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A Study of the Future Roles of the Four North Dakota State Colleges

Merton W. Andresen

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A STUDY OF THE FUTURE ROLES OF THE FOUR NORTH DAKOTA
STATE COLLEGES

by

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A Dissertation
Submitted to the Faculty
of the
University of North Dakota
in partial fulfillment of the requirements
for the degree of
Doctor of Education

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This dissertation submitted by Merton W. Andresen in partial fulfillment of the requirements for the Degree of Doctor of Education from the University of North Dakota is hereby approved by the Faculty Advisory Committee under whom the work has been done.

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STATE COLLEGES

Department Education

Degree Doctor of Education

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Signature M. M. Andresen

Date July 24, 1972

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ABSTRACT

The purpose of this study was to examine the problem of the future roles of the four state colleges in North Dakota. Attention was focused upon the historical antecedents which were germane to changing roles in the four state colleges in North Dakota. In addition, an overview of imperatives in planning for change reflected the national imperatives for change which are relevant for North Dakota.

The study included an analysis of legislative attitudes toward the future roles of the four state colleges. These attitudes were delineated by use of a questionnaire. A chi square statistical analysis was applied to the responses which were received from members of the 42nd Legislative Assembly. The analysis was done to determine the present climate of thinking of the political entity toward the future roles of the four state colleges in North Dakota.

The conclusions established from the summary data and statistical analysis indicate:

1. That legislative opinion exists which suggests that alternatives should be planned for the four existing state colleges.
2. That a body of legislative opinion supports the concept of closing some of the state colleges.

One recommendation of this study was:

1. That Minot State College be the only state college in North Dakota to continue in its role in a teacher training function as its primary purpose.

Additional recommendations were concerned with:

1. The development of Dickinson State College as a baccalaureate degree granting institution employing some of the innovative thrusts of the Mitau paradigm.

2. The closing of Mayville State College.

3. The development of Valley City State College as a two-year level institution.

All of the recommendations projected by this study must be viewed in the light of the limitations of this study.

CHAPTER I

INTRODUCTION

The Problem

Briefly stated the problem is concerned with the future roles of the State Colleges. The duplication of college services in North Dakota has been the subject of legislative discussion for a period of time; more recently, members of the Board of Higher Education have been seriously questioning whether or not the state can logically and intelligently continue the present schools which are a part of higher education complex in this state. The legislative segment has also raised questions concerning roles and scope in their analysis of the present educational situation in North Dakota. Reference to legislative reaction is detailed in Chapter IV in this study.

The present distribution of educational tasks and levels of academic performance in the State Colleges is the product of slow, almost unnoticed accretion over a long period of time. The financial stress in maintaining nearly identical programs is now questioned more seriously than at any other period in North Dakota history, though Geiger (1958, p. 368) suggests a brief crisis during the thirties. The temper of present thinking is best suggested, however, by the fact that funding was not continued for the operation of a college facility at Ellendale. The fact that the legislature had the courage to close, in effect, one

of the state institutions illustrates rather dramatically that there is a genuine urgency in considering future roles for the four remaining North Dakota State Colleges.

The writer would adumbrate the hypothesis that there are several conditions which necessitate serious attention be given to the roles of the state colleges:

1. The fiscal parameters within which the governor and legislature must operate.
2. The strong public pressures for austerity in public spending.
3. The evidence of a sharp, downward trend in State College enrollments.
4. The marked shrinking of the job market for new teachers.
5. The obvious duplication of college services in North Dakota.
6. The evidence that North Dakota's population is declining and aging.
7. The significant shift in population in North Dakota to centers of population concentration.
8. The mobility of students in North Dakota showing a marked tendency of students to migrate to the universities.

The conditions outlined above tend to underscore the urgency for a study of roles and scope of higher education in North Dakota. Thus, in focusing attention upon the roles of the State Colleges, it is hoped that in addressing the problem, viable recommendations can be made which will serve as significant components of an ultimate program which will provide scope and role to all of the institutions of higher learning in the State of North Dakota.

In recommending a change in roles for State Colleges, it must be recognized that the business community involved with various institutions will react very quickly. Any suggestions which involve change are immediately suspect predicated in the main upon the long history of conservatism which has been an integral component of the North Dakota mind. Moreover, the business community is deeply concerned about the economic consequences which can result from a changing role. The ad hoc community groups which made numerous appearances before legislative committees from Ellendale during the 1971 legislative session in last ditch efforts to salvage the institution provides ample evidence for examples of concern for institutional status quo. The writer also noted a considerable number of Valley City businessmen in attendance at the House Appropriations Committee hearing lobbying for "their college."

The quantitative aspects of educational matters are of prime concern. Any postulation of role changes therefore must necessarily involve many segments in role-changing decisions.

Legislators who represent communities where State Colleges are located also must confront the reality of viewing the institution of higher learning in terms other than one of economic asset.

Limitations

The focus of the study is limited to the future roles of the four State Colleges. There is considerable risk inherent in projecting recommendations which involve a segment in higher education in North Dakota; however, the writer's recommendations are posited with an awareness of the other components of higher education in the state.

This study was further limited by the fact that the questionnaire which was used to elicit legislator responses yielded 90 returns or 60%

of the total legislative body. Accordingly, the recommendations and conclusions are based upon the ninety legislator responses to the questionnaire, twenty-five legislator letters to the writer, and the letters of the presidents of the four State Teachers Colleges and George Sinner of the Board of Higher Education.

Sources of Information

Because the writer has been fortunate enough to serve in an administrative role at UND-Ellendale, it has been possible over the years to develop and maintain a relationship with many members of the legislative assembly. These invaluable relationships have provided a rich source of valid information about the issue under study. The opinions and judgments which have been expressed in interviews, personal letters, and questionnaires were of inestimable value in shaping recommendations concerning the State Colleges. Moreover, the writer could postulate that legislative action which might be proposed consistent with the recommendations should elicit enough support to become reality. Sources of information were selected from a pragmatic point of view; emphasis upon the viability of recommendations was a matter of priority.

The writer developed an overview of the national trends in changing and emerging roles in State Colleges by focusing upon the work done at Berkeley. The center for Research and Development in Higher Education at Berkeley has done voluminous work in planning change in State Colleges. Analysis of the mechanisms of change are thoroughly treated in Berkeley studies. The resources of the Chester Fritz Library, particularly the Education Index, Reader's Guide, The Encyclopedia of Educational Research

and the Dakota Room were valuable in gathering research information in the study. In addition, the writer depended upon the personal library of Dr. William Koenker, for much recent literature in higher education which was germane to the study.

In addressing the problem of role changes in North Dakota colleges it must be noted that educational programs and institutional role changes have been planned. Reviewing the current literature one can discern many previous efforts which suggest recommendations and principles for institutional planning: Bagley (1966); Bereday et al. (1967); Ellam and Swanson (1968); McGrath (1964); Williams (1966) have given exclusive attention to methods of planning and the design of data systems. Caffrey (1968), Palola (1971), Kraft (1969) give more substantiative material on educational matters and conditions necessary for academic reforms.

Dr. Theodore Mitau, Chancellor of the Minnesota State Colleges, provided the writer with a host of new ideas, approaches, and suggestions which were examined to provide some "seedlings," which Gardner (1968) has discussed, to stimulate a dialogue which could have significance in the dilemma in North Dakota higher education.

To determine the reactions and judgments of members of the legislative body in evaluating the future roles of the four state colleges, letters and questionnaires were sent to the members of the Senate and members of the House of Representatives who served in the North Dakota 42nd Legislative Assembly in 1971. The responses to the questionnaire were solicited to delineate the present attitudes of the legislative constituency toward selected issues that involved the state colleges. Before any significant changes are designed in terms of a coordinated

plan in higher education in North Dakota one could posit that legislator support would be crucial to affecting such changes as may seem valid. The writer has sought legislator judgments to augment recommendations for change. The existence of a body of political support can result in an improvement in higher education which could be exemplary in patterns of higher education in the United States. The substantive changes may initiate the development of a coordinated program that will reflect more effective utilization of human as well as tax resources in the interest of better serving the needs of the youth of North Dakota.

Significant precedents for changes in State Colleges are of recent national origin. The literature which is germane to the subject has been examined to provide an understanding of some national practices which prevail, the points of view, and attitudes toward the idea of changing roles of state colleges. This literature has meaningful significance for those who will be associated with the mechanism of change in North Dakota.

The guidelines for substantive change and the recommendations for the future roles of the State Colleges in North Dakota reflect the current literature in the field, the evaluations of legislator points of view and attitude, and the historical antecedents pertinent to this study.

CHAPTER II

SOCIAL AND ECONOMIC SETTING

It is the view of the writer that the shape of the change in higher education in North Dakota is predicated upon the ethnic characteristics of its people and the conditions of a social and economic nature of the recent past in the history of the State. Robinson (1966, viii) suggests: "North Dakota's past provides the best foundation for making public decisions which will determine its future."

The analysis of the ethnic composition of North Dakota and the consideration of some of the social and historical conditions which impinge upon the determination of the future roles of institutions of higher education in the state present useful and pertinent imperatives.

