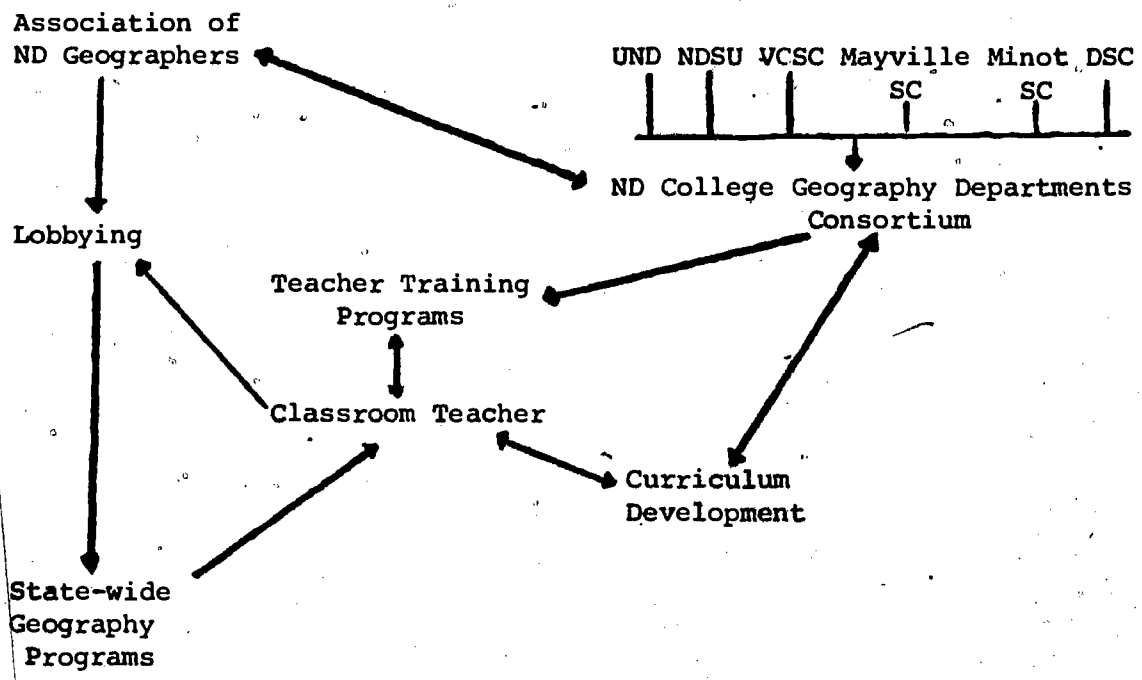
Table 6. Interest in Further Geographic Education by the 1978-79 North Dakota High School Geographers Sample

| | |
|---|---|
| Two-week on-campus course | 23 |
| Series of Saturday workshops at a high school | 21 |
| Series of Saturday workshops at a college campus | 18 |
| Week-long field trip | 18 |
| Eight-week on-campus course | 11 |
| Four-week on-campus course | 11 |

How much of a high school geography market there is in North Dakota still is subject to question. It appears that an effort is needed to stabilize and expand the secondary school base if these is going to be continued growth in professional geography at the collegiate level. It should be pointed out that academic anamolies currently exist in North Dakota: enrollments continue to increase at most of the colleges and universities of the state rather than decline as is a national trend. The University of North Dakota has a double anamoly in that not only do university-wide enrollments continue to increase, but enrollments in geography are rising at almost double this university's percentage rate of growth. However, increased support for pre-collegiate geographic education is seen as a crucial element in the future growth plans for this particular department.

Efforts to strengthen geography in the high schools of North Dakota requires planning. The key is to increase current involvement by high school personnel and to lobby for a state-wide requirement for a minimum of one geography course in each secondary school system. A model for improving the secondary school base in North Dakota is presented below:

Figure 1. A Model for Improving High School Geography in North Dakota




For over a year efforts have been made to follow the precedents set in strengthening

geography at the high school level by geographers in Manitoba, a dynamic Canadian province in terms of secondary school geography programs, and this model has been the result.

The first step to developing a geography lobby in North Dakota is to encourage the state colleges and universities in North Dakota to participate in a consortium for geographic education. This group would be able to provide the necessary professional expertise for translating the advances of the discipline into materials of use by high school personnel and high school students. North Dakota secondary school geography teachers have not been trained for quantitative-oriented, theoretical geography as found in the first edition of the AAG's High School Geography Project.