The ethnic composition of North Dakotans varies far less from the national pattern than might be assumed. Migrants from Europe and the older American states provided the foundation stock of the population. It is an understandable error to believe a state which named its capitol city, Bismarck, and has other towns of Berlin and Strasburg clearly indicates the origins for the dominant group. Nonetheless, the 1960 U. S. Census reveals that there are 53,213 Norwegians, 42,961 German-Russians, 27,871 Germans, 19,589 Canadians, and 12,692 Swedes as the major portion of the total foreign stock in North Dakota. The Norwegians with 28% of the foreign stock have almost twice the number that are Germans in the state (i.e., 14.7%). The Russians with 22.6% far exceed those of

Germanic descent. It should be noted that the total foreign stock only represents 29% of the population of the state. Stated another way, over 70% of the North Dakotans are descendants of native-born Americans.

The first of the national trends which affected North Dakota can be noted in the presumed closing of the frontier which forced migration beyond the Prairie Plains to the western semi-arid and mountainous terrain, or northward to the Dakotas. The second was the shift of European immigration from Northern to Southern Europe. The third was the national depression of the 1890's coupled with the well-known "bonanza-farm" image of North Dakota (Drache, 1964). A fourth was the continuing "westerning, frontier spirit, manifest destiny," or call it what one will. This spirit of adventuring and consciousness of national greatness was aided by a network of railroads which served to transport settlers in and their products out. The fifth was the rise of militarism, social unrest, minor wars, and revolutionary ideas in Europe.

By 1900 the pattern of settlement, migratory routes, and ethnic composition was basically established for North Dakota. The economic recovery of the nation, the conclusion of the brief war with Spain, and the important industrial business sector which consolidated and now distributed nationally were favorably influencing agricultural enterprises in North Dakota.

Retarding population growth by 1930 was the low economic position of farm income in the decade of the twenties which discouraged the native born from migrating to agricultural North Dakota, and the national immigration laws passed during this decade which reduced the flood tide of European immigrants to a trickle. By 1930 the foreign born had declined to 8,488 persons or 13.3% of the total population. It was the 1940

Census that more correctly reveals the effect of immigration legislation upon the composition of the American population. By 1940 the foreign-born declined until they were 5,723 or less than 10% of the total.

The 1930's with its national depression, when coupled with the drouth, did drive North Dakotans from the farm and from the state itself. Compounding the problems was the abolishment of homesteading in continental United States, and the declining birth rate. During the forties and fifties the out-migration of North Dakotans continued. The impact of events during the thirties continued to have an effect. That migration was not greater might be ascribed to the policies of the federal government which offered assistance to agriculture. Although subsidies to agriculture continued in the decades of the 1940's and 1950's, the competition of industry for the young with good pay scales developed into a condition that the rural farmer would not or could not match.

Interestingly enough it was during this period of the thirties that people were convinced that North Dakota had too many colleges (Geiger, 1958). The thinking of legislators and the public at large tended to express a reflection of the problems alluded to in previous paragraphs. As the economic plight became more serious, the parameters of fiscal support were more rigid.

It is not enough to discover when settlers came, but to determine why they came, if the North Dakotan is to appreciate the people of North Dakota. What caused the immigrant to choose this particular area when other land was available? One reason was the similarity of North Dakota soils to that of the Russian Ukraine and the lowlands of Germany. A second was the fact that winter in North Dakota was not considered

such a liability to the hardy Russians, Norwegians, and Swedes who were intimately familiar with similar cold, harsh winters.

It was not familiarity or similarity alone, but availability of land for settlers that helped turn these Europeans northward. Blocks of immigrants wanted a communal area, isolated from the mainstream of American culture that would allow them time to settle, prosper, and adjust; this they could find in North Dakota. Familiar soil and climate and available communal areas, the ties of kinship and natural cultural centers of prior immigrants from the homeland to the upper midwest in America, and choice of North Dakota was logical and understandable.

A few immigrants left their European home because of the political conditions there rather than economic reasons here. The Russian-Jews were being harassed by Pobyedmostoev who allegedly boasted "he would drive one-third of the Jews in the Empire to emigrate, would convert one-third to Orthodox Christianity, and would harry the remaining third to destruction" (Hall and Davis, 1941). Nihilism, Socialism, Communism, and Anarchism roiled the social order that was already disturbed by military training, secret alliances, and the personal government of Kaiser, Czar, or Emperor. Pan-Germanism was contesting with Pan-Slavism. These expelling forces were having as powerful an impact upon the young Europeans who were able to migrate as did the attracting force of free, fertile land in America, where many of their countrymen were going. Liberty, anti-militarism, and economic opportunity combined to make America their choice, and, for some, North Dakota their home.

The reasons why the American-born left their native states to migrate to North Dakota can be appreciated by recalling events of the 1890's. The depression during the Cleveland Administration hurt the

agrarian family economically. The maturing children who desired a farm near their father would be compelled to buy their land whereas they could acquire free homestead land farther west. From the vantage point of view of ambitious youth, one less mouth to feed, land of one's own, independence and the value-indoctrinated ideal of pioneering gave impetus to young men to go west. Once that decision was made, other factors became operative: The obvious fact that railroads effectively served North Dakota; the land was fertile and well-watered; and the bonanza farm with thousands of acres which required private elevators, and special grain-hauling service for storage, and subsequent transportation to the milling industry in Minneapolis all helped to turn many immigrants toward North Dakota (Drache, 1964). The status of the statehood helped the Dakotas, Wyoming, Idaho, and Washington to attract the native young of the other states who recognized they were serving the national need for plains settlers as they satisfied their own needs for land. The railroads understood this reciprocal relationship between settlers and their local, state, and national governments by generously providing transportation for the settler, his family, livestock and equipment for a nominal transportation fee.

It is incorrect to assume the railroads were motivated by altruistic objectives, however, for the owners were economic realists who recognized their railroad must operate between the Midwestern cities of Seattle and Portland. It was shrewd business to bring in settlers who would require the importation of further goods constantly, and the exportation of surplus agricultural produce because the railroads were the logical, if not the only, transportation facilities for the farmers' goods and commodities. Further, the railroads vigorously promoted North

Dakota land settlement for mercenary reasons: they had sections of corporation-owned land they should sell to acquire capital gains and to end the threat of a state tax assessment.

Although sharp promotion publicized the area and created a favorable climate of opinion among citizens to other lands and other states, the ultimate decision to migrate was made by each individual settler, based upon his needs and desires. Relatives already in this area were one of the foremost reasons why the foreign-born and native Americans came. Another important reason cited by the foreign-born was the ethnic block that was already here. A third reason was the fertile soil in the area. A fourth was the proximity of land open to homestead entry adjoining good land which could be purchased for a modest cost. A few settlers came because the North Dakota climate was recommended as beneficial for the sick wife, son, or other ailing relatives. Work opportunities, whether sod-busting, railroad building, teaching, or farm-job brought several persons to North Dakota who chose to remain when the original work terminated. In short, it was several obvious reasons and a few subtle ones that contributed to each settler making the difficult decision to permanently abandon his old life, home friends, and country or state for the economic and social opportunities expected to be found in the southeastern portion of North Dakota. It is conceded that not every settler found the reality matching the dream, and many left; other pioneers lacked the human or economic resources to endure until success ultimately arrived, hence they were forced to leave; still, other settlers perceived greater opportunities in other states, and they departed the Dakota land.

The foregoing paragraphs discuss why the settlers came, but they do not explain why the pioneers and their descendants stayed through the intervening years. This too, is explainable. Although each decade since 1920 shows an out migration that continues to the present, there is a correlation between the names on the land patents in the Court House and the grave-stones of the local cemeteries which attest the fact that many settlers altered their dream to match reality, or else they succeeded in forcing reality to match their dream.

Since then, change has altered the people's dependence upon the railroads; the availability of the land has diminished; the ethnic blocs have been modified by interdependence and intermarriage with other national strains; all these and other factors that caused the original pioneer to migrate into this area have become invalid today. However, the basic reason that transcended all else, economic and social opportunity, continues undiminished. Indeed, the opportunities have been enhanced by and for the present residents who recognize a truth ignored by many people that it is only the dreamer and never the dream that ever dies.

A salient characteristic of ethnic groups in the state was a marked concern for post secondary education. The high aspirational level on the part of parents for their children is shown by the dramatic percentage growth of post secondary enrollments and the comparative percentage figures of high school students who attend college in comparisons with students of the other states. It could be suggested that the North Dakotan viewed the system of higher education in the state as a system concerned with the production of human capital. This human capital has had a viable effect upon the whole economy.

But, the typical, conservative North Dakotan views the system of higher education beyond precise economic value. There has existed, and continues to exist, in the mind of North Dakotans the notion that when a person's intellectual competence was improved, that individual benefited culturally and socially. The North Dakotan aspired to improve intellectually, culturally and socially. These aspirations were quite natural for parents who, during the decades of the thirties and forties, had known years of drouth, grasshopper infestations, and rock-bottom prices for grain. For the parents of the past two generations, education, and particularly post secondary education, became a symbol of escape; an escape from the toil, hardship, and the deprivations that they had known so well.

The student was essentially sent to college to enjoy the special assets of the elite. College became the primary avenue to social mobility. The symbol of the students' success was the degree and for a large proportion of contemporary students, upward social mobility was the central motivant and the evidence was persuasive that college-going did indeed lead to a higher rung on the ladder of income and status.

The upper white-collar segment of the occupational structure following World War II became the fastest growing occupational structure and North Dakotans came to regard a college education as a necessity, rather than luxury, for any individual who hoped to participate meaningfully in an ever expanding economy. In a broader sense, people in North Dakota viewed higher education as a normal extension of secondary education, which had become almost universal in the state prior to World War II. Capitalizing on this view, institutions of higher learning became increasing competitive in "recruiting" students as

institutions were, in the past three decades, much more concerned with quantitative views than qualitative approaches despite many disclaimers. With numbers, institutions could develop and implement program requests and the increasing numbers attracted by the development of new majors could then cause these "new" majors to assume increasing validity. Thus, institutions in their zeal for students encouraged parents to send students who were sometimes not college material. Parents were constantly led to believe that there were visible gains in income, prestige, and social mobility via the college degree route.

North Dakota has had conveniently accessible colleges, low tuition costs, and an open door admissions policy. College attendance was obviously destined to increase substantially. As Trow (1962) put it, "Parents were much more likely to encourage their children to go on to college, as part of the 'natural' progressive improvement in living standards across the generations that is so deeply a part of American values."

Evidence of the attitude of North Dakotans toward higher education was cited by Robinson (1971, p. 30):

In the years from 1965 to 1970 college enrollment was growing much faster in North Dakota in proportion to population than it was in the nation. In 1966 North Dakota had 335 full-time college students for each 10,000 of population, the United States had 227 such students. In 1970 North Dakota had 431 full-time college students for each 10,000 of population, the United States had 287 such students.

The U. S. Office of Education in its Analytic Report in 1970 provides additional information which suggests that North Dakota young people sought college and university enrollment in significantly greater numbers than students in states contiguous to North Dakota.

The institution of higher learning in North Dakota have experienced dramatic enrollment growth during the past three decades. From data available, it must be noted that enrollment in state supported institutions of higher learning has risen from 6,566 in 1940 to 27,501 in 1970. The increasing numbers reflect the aspirational levels of the adult population quite markedly. Higher education and the achievement of the degree has been seen as the one way to improve upon the economic and social status of the high school graduate. One can note in 1961 for example that the high school moving total was 31,833 as compared with the 1971 moving total of 45,375.

In 1962 total enrollment at the institutions of higher learning was 46% of the four-year moving total of high school graduates. In 1970 the enrollment at the state institutions was 61% of the four-year moving total. Projections made by the Office of the Commissioner for Education for North Dakota indicate that by 1980 the per cent of moving total high school graduates will increase to 69%. Accordingly, the enrollment at public institutions which was 15,146 in 1962 is estimated to be 37,704 in 1980.

There appears to have developed a significant shift in the philosophy of legislators concerning higher education. Historically, the philosophy was held that higher education benefits society at large; consequently the state felt an obligation to students for complete support of public higher education. The attitude of the legislator today seems to suggest that he feels that the student benefits which accrue to individual students in terms of increased earning capacity would dictate a system whereby the student would be responsible to assume

an increasing share of the costs of higher education. These increasing costs would result in having the student pay more for tuition and other fees.

The history of appropriations for the past three decades in North Dakota gives significant evidence for the state's sense of commitment toward higher education. For the biennium 1947-1949, the state legislature appropriated \$5,856,160 from the general fund for the operating budgets of the nine institutions of higher learning in North Dakota. Only ten years later, the legislature, recognizing the rapid expansion of its institutions of higher learning, appropriated \$14,881,489 from the general fund to the operating budgets of the nine institutions of higher education. Then, only ten years later, a sum of \$34,892,888 was appropriated for the biennium 1967-1969 for the operating budgets of the state's colleges and universities. Again this past legislative session, the legislature continued to increase its commitment with a \$47,280,925 appropriation. This appropriation was designed for eight of the state institutions of higher education. The appropriation for Ellendale Branch of the University was only a token amount for maintenance functions. One might note with interest that the total appropriation for the four state colleges for the present biennium was set at \$11,471,173 for operating budgets. Thus, the state colleges today are funded at a figure more than double the total appropriation for all nine institutions of higher learning in 1947-1949.

Resistance to constantly increasing budget demands has been building rapidly. With increasing enrollments and an awareness of the inflationary spiral, legislators all have sensed an impending crisis in continuing to expend greater percentages of the state general fund

for higher education. Alternatives are being discussed. Political solutions are going to create problems with many of the constituencies presently served with a college located nearby.

The people of North Dakota are becoming increasingly aware of the financial problems in maintaining their present system of education. Each segment of the total educational program in the state seems confronted with problems in finance. Tax levies are being voted down; the public appears unwilling to provide more money while at the same time the public does not support methods of reducing school costs. A national survey conducted recently reports that 52% of the public are opposed to raising property taxes; nor was there support for increasing state income taxes and reducing property taxes.

The typical North Dakota has apparently reached a point where he will resist any further efforts to increase property taxes; yet he resists patterns of organization which would develop larger districts with the resulting economies. Apparently, the typical North Dakotan feels that the best solution to the present financial dilemma lies in making better use of available resources.

In the state, there has been genuine sympathy toward the state's commitment to higher education. As evidence of this fact, one can point to the increasingly large appropriations approved during the past bienniums. The North Dakotan has placed significant value upon the system of higher education in the state. During the session just ended, the first manifestations of irritation concerning the ever-spiraling costs in higher education were heard. With the competition for the tax dollar as it is, one can expect that higher education will not continue to enjoy a level of funding which it has had.

The level of support for higher education in North Dakota has weathered crisis of several kinds. The veteran enrollment boom which was felt in the 1946-50 period placed a strain upon state resources, but was offset rather substantially by the federal funds which were made available through the "G. I. Bill," by some revenue surpluses accumulated during the war years, and through improved use of existing faculties and facilities. Financial pressures grew however, because the anticipated enrollment decreases which were expected as the needs of the servicemen were met, did not materialize.

To meet continuing needs, many states adopted formulas and more systematic budgetary procedures for measuring the needs of higher education. North Dakota has been no exception. Formula procedures have been employed with varying reactions. Fiscal officers find the formulas an efficient device because equality in funding is realized and the device is viewed rather favorably by the legislative body.

Unfortunately, the adoption and use of such devices as the formula for the development of an institutional budget does not carry with it any comprehensive academic plans. Moreover, the needs of higher education were never really explicated as a more rational basis for allocating resources. North Dakota legislators thus have been led to a reliance upon formulas as substitutes for policy decisions. Obviously in the past two bienniums, the dollars generated were hardly adequate to keep pace with the tasks that are involved with change in higher education.

Studies of Resources

Determining a rational basis for allocating resources had not been the subject of serious study until recently in North Dakota. Grooters

(1971) and Sundre (1970) have done studies which are significant in examining the problems inherent in planning future roles for the four state colleges in North Dakota.

The statistical evidence in the Sundre study takes comparisons of instructional "efficiency" and graduate "production." Data gathered in this study reflects the problems involved in duplication which exists in the four state colleges. Sundre concluded that there did exist some unnecessary duplication of major/minor curricula at the state colleges. Some specific recommendations which he made which have relevance for this study include:

The conclusion established from the summary data, rank order tables, and statistical analysis was that there did exist some unnecessary duplication of major/minor curricula at the North Dakota State Colleges. This conclusion was based on the instructional "efficiency" as well as the graduate "production" of the curricula comparison among the institutions.

Additional recommendations were concerned with possible revisions and deletions of the major/minor offerings. These recommendations were the result of observing relatively low "production" and/or relatively low instructional "efficiency." These recommendations included: (1) that the art major/minor offering be limited to one or two institutions with special consideration given to Minot State College and Dickinson State College; (2) that the geography offering be limited to one or two institutions with special consideration given to Valley City State College and Dickinson State College; (3) that serious consideration be given to the possibility of deleting the music major/minor offering at one or more of the institutions, but no specific institution could be identified; and, (4) that the speech and drama major/minor offering be limited to one or possibly two institutions, but no specific institution or institution could be identified (Sundre, 1970).

The Grooters study was done to determine the differences in instructional salary costs per student credit hour of major program offerings that are common to the four state colleges in North Dakota. Statistical evidence in the Grooters study provides additional data

which augments this study in recommending new roles for the four state colleges. There are some specific recommendations made by Grooters which are particularly significant to this study:

1. The data indicated limited student participation in upper division courses in the major area of chemistry at Dickinson, Mayville and Valley City. Variables which account for the differences in costs were established but the production of graduates was not considered in this study. Therefore, it is the recommendation of this study that further investigation be conducted to determine the number of students graduating with majors in chemistry. If a need is not established through future research then this study would support a recommendation to reduce the major to a minor in two of the three institutions.

2. The major area of English at both Mayville and Minot produced a small number of upper division student credit hours. This is an indication of a limited number of students interested in the major program. It is the recommendation of this study that research be conducted to establish a need for a major program at the two institutions. If a need is not established through research it is recommended that the major offerings in the area of English at both Minot and Mayville be reduced to a minor on the basis of production supported by costs.

3. This study recommends that the major program of music be deleted at Minot on the basis of unjustifiable high student credit hour costs. It is also a recommendation of this study that the major program of music at Mayville be reduced to a minor or less. This recommendation is based on high student credit hour costs and the limited student participation in upper division classes (Grooters, 1971).

The conclusions and recommendations of these two studies described, provide statistical data which lend support to the legislator reaction to changing roles of the four state colleges, which has been the focus of this study.