The second step is to have this consortium tie into the Association of North Dakota Geographers, the state-wide affiliate of the National Council for Geographic Education and one of the oldest state professional geography societies. Important insights as to the scope and purpose of geography training can be gained from mixing collegiate, secondary school, and non-academic geographers when considering developing a useful, up-to-date teacher training program. Exposure to applied geography, particularly in terms of the techniques of remote sensing and computer graphics, will enable the next generation of high school geography instructors to better assist their students in becoming familiar with the exciting career prospects in geography. By stressing the professional aspect of geography, a stronger base for lobbying for state-wide geography programs in the secondary schools would become possible.

Obviously, there is a need for revised curricula in both teacher training programs and in high school geographic education if this model is to be implemented. The focus of the third step of this proposed effort to strengthen geography in North Dakota high schools is to create such new curricula. Alterations in teacher training programs will not be discussed in this paper, but suggestions for an up-dated high school geography program will be considered which are based upon the assumption that state-wide syllabi as teaching guides are essential materials. Because world regional geography already has a relatively long tradition but decreasing hold in social studies

programs throughout North Dakota, it is imperative to create a syllabus complete with supplements for obtaining films, slides, additional readings, and outline maps to be used in conjunction with any of the three major texts now in use in the high schools of North Dakota. A second state-wide syllabus should be produced which emphasizes the geography of North Dakota (current classes in the history of North Dakota, unfortunately, are weak in geographic coverage). Such state-wide syllabi could be used as practical guides for training new teachers as well as providing experienced teachers with materials. These syllabi could be introduced gradually into the secondary schools of North Dakota through the use of two-week workshops for those teachers interested in upgrading or expanding existing geography programs.

It is essential that state-wide lobbying be undertaken so that the State of North Dakota Department of Public Instruction is encouraged: 1) to require at least one geography course in all high schools; and 2) to adopt recommendations for additional human as well as physical geography courses on an elective basis.

At the present time efforts to implement this model is in the advanced conceptual phase. Extensive work has been done with members of the geography-oriented Manitoba Social Science Teachers' Association in curriculum development. However, efforts to develop a consortium of geographic educators inside or outside of the Association of North Dakota Geographers has yet to proceed beyond the informal discussion stages. However, in an energy-rich, agriculturally productive state such as North Dakota, the need for geographic education, especially in the high schools, continues to grow despite the long-standing opposition by the history-dominated social studies educators. North Dakota needs geographically informed citizens.

In conclusion, the status of geography in the high schools of North Dakota appears to have declined at a time when it is most needed. Fortunately, it has stabilized according to the 1978 sample--9 schools claim growth to 10 schools's decline with 25 schools having stable programs. Of those 25 schools claiming stable programs, world regional geography was a required course. The level of world regional geography courses is focused upon grades nine and ten, so a base does exist for

creating an expanded geography program. The key is to develop state-wide syllabi in a number of geographical topics and to introduce those syllabi into the classroom first through voluntary action and then through requirements in the course of study for high schools as approved by the North Dakota Department of Public Instruction. Classroom teachers must and are being given the opportunity for input into this proposed program. All too long professional geographers at the collegiate level have been promoting the demise of the discipline by turning their backs on the high school teachers. Geography is not an exciting field of study in the high schools because it is taught mostly by non-geographers. The time has come for collegiate geographers to do more than wring their hands about how enrollments are dropping in the college levels and being so myopic as to not see the decline in the pre-collegiate levels.

The true frontiers of geographic education are in the pre-collegiate aspects of teaching and research, and it is imperative for the academic geographers to begin to participate with more support than was given to the first edition of the AAG's High School Geography Project. A model has been presented here which is being implemented in North Dakota. Hopefully, pre-collegiate geography in North Dakota will see a turnaround which will do more than provide the narrow-minded goal of increased geography enrollments at all the institutions receiving North Dakota high school graduates. In a frontier state such as North Dakota, containing 22 percent of the nation's energy reserves, there is a need for a geographically informed citizenry which will be better able to make rational decisions for handling the problem of land use and energy development. The hope for a better environment and for improving the quality of life for all rests upon a stronger base in geographic education.

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