CHAPTER III

IMPERATIVES IN PLANNING FOR CHANGE

In addressing the ramifications of problems of goal planning and changing roles of North Dakota's four State Colleges, perspectives can be gained in examining a statement made by Edward Schoben, Professor of Education, Cornell University, in an address given in 1968 at the University of North Dakota:

Essentially, it seems, an orthodoxy has been handed down to us from the past, and we do not question. When questioning occurs, the most expectable response is a kind of panic at the very idea of examining the bases of that orthodoxy, and panic motivates the defense maneuvers that range from Byzantine political procedures to personal pettiness.

As institutions, colleges and universities are probably more humanly generous and afford more room to the values of individuality and intellectual freedom than any other. But they are also remarkably resistant to internal change and stubbornly insistent about the maintenance of their own mores. Rarely have resources of creativity been brought to bear on the structure and operations of our institutions of higher learning themselves. When they have, as in the case of a Veblen or a Hutchins, they have been massively ignored as the perhaps brilliant but crankily irrelevant expressions of persons dealing with special circumstances or grinding personal axes of little general utility.

The need for the development of future goals for the state colleges in North Dakota is evidenced in the thinking in microcosm of several national figures. Eurich (1969, p. 108) states:

The very perils of the present make our scrutiny of the future not only defensible but absolutely necessary and long overdue. In higher education, the mistakes and myopia of the past are catching up with us today. Our failure to define our goals with precision; our failure to examine critically and to revise imaginatively our ways of teaching; our failure to put our financial houses in order; . . . all these failures are haunting education today.

Any coherent and intelligent attempt to manage the future of higher education includes certain essential ingredients:

- *A candid recognition of past mistakes
- *A sensitive awareness of major current problems
- .An intense desire to eradicate obsolete attitudes and practices.
- .Imagination and ingenuity in the search for better answers to pressing problems.
- .Careful planning that takes full account of all major aspects of higher education--from educational goals and instructional techniques to finances and administration.
- .Courage to act.
- .Effective activation of plans, and constant evaluation and re-evaluation of the results.

The ingredients cited in the foregoing paragraph are particularly pertinent for North Dakota as the state addresses its attention to long range planning in higher education.

Palola and Padgett (1971, p. 5) have suggested that:

Social and technological change will substantially modify the entire function of higher education in society. Recent literature predicts fascinating possibilities for education in the year 2000. There will be more commuter institutions, and emphasis on problem-solving in teaching rather than the development of competence with specific bodies of information, individualized instruction, a chemical transfer of learning, "university cities" characterized by a high degree of inter-relatedness and interdependence between university and urban institutions, increased mobility of faculty and students, between institutions of higher education, and programs of lifelong learning. Developments such as these would necessarily signal sharp reorientations in the accustomed ways of thinking about the process and organization of education.

North Dakota was one of the first states to adopt a single board for statewide control and supervision of its colleges and universities. Creation of such statewide boards has now become a trend in the nation and the development of a board in 1938 illustrates the fact that much latent potential for innovation exists in North Dakota.

Program formulation is the single most important task for planners. Decisions about finances, facilities and personnel are of secondary importance, although they may be consistent with program priorities.

The formulation of programs in North Dakota requires definite clarification. Attention must be immediately given to proposals for new programs, proposals to change or reshape existing programs, and proposals must be forthcoming to phase out or totally eliminate some of the existing programs.

North Dakota has had its educational planning involved with quantitative expansion and growth rather than the substantive development. The time for an assessment of the various disciplines in state colleges is here. Attention needs to be addressed to the problems of necessary and unnecessary duplications of major disciplines in the state colleges. Thus, the writer proposes a radical shift in the basic strategy. Personnel, finances, and facilities should be examined to see how they best support program objectives. Personnel and facilities should no longer determine the programs.

Unfortunately budgeting is a short-range, pragmatic, political process that often fails to take into account the long range educational plans. Budgeting therefore must take into account the need for a long range view of the four state colleges or planning will be an exercise in futility. The roles of the state colleges as they evolve must not be the result of ad hoc committees and other forms of temporizing.

Hefferlin (1969, pp. 39-40) has summarized the importance of resources to academic reform and role changing:

In short, the first key to academic reform is that of resources; an existing program will continue to exist as long as it can find support. A new program will be tolerated if it costs no money or it brings its own support. It will be resisted if the new funds it requires could be used for the expansion of existing programs. And it will be actively opposed and accepted only under duress if existing resources must be divided to include it. This tendency is the fundamental reason why the shape of academic change

has always been and continues to be predominately outside the educational system, for the resources that support the system overwhelmingly come from outside the institutions themselves.

Decision making about program formulation and reappraisal is a process that involves a close interplay of the tasks of initiation, decision, and implementation, and considerable negotiation occurs between institutional, segmental, and statewide levels. Program formulation must be viewed as an ongoing activity, continuously practiced, rather than engaged in only every 5 or 10 years. In part, it may mean developing requests for new programs; in another form, it necessitates important modifications of a current program; in still another, it may mean the complete removal of a program. This kind of program assessment has received only scant attention in North Dakota.

The constraints on the process of program formulation are mainly those of demonstrable need, availability of resources and competencies to nourish programs, maintenance of balance among political forces within a given higher education network, desirability of experimentation, and the short and long-range implications of various program decisions for the program itself, and for the institution that plans to offer the program. We need to explore new experimental programs with diligence in viewing the state colleges in North Dakota. Though we need new approaches and innovative strategies, somehow we must be able to gain the sympathetic support of legislative groups. Outcomes of some of the experimental ventures are apt to be very vague. Obviously, we will need to have some risk-taking for these ventures; but we must venture the risk.

The writer has found it most difficult to probe into the goal structure of educational organizations. The interests of those

associated with a given institution are easily aroused as questions are raised concerned with the advisability of changing the functions of an institution. Etzioni (1968, p. 167) argues that:

. . . decision making elites . . . tend to prefer the production of stable to transforming knowledge and seek closure on basic knowledge assumptions. One reason for this preference is that basic assumptions cannot be selected and reviewed on wholly empirical grounds . . . it is expensive politically, economically and psychologically for the elites to allow these assumptions to be questioned which is necessary if they are to be transformed.

Goal evasion is not a phenomenon restricted to the colleges in North Dakota, for Palola and Padgett (1971, p. 14) suggest:

Goal evasion then is one of the central planning problems facing higher education policymakers. In our interviews many faculty, administrators, and statewide coordinators expressed the concern that planning had failed to consider educational policy questions adequately and effectively. . . . There are, to be sure, some positive functions to be served by purposely leaving goals vaguely defined; the most obvious is to provide the institution maximum flexibility.

People on college campuses have a low irritation threshold. There is another dimension to goal clarification. Colleges and universities must muster the courage to admit that they cannot each excel in all fields of knowledge or offer all kinds of cultural experiences nor participate in all kinds of community service no matter how worthwhile.

Selznick (1960) emphasized in his discussion of critical decisions, the primary task faced by all formal organizations or networks of organizations, is the definition of their goals and purposes. Once defined, goals provide guidelines for making the day-to-day decisions which ultimately determine the success and survival of the organization.

Research tends to support the thesis that there are several key features involving goals. First, goal definition is a continuous process. Changes in the organization, or in the environmental forces impinging on

questions of educational policy to be openly debated and the resulting decisions facilitated, rather than inhibited, by considerations of efficiency and economy.

In Selznick's (1957, p. 135) words:

The cult of efficiency in administrative theory and practice is a modern way of overstressing means and neglecting ends. This is done in two ways. First, by fixing attention on maintaining a smooth-running machine, it slights the more basic and more difficult problem of defining and safeguarding the ends of an enterprise. Second, the cult of efficiency tends to stress techniques of organization that are essentially neutral, and therefore available for any goals, rather than methods peculiarly adapted to a distinctive type of organization or stage of development.

Institutions, segments, and statewide agencies must divide the labor of program formulation; the institutions' major task is to define the program needs; the statewide agencies' task is to define broadly the missions and roles of its segments so that (statewide needs) public interest are adequately met.

References to public interest are vital. In the fields of education and political science one notes references to "the public interest" rather frequently. Lindblom (1968) characterizes current usages of the term when he says, "clearly there is no general agreement on what constitutes the public interest." Lippman (1955) discusses the term and, in general, suggests that what the largest number of people want constitutes the public interest. He points up, however, that such a definition is unrealistic because the will of the majority is predicated on the belief of "what men could choose if they say clearly, thought rationally, acted disinterestedly and benevolently."

But a more realistic approach would define "the public interest" in important matters in higher education as the product of two forces--

the perceptions and efforts of the professional staff of statewide planning agencies and political factors. Several types of items may constitute issues of public policy.

A second factor important in defining the public interest has been clearly defined by Palola (1971):

It must always be remembered that no planning scheme removes the political implications of decision-making. It's always better to have a valid political solution to a problem than something which looks "rational" according to some planned studies. Without valid political solutions, we'd end up with chaos!

CHAPTER IV

ANALYSIS OF DATA

Historical Perspectives

The roots of the state teachers' colleges in North Dakota go back to the rapidly expanding public school systems of the past century. The public school system was a rapidly growing system which was responding to public desire for elementary and secondary education for all. Moreover, the state teachers colleges were designed and established to serve those elementary and secondary schools. Accordingly, the state colleges provided a service which in its time was both needed and valuable.

Nationally, few observers sensed the winds of change early enough to point to the necessity of giving study to changing roles for state colleges. On November 16, 1966, Earle Hawkins, President of the Association of State Colleges and Universities, made these comments in an address at the annual meeting of that organization at Washington, D.C.

The state colleges and universities have historically had a curriculum which was both culturally and occupationally oriented. Most of them prepared teachers; some, agriculturalists, some accountants. They attempted to fit young people both to live and make a living.

Students of manpower needs show that significant changes are occurring with great rapidity; many of them due to the increasing development of automation. Since 1957, the annual dollar value of services has exceeded that of goods. Professions and occupations involving areas of service are becoming increasingly important (H. Hawkins, 1966).

One cannot fail to note that Hawkins was particularly alert to the need for changing roles in the state colleges, for he went on to say:

It would seem essential that they (state colleges) seek to identify the educational services needed by our society which these institutions may be particularly qualified to render. Some of these may lead to programs never before offered by institutions of higher education. It would seem equally important to establish guidelines which may enable each institution to determine what its own major purposes should be and how it could be of service in its region (Hawkins, 1966).

Despite this enunciation as early as 1966, very little national concern was shown for the imperatives of change--in any marked degree. During the spring of 1971 the problems involved with the placement of the graduates who were trained and educated to teach manifested a serious situation of over-supply. The dilemma had been imminent for some time, yet one can find but few institutions which suggested or had initiated change; importantly the initiative must come from the academic community. Millard has suggested that: "If the academic community does not seek the initiative, it is all likely to be seized for us and seized in a way that can destroy real autonomy and threaten basic academic integrity itself" (Millard, 1971).

No written statements have been found that would indicate that some specific alternatives have been posited in North Dakota for its state colleges. The 1971 fall enrollment drop caused other constituencies to seize the initiative rather quickly (Grand Forks Herald, October, 1971). The academic community had been lulled into a sense of false security in their previous roles. In North Dakota during the entire decade of the sixties, higher education was perceived by the lay public and the state legislature in a most favorable image. Enrollment was constantly growing and despite the national warning no moves were made in the direction of substantial changes of focus and purpose on the part of state colleges. One could suggest that fortresses were being built against change.

A survey report written in 1958, Higher Education in North Dakota, under the directorship of Ernest Hollis, Department of Health, Education, and Welfare stated: "Objectively, the outside observer must conclude that the history of higher education in North Dakota has been one of considerable confusion and much competition among the institutions" (Hollis, 1958). The authors continued to note in the narrative report that interinstitutional planning or coordination was characterized by the terms "voluntary" and "informal"; moreover the degree to which the coordination was carried out was determined by the presidents of the institutions.

To be sure, there appears to be a lack of clear determination of what should be the main functions and programs of some of the institutions (for example, the Board deliberated at length during the summer of 1958 on the proposal by Dickinson State Teachers College that it offer the degree in Business Administration and then refused the request), but in most respects the colleges know what the others are doing and have an accepted understanding of the role of each institution in the total State-supported system (Geiger, 1958).

Despite this note of criticism, and the recommendation concerned with planning, coordination, and governing of higher education, one would have to note that all institutions carried on their programs during the years following the report in much the same manner as they did at the time of the written report.

Over the years, the long-range plans for the four state colleges have relied heavily upon the statutory definitions of their functions. One of the college presidents in one of the four state colleges in North Dakota had this to say when queried about the institution's efforts in planning alternatives:

As you know, the role of the state colleges is limited by statute. The amendment to the constitution which established the State Board of Higher Education gave the State Board a little leeway.

However, the master plan prepared by the State Board tends to follow the guidelines set forth in the constitution. Even new programs must have legislative committee approval so that any major change in the role of the state colleges will require legislative approval (Jenkins, 1972).

Gordon Olson, President of Minot State College, has written:

I personally feel that the state colleges should be permitted to expand their offerings in order to assume a role so that they will have a broader basis of support. I also feel that we will find it necessary to be more selective in admitting students into teacher education programs (Olson, 1972).

The Valley City State College president, Howard Rose, has expressed this observation:

It is our feeling that there will have to be long range planning done on the statewide level as well as the campus level. It certainly seems possible that one or more of the present state colleges would become two-year institutions or branches of the universities. In any event, efforts must be carried on at a state-wide level to carefully phase goals of the individual institutions and the state-wide system (Rose, 1972).

The four state colleges which are the focus of this study now offer four year programs which are predominately for the training of teachers both at the elementary and secondary level. These four teacher training institutions are organized and administered along very similar lines. All of them emerged from institutional types known as normal schools. The state college located at Valley City was the first of the group to be authorized the right to grant the bachelor's degree. This authorization was given in 1921 by the Twentieth Legislative Assembly. Thus, the institutional task was extended to include the training of secondary teachers as well as elementary teachers. Similar authorizations were granted to the other three institutions of this group within a few years of Valley City authorization: Minot in 1924, Dickinson in 1932, and Mayville in 1925.

Pertinent Documents

Since the enunciation of the roles of the state colleges of higher education in North Dakota by the legislature, the idea prevailed that little change, if any, would be forthcoming in the total structure of higher education in North Dakota. Even the John Dale Russell study (1964) and the study which was done by the survey team of the U. S. Office of Education (1958) tended to report on conditions as they existed. There is no evidence to suggest that those involved in those studies saw the need for recommending the formulation of alternatives to the teacher education functions of the four state teachers colleges.

The Board of Higher Education compiled A Working Master Plan for Higher Education in North Dakota Colleges and Universities in 1968. This plan was designed for the orderly development of state institutions of higher learning. The plan as it related to the state colleges, involved in this report, tended again to outline those goals which had long been in existence. Again, it must be suggested that no recommendations with reference to changing or emerging roles were made. The plan tends to report the status quo. At the time of the publication, higher education in North Dakota was enjoying constantly rising enrollment levels and the fiscal parameters of support from the state legislature were consistent with patterns of growth. Many persons in the state college systems felt that the demand for teachers would be constant. No motivant for a serious study of change was apparent.

The Master Plan suggests that all institutions initiate a program of institutional self-study and evaluation with a view toward the use of resources in the most efficient manner possible. There is no data which

would support the contention that institutions suggested any alternatives to teach education as the primary role. Any study and improved utilization of resources tended to be designed to augment the teacher-education role as it was perceived by the four state colleges.

Another recommendation which appeared in the Master Plan under a subsection entitled "Interinstitutional and Regional Cooperation," must be cited because of its relevancy. "North Dakota colleges and universities should explore and develop all feasible avenues of interinstitutional cooperation in order that the total higher education resources of the state might be utilized to the fullest" (A Working Plan for Higher Education, 1968).

As early as 1968-1969, the legislature began to voice its concern with regard to the escalating costs, matters of course duplication, and more efficient utilization of faculty and facilities. This concern took form in House Concurrent Resolution No. 54 under the sponsorship of Representative Arthur Link, et al.

The resolution is reproduced in its entirety because to delete any portion of it would detract from the importance of the content.

Study of Overlapping of Courses at Institutions of Higher Education

WHEREAS, the Legislative Assembly of the State of North Dakota recognizes that there is a need for the most efficient utilization of faculty and facilities of the institutions of higher education in order to offer the best possible education to the students of the State; and

WHEREAS, the fact that during the present biennium the appropriation for higher education is some twenty-nine and one-tenth per cent higher than during the prior biennium, and the Executive Budget for the coming biennium suggests a twenty-three and six-tenths per cent increase over the present biennium, indicate that the most careful evaluation must be made to insure the highest

degree of efficiency in the utilization of the funds available for higher education; and

WHEREAS, because appropriations for higher education inure to the direct benefit of only a portion of the youth of the State of North Dakota, every effort must be made to avoid the unjustified duplication of programs, particularly in advanced and four-year degree-granting programs in order to assure that a portion of the educational dollar can be made available for the education and training of youth of the State not pursuing in the academic field; and

WHEREAS, the increasing student enrollments and the ever-increasing costs of providing adequate educational opportunities are creating financial problems which may seriously weaken the quality of education offered by the State unless the limited funds that are available and will be available are expended in the areas of greatest need in as efficient a manner as possible, giving the greatest possible return in higher education for each dollar expended;

NOW, THEREFORE, Be It Resolved by the House of Representatives of the State of North Dakota, the Senate Concurring Therein:

That the Legislative Research Committee with the assistance of the Board of Higher Education and personnel employed by the Board, is thereby directed to conduct a continuing study of the overlapping of courses and the use of instructional services to avoid the unjustified duplication of instruction, teaching loads and hours, standards for the evaluation of the qualifications of instructors; and to evaluate and update the previous studies regarding instructional programs and space utilization at the state institutions of higher education; and to make its report and recommendations thereon to the Forty-second Legislative Assembly, together with any legislation required to carry out such recommendation.

If high schools had not sprouted all over the state, there would not be the cadres ready to go on to college. In North Dakota over the past four decades the sheer numbers of high schools were responsible in some measure for the growing numbers of students in colleges.

The number of high schools, indeed the number of school districts in the state of North Dakota, had an important consequence, namely, an enormous demand for college trained personnel to teach in the elementary and secondary schools. There existed a great need for people to teach the teachers--a kind of academic multiplier effect.

In the decade of the sixties the rapid strides made in the state reducing the number of school districts through reorganization programs suddenly reversed the multiplier effect. Suddenly the number of teachers needed was not as great; colleges were still producing personnel as though the demands were high--thus the stage was set for a surplus of teachers.

The enrollment projects which did not materialize have become a source of considerable embarrassment. Some legislators have expressed the thought to the writer that "We were led down the primrose path." The failure of enrollments to materialize reflects several factors, not the least of which is the realization that the possession of the degree does not guarantee employability as has been the case a few years ago.

Legislative Assessment

The thinking of members of a legislative body has been considered earlier in this study as a vital dimension in any role changing recommendations for higher education in any state. The significance of this legislative reaction has been pointed out in Chapter III of this study. The changes which were made in all cases came as a result of careful consideration of the political implications of all levels of decision making in role changes involved with higher education. With this fact in mind, the attitudes of members of the legislature who served in the 42nd Legislative Assembly for the state of North Dakota were assessed.

The assessment of the legislator responses of the 42nd Legislative Assembly of North Dakota was handled by a statistical analysis in this chapter. Following the statistical analysis of the Legislative Assembly responses, the chapter deals with detailed comments concerning the four state colleges of North Dakota which are the subject of this study.

These comments were from letters sent to the writer by various key legislators who served during the 42nd Legislative Assembly of North Dakota. These key legislators are those whose leadership roles were significant during the past two or three legislative sessions in North Dakota. These leadership roles involved positions on the appropriations and education committees. In addition, the men who were elected to serve as majority and minority leaders in both the House of Representatives and the Senate of the 41st and 42nd Legislative Assemblies in North Dakota were also considered as key legislators.

During the latter half of October and the first two weeks of November, a questionnaire was prepared and submitted to each of the members of the 42nd Legislative Assembly of North Dakota. The questionnaire was designed to elicit the attitudes of members of the legislature toward specific questions relating to the state colleges (see Appendix A). This paper is concerned with specific questions on the questionnaire and the responses which were elicited.

The questionnaire had a 60% return; conclusions are based upon those 90 responses. An almost equal percentage response was received from members of the House and members of the Senate. The writer would posit that the 90 returns provide a reasonably adequate number of responses to support the tentative conclusions.

Treatment of Data

Each of the questions was checked for the responses given. Each of the pages of responses was marked to indicate whether the response was obtained from a member of the House of Representatives or from a member of the Senate. Further, each response was marked to note whether the

legislator was from a "college town" or whether the legislator was from a community that could be clearly labeled non-college. Tabulations of the data were then made.

A null hypothesis was stated for each question involved in the analysis of the legislative attitudes. The first null hypothesis stated that there is no significant difference in attitude among the members of the House of Representatives and members of the Senate with reference to the statement that each of the four state colleges should be planning alternatives to teacher education.

The first statement analyzed by the chi square method is shown in Table 1. The observed frequencies have been taken from tabulations from the questionnaires returned.

TABLE 1

THE CHI SQUARE ANALYSIS OF THE ATTITUDE OF LEGISLATORS OF THE 42ND LEGISLATIVE ASSEMBLY TOWARD THE STATEMENT THAT EACH OF FOUR STATE COLLEGES SHOULD BE PLANNING ALTERNATIVES TO TEACHER EDUCATION

		Observed Frequency	Expected Frequency	(O-E)	$\frac{(O-E)^2}{E}$
Senate	Yes	21	22.67	-1.67	.123
	No	9	7.33	1.67	.379
House	Yes	47	45.33	1.67	.061
	No	<u>13</u>	<u>14.67</u>	-1.67	<u>.189</u>
		90	90		.752

$$\chi^2 = .752; P \geq .01, \chi^2 = 6.635, df = 1$$

Thus, the data supports the null hypothesis. The writer must conclude that there is no difference in attitudes between the two houses

of the legislature on the statement; moreover, of those reporting, 78% of the members of the House of Representatives and 70% of the members of the Senate have signified by their responses that the four state colleges should be planning alternatives. Alternative models appear to be the subject for a viable recommendation to be made to the Legislative Assembly for action.

The second null hypothesis stated that there is no difference between the attitudes of the members of the House of Representatives and members of the Senate of the 42nd Legislative Assembly concerning the statement that we need to eliminate some of our four year state colleges. The attitudes toward this statement are analyzed by the chi square method in Table 2.

TABLE 2

THE CHI SQUARE ANALYSIS OF ATTITUDES OF THE 42ND LEGISLATIVE ASSEMBLY
TOWARD THE STATEMENT THAT WE NEED TO ELIMINATE SOME OF THE
STATE COLLEGES

		Observed Frequency	Frequency	(O-E)	$\frac{(O-E)^2}{E}$
Senate	Yes	28	24.33	-3.67	.2767
	No	2	5.67	3.67	1.1888
House	Yes	45	48.67	3.67	.55
	No	<u>15</u>	<u>24.33</u>	-3.67	<u>2.37</u>
		90	90		4.385

$$\chi^2 = 4.385; P \geq .01, \chi^2 6.635, df = 1$$

Thus, the data supports the null hypothesis. Since there are no significant differences in attitude, it must be concluded that both

bodies of the Legislative Assembly would support legislation designed to close some of the state colleges. Responses to the questionnaire indicated that, of those reporting, 93% of the members of the Senate and 75% of the members of the House of Representatives indicated a positive response to the question.

The third null hypothesis stated that there is no significant difference between attitudes of legislators who are identified as living in college towns or those legislators who are living in communities which are clearly non-college towns regarding the closing of some of our four state colleges. This analysis of attitudes by the chi square method is shown in Table 3.

TABLE 3

THE CHI SQUARE ANALYSIS OF LEGISLATORS WHO DO OR DO NOT LIVE IN COLLEGE COMMUNITIES REGARDING THE CLOSING OF SOME OF OUR FOUR STATE COLLEGES

		Observed Frequency	Frequency	(O-E)	$\frac{(O-E)^2}{E}$
Legislators (College Towns)	Yes	24	25.14	-1.14	.0517
	No	7	5.86	1.14	.2218
Legislators (Non-college)	Yes	49	47.86	1.14	.0272
	No	<u>10</u>	<u>11.14</u>	-1.14	<u>.1167</u>
		90	90		.4174

$$\chi^2 = .4174; P \geq .01, \chi^2 = 6.635, df = 1$$

Thus, the data supports the null hypothesis. Of those reporting, 80% of the legislators residing in college towns responded yes to the questions regarding the closing of the state colleges while 83% of the legislators who do not live in college communities responded yes to the

closing of some of the state colleges. Accordingly, the place of residence has little effect upon the attitudes of members of the 42nd Assembly. (It is an attitude that the writer finds somewhat surprising.)

The fourth null hypothesis stated that there is no significant difference between attitudes of members of the House or members of the Senate of the 42nd Legislative Assembly concerning the statement that we need to maintain at least two of the state colleges at the four year level and the other two at the two year level of preparation. This statement is analyzed by the chi square method in Table 4.

TABLE 4

THE CHI SQUARE ANALYSIS OF ATTITUDES OF MEMBERS OF THE HOUSE OF REPRESENTATIVES AND MEMBERS OF THE SENATE TOWARD THE STATEMENT THAT WE NEED TO MAINTAIN AT LEAST TWO OF THE STATE COLLEGES AT THE FOUR YEAR LEVEL AND THE OTHER TWO COLLEGES AT THE TWO YEAR LEVEL OF PREPARATION

		Observed Frequency	Expected Frequency	(O-E)	$\frac{(O-E)^2}{E}$
House	Yes	40	32	8	2.00
	No	20	28	-8	2.2857
Senate	Yes	8	16	-8	4.0
	No	<u>22</u>	<u>14</u>	8	<u>4.57</u>
		90	90		12.8557

$$\chi^2 = 12.8557; P \geq .01, \chi^2 = 6.635, df = 1$$

The data does not support the null hypothesis. It is possible to adumbrate the alternate hypothesis that the significant difference in attitude is the result of the fact that members of the Senate are often legislators of longer tenure; they have been concerned with future roles

of state colleges for a longer period of time and their thinking has crystallized concerning the closing of some state colleges. Table 2 provides data which supports this premise. Thus it appears that members of the Senate of the 42nd Legislative Assembly would choose to close some state colleges rather than assign two year level functions to two state colleges and four year level functions to two state colleges.

The letters received from 25 members of the 42nd Legislative Assembly of North Dakota were a source of information which made it possible to identify legislative concerns which were germane to the study of the roles of the remaining four state colleges. While some of the peripheral aspects of higher education were the subject of some treatment by those who wrote letters, the respondents showed a remarkable degree of homogeneity in what they considered as crucial issues. As one might expect, the principal concern of key legislators who prepared letters was involved with financing higher education in North Dakota.

Senator Roen, member of the Education Committee, had this comment:

North Dakota cannot continue to increase support for tax resources. We lead the nation--or very near the top--in support of education per capita. With student enrollments leveling off there must be a limit somewhere (Roen, 1972).

Senator Wayne Sanstead tends to echo the comments made by his colleague:

I am interested in your concern for further higher education coordination before any expansion of existing programs or expenditures. Continued higher education increases and support from a financial point of view are impossible. At the same time I am firmly opposed to extending those increased cost factors to the students (Sanstead, 1972).

Senator Robert Melland who has served on the appropriations committee takes a somewhat different position on the matter of higher education support:

I feel that tax support for higher education is a relative thing. We are currently in a period of time when great emphasis on higher education is placed with general concurrence of taxpayers. I sense a transition in thinking from academic to occupational emphasis currently underway. There is no reason, in my opinion, to de-emphasize higher education but there may be a need to reevaluate and reappraise the role of higher education. The present high level of tax dollars going into higher education would probably be reduced because of public sentiment but the dollar level may be sustained in the light of new tax resources (Melland, 1972).

A considerable body of legislative thought to ease the financial dilemma which confronts the legislative body has been expressed in areas concerning apparent duplication of college services in North Dakota. Legislative thinking might be characterized by one North Dakota representative statement:

There certainly is a great deal of thought being given by legislators and other political leaders to the apparent duplicity of college services in North Dakota. At a time when our North Dakota population of primary and secondary school children seems to have reached its peak, and possibly is declining, the need to continue to educate large numbers of teachers raises many questions of educational priorities. The Legislature in the future will be more inclined to critically review the functions of the State Colleges (Gackle, 1972).

The study has alluded to this question of duplication elsewhere, and while it may seem that the matter is a perennial issue, there is reason to believe that economic stress, diminishing population, and present attitudes will force a serious confrontation with matters of duplication of college programs. The judgment is specifically made in a letter from an attorney:

I am interested in higher education duplication. For my part there will be no increase in expenditures for higher education. Something needs to be done in those state colleges. They are all doing the same thing and if the Board of Higher Education fails to do something meaningful, the Legislature will (Graham, 1972).

A member of the House of Representatives wished to have his comments treated in confidence but one comment which he made is relative to this study:

It is always possible to find some means of increasing support from tax resources for every governmental function. Higher education normally enjoys a higher degree of political popularity in seeking taxation support than does other governmental activity.

A summary of the attitudes on the question of financial support to higher education shows general concern in attempting to maintain the number of institutions of higher education in the state. Evidence has shown in this chapter that one way to alleviate the cost of higher education in the state would involve phasing out other state colleges. This was done during the 42nd Legislative Assembly in the case of the state college at Ellendale.

Financing higher education in North Dakota has resulted in pressure from school boards across the state. From the statements of legislators, one discerns the fact that legislators have been subjected to increasing criticism from their own constituencies regarding secondary school support. School board members tend to feel that higher education gets too great a share of the tax dollar somewhat at the expense of secondary education.

Colleges and universities in the state of North Dakota have given consideration to increased student fees as a possible solution to the rising cost dilemma. Ostar (1969) has suggested that there has been an obvious shift in thinking with reference to increasing tuition.

Today the legislator views the student as the primary beneficiary of higher education and since the student enjoys an improved academic status as a result, it is the feeling of many legislators that the student should participate in the costs of higher education at a greater level than he does at the present time (Ostar, 1969).

CHAPTER V

SUMMARY, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

Summary

The state colleges in North Dakota can reflect proudly on their demonstrated ability to serve the elementary and secondary schools. During the past three decades the primary service was involved with the training and preparation of elementary and secondary teachers. In addition, the state colleges were somewhat concerned with competently trained manpower for other endeavors where the possession of a degree was considered an important component in employability.

During the two decades which lie just ahead it is obvious that there is and will continue to be a shrinking job market for new teachers (see Table 5). Thus, those institutions in North Dakota which are to be assigned continuing roles in teacher preparation will, of necessity, need to adjust to the realities of the market. Close attention will be necessary to more carefully screen the applicants for teacher education and greater emphasis placed on retraining teachers in subject areas where severe shortages still exist will have to be given definite priority. Concomitant types of teaching activity will need to be explored for it is quite apparent that teaching-type work will be involved in community development and leisure-time programs. Special adjustments to meet these needs can be made; adaptability will be of some importance in rethinking and restructuring existing training

programs. With the recently published statements of concern by the Board of Higher Education, it is obvious that the governing constituencies are concerned that all of the state institutions address themselves with the realities of the future manpower needs of the state.

With the concern that has been expressed by the various members of the legislature, interested lay persons, the press, and the board of higher education, it would seem that the time to work in the direction of purposeful change is here. All constituencies have reached a point where purposeful discussions and dialogue might result in some viable alternatives to the present focus of the four state colleges.

A Study of Program Offerings and Factors Effecting Instructional Salary Costs in Major Curricula at the Four State Colleges, a dissertation by Larry Grooters which was completed in December of 1971, and a dissertation by Orlo Sundre entitled A Study of Institutional Efficiency for Selected Curricula at North Dakota State Colleges, which was completed in 1970, focus attention on specific aspects of the overall problems which face the four remaining state colleges. Grooter's analysis of the instructional cost differences reflect a very low level of instructional salary costs per credit hour. An educated analysis of this set of data would tend to support the idea that low instructional costs tend to reflect heavy teaching loads, or low salaries, or both. This combination of factors coupled with the knowledge that library facilities in the state colleges are not considered adequate would lead to the conclusion that they are not able to provide a quality educational experience unless the legislature shows an increasing dollar commitment to bring these institutions to a quality level.

Earlier in this study legislator opinion was indicated as being opposed to any increase in dollar expenditure for higher education. If in fact this is the case, then it becomes apparent that something else will have to be done.

The Sundre study provides evidence that there is unnecessary duplication of some major/minor curricula. The Sundre conclusion is based on the instructional efficiency as well as the graduate production of the curricula comparisons among the institutions. The Grooter dissertation and the Sundre study provide evidence which when taken with legislator reaction, the focus of this study, gives support for the recommendations made in this chapter.

The demographic trends in North Dakota were noted in an earlier chapter and it appears that the state shall not expect anything in the future except diminishing enrollments for the state colleges. The trend for this decrease began to manifest itself in the fall enrollment pattern in 1971 despite the optimistic projections of Cox and Ostenson which are now of dubious value (see Table 6).

While this chapter will recommend some specific areas which need to be considered as alternatives or options to the present teacher training role, it must be posited that the faculties of the colleges, students, or the legislative body may suggest other areas which need exploration. The specific academic course which would be used to support the curricula or areas suggested should include certain rather definite characteristics as suggested by Mitau (1971).

Learning-special and general- would emphasize the development of problem solving skills rather than narrow expertise; the focus would be interdisciplinary rather than disciplinary. If we are to train students for the future we must provide them with the capacity for continuous learning so that as job requirements

change individuals are better equipped to adapt. The knowledge explosion and the rate at which current information becomes obsolete have rendered impractical an education that teaches specific facts as ends in themselves. Rather, should should have an awareness of the information that exists at a given time, the knowledge of how to retrieve it and evaluate it, and the ability to use it in the decision-making process. Students must have the kind of education that permits them to deal with rapid change.

A degree in the areas mentioned (or other areas that are yet to be defined) would be obtained in three calendar years and include an internship with the job training in a hospital.

A program based budget would make more explicit resource allocation, hopefully facilitating more sophisticated cost-benefit considerations while at the same time making possible the kind of fiscal flexibility that would be supportive of curricular innovation.

The tentative roles which are suggested for the state colleges are predicated upon characteristics concerned with geography, present clientele, present major production and the mobility of the student population as well as the legislator reaction.

In a recent statement concerning the agenda for higher education in the next decade, John Gardner (1968, p. 3) put it in this way:

To make adequate preparation for them (influx of students) is going to require better planning within institutions, far better planning on a statewide level, and an attentiveness to the economics of education greater than any we have exhibited in the past. We are going to learn some hard lessons about planned diversity among institutions and about cooperation among institutions.

Gardner's statement seems to hold particular significance for North Dakota. The analysis of legislator reaction which was examined in Chapter IV would suggest evidence for the pertinence of applying Gardner's statement to the four remaining state colleges in North Dakota.

Conclusions

Based upon the returns from the questionnaire which were analyzed by the chi square method support the following conclusions:

1. There is no significant difference in attitudes of members of House of Representatives and members of the Senate of the 42nd Legislative Assembly toward the statement that each of the four state colleges should be planning alternatives to teacher education. Since 70 percent or more of the legislators indicated the need for planning alternatives one can conclude that legislative opinions would support change in roles for the four state colleges.

2. There is no significant difference in attitudes of members of the House of Representatives and members of the Senate of the 42nd Legislative Assembly toward the statement that we need to eliminate some of the state colleges. Responses from both legislative bodies indicated a positive attitude toward closing some of the colleges.

3. There is no significant difference between attitudes of legislators who live in college towns or those legislators who are living in areas which are clearly non-college towns toward the closing of some of our state colleges in North Dakota.

Recommendations

From the results of this study the following recommendations seem appropriate:

1. Based upon studies available and considering the legislative attitudes, it appears that the state college at Minot is the only one of the state colleges which should continue in a teacher training role as its primary function. The population in that area and the needs of the state should continue to make possible the viability of a teacher training institution at Minot. Concomitant to the continuance of the teacher education program at Minot would be a strong

commitment to explore new approaches in teacher education. Course distribution should be more flexible; experimentation in interdisciplinary focus would be suggested; experimentation in teaching-learning should be considered. In short, attention must be given to loosening the current models.

It is recommended further that explorations also be made with reference to the development of other programs to meet the needs of the state of North Dakota. Table 1, Chapter IV, provides evidence of legislative thinking regarding alternatives.

2. Table 2 in Chapter IV of this study provides statistical evidence for legislative reaction to the question of eliminating some of our state colleges. There appears to be a body of legislative opinion which would recommend the closing of the Mayville State College. It is recommended that further study be made regarding the closing of this state college. An examination of the number of graduates by major fields of concentration reveals that the number of students involved could easily be absorbed by the two universities in North Dakota (see Table 7).

3. It is recommended that further study be made relating to phasing down the state college at Valley City to a two year level operation. There appears to be a body of legislative opinion which supports the phasing down of the state college program at Valley City to a two year level. The rationale which was expressed by some of the legislators could be summarized by stating: the propinquity of Valley City State Teachers College to North Dakota State University and Jamestown College obviates the necessity for continuation of a four-year teacher training institution at Valley City. Several community colleges in Iowa have

established curricula which can provide areas of study and curricula suggestions which are worthy of consideration for the college at Valley City.

4. It appears that a body of legislative opinion would support the idea that the State Teachers College at Dickinson, North Dakota should continue for the time being as a degree-granting institution. The degree granting capability, however, would not include teacher preparation. The thrust of educational degree programs would be three and four year types of programs involved with some of the options which Mitau (1971) has suggested for the Minnesota State Colleges. The specifics however should be determined by members of the faculty working with other constituencies charged with higher education responsibilities in North Dakota. The emerging degree programs should be innovative, exploratory, and oriented strongly to needs of the population of North Dakota in a specialized way.

5. A master plan for higher education has been indicated as a frequently expressed need by legislators. The concerns expressed by the legislators are aptly summed up by Millett (1965):

A state master plan in higher education must have some relationship to available or realistically prospective financial resources. We cannot expect to set goals beyond the limits of our ability to pay and have anyone else take the goals seriously. The real test of this part of the master plan enterprise is to determine what is reasonable support of higher education. This is not easy to answer, because state higher education support is a part of state financial planning and because state financial planning is a part of politics. We can only hope that in the political process of taxation, borrowing, and spending, higher education planning can present its needs comprehensively and justify its objectives reasonably.

If a statewide plan is to be successful, the importance of effective leadership coalitions of the various groups in the higher education network cannot be stressed enough. One close participant in these coalitions (Gould, 1966, pp. 3-4) puts it:

The more subtle personal contacts which are the warp and woof of the fabric of this (college-state government) relationship defy rules and definitions and formulas. They differ in every single instance, even though they are the true means by which the delicate balance of authority, responsibility, and interdependence existing between the university and state government is maintained, or, when matters go awry, is upset. They represent the interplay of these personalities the development of attitudes on the part of these personalities reflecting a clear understanding of respective roles and motivations, and most of all the creation of a climate of mutual trust and respect.

On the basis of the evidence obtained in the survey of legislators by means of the questionnaires previously mentioned, it would appear that the stress of economic pressures will finally resolve at least a portion of the "too much mistake" to which Robinson (1966) alludes. Unfortunately it has taken a kind of crisis to promulgate the serious consideration of alternatives for higher education in North Dakota which took place at the Medora Conference on June 22-23, 1972. One would expect that the educational leadership of the state of North Dakota would have been in the vanguard of suggesting change despite statutory considerations. Such was not the case. As the situation reached serious proportions with a diminishing teacher market and pressing economic considerations, then the motivation, borne out of pressure, resulted in position papers for two state college Presidents as well as a response from the University of North Dakota, all invited by the Board of Higher Education.

APPENDIX A

In an attempt to discern present political opinion with reference to the four State Colleges at Mayville, Valley City, Minot, and Dickinson, we should like to have your responses to the following questions:

	YES	NO
Each of the four state colleges should be planning alternatives to teach education.	_____	_____
All of the four year colleges should continue to offer four year programs, but not necessarily four year teacher-preparation programs.	_____	_____
We need to eliminate some of our four year institutions of higher education.	_____	_____
We need to maintain at least two of the state colleges at the four year level and maintain the other two state colleges at a two year level of preparation.	_____	_____
All of the present four year institutions should be maintained at a two year level of preparation.	_____	_____
Of the four state colleges, Minot should be the only state college which continues to serve a teacher education role.	_____	_____
Of the four state colleges, Dickinson should be the only state college which continues to serve a teacher education role.	_____	_____
Of the four state colleges, Valley City should be the only state college which continues to serve a teacher education role.	_____	_____
Of the four state colleges, Mayville should be the only state college which continues to serve a teacher education role.	_____	_____
Would you support a higher education program which recommended one state college serving a four year teacher education program and one state college with four year programs in areas other than teacher education?	_____	_____

October 28, 1971

Mr. Howard Bier
Hazelton
North Dakota

Dear Representative Bier:

During the course of this school year, I am going to devote a good deal of time to a careful study of the four State Colleges which are currently involved with teacher preparation functions. This study will focus attention upon the future roles that these institutions might validly serve.

In an era of constantly escalating costs in higher education and diminishing tax resources, one wonders what approaches we will make in the future. It would appear that a resolution of the dilemma will be made "in the public interest." To me, a realistic approach would define the public interest in matters in higher education as the product of two forces---- the perceptions and efforts of the professional educators and political factors.

Accordingly, your opinions are earnestly solicited in recognition of roles you have served in varying political responsibilities. Would you take a few moments of your time to react to the following questions? You will not be quoted. Your reactions will be held in strict confidence.

1. Can North Dakota continue increasing support for higher education from tax resources?
2. At what dollar level of financing would you expect legislative hostility?
3. Does higher education have a tarnished image in North Dakota today?
4. What, in your view, should the role of four State Colleges be?
5. Have you ever considered the merits of assigning the first two years of college work to the State Colleges and the upper division and graduate responsibility to the two Universities in the State?

Your reply would be appreciated.

Yours truly,

M. W. Andresen
Department of Speech

MWA/lkh

January 26, 1972

Dr. T. S. Jenkins, President
Mayville State College
Mayville, North Dakota 58257

Dear Dr. Jenkins:

In connection with my final work at the University, I am doing a study of future roles of State Colleges. Members of the forty-second Legislative Assembly have been queried as a part of the investigation, as well as various influential persons in the state.

It is quite necessary that the thinking of college administrators be reflected in an analysis of future roles. Would you be kind enough to send me comments concerning your perceptions of the roles which our State Colleges might appropriately serve? Any commentary which describes some of the alternatives to teacher education, which you have thought about, would be of particular pertinence and interest.

Sincerely yours,

M. W. Andresen
Gallery Apts. 306D
615 N. 39th Street
Grand Forks, North Dakota
58201

MA;ma

APPENDIX B

TABLE 5

SUPPLY AND DEMAND FOR BEGINNING TEACHERS IN PUBLIC SCHOOLS FROM
1960 TO 1971 AND PROJECTED TO 1980

Year	Elementary School (000's)			Secondary School (000's)		
	Supply	Demand	Difference	Supply	Demand	Difference
1960	43.8	66.8	-23.0	53.7	55.3	- 1.6
1961	43.2	53.0	- 9.8	53.5	72.8	-19.3
1962	48.2	59.6	-11.4	58.5	62.2	- 3.7
1963	51.6	65.4	-13.8	66.7	82.8	-16.1
1964	60.5	78.5	-18.0	70.3	77.5	- 7.2
1965	64.8	71.1	- 6.3	77.8	77.6	0.2
1966	64.7	88.3	-23.6	84.6	78.8	5.8
1967	63.8	83.3	-19.5	88.1	75.8	12.3
1968	76.1	87.0	-10.9	99.4	90.6	8.8
1969	86.3	84.7	1.6	112.5	94.2	18.3
1970	91.5	61.3	30.2	126.5	79.7	46.8
1971	103.4	46.9	56.5	125.7	78.4	47.3
1972	104.1	37.0	67.1	130.0	78.9	51.1
1973	108.6	32.2	76.4	135.7	83.3	52.4
1974	113.1	33.2	79.9	141.2	75.8	65.4
1975	118.2	38.3	79.9	147.7	69.9	77.8
1976	123.0	44.6	78.4	153.7	65.6	88.1
1977	128.0	54.3	73.7	159.9	57.0	102.9
1978	132.4	61.5	70.9	165.4	51.9	113.5
1979	137.1	74.1	63.0	171.2	38.5	132.7
1980	139.7	--	--	--	--	--

TABLE 6

ACTUAL 1920 - 1970 AND ESTIMATED - 1980 POPULATION
SELECTED NORTH DAKOTA DATA

	North Dakota	Cass	Grand Forks	Ward	Burleigh	Four County Total	Non-Four County Total
1920	646872	41477	28795	28811	15578	114661	532211
1930	680845	48735	31956	33597	19769	134057	546788
1940	641935	52849	34518	31981	22736	142084	499851
1950	619636	58877	39443	34782	25673	158775	460861
1960	632446	66947	48756	47072	34016	196791	435655
1970	617761	73653	61102	58560	40714	234029	383732
(1980)	600000	81594	67607	64757	45071	259029	340971

TABLE 7

UTILIZATION OF ACTUAL STUDENT STATIONS IN GENERAL CLASSROOMS - FALL 1971

Institution	Student Contact Hours	Actual Stations	Square Feet Per Station	Average Number Station/Room	Average Number/ Station Used Per Week	Stations Used Ind. Based on 18 Hr. Wk.
N.D.S.U.	69116	6995	12.3	73.63	9.88	54.90
U.N.D.	92552	6855	16.7	47.28	13.50	75.00
Dickinson	17278	1384	14.4	55.36	12.48	69.30
Mayville	8962	904	16.4	45.20	9.91	55.06
Minot	30762.5	2055	15.4	51.38	14.97	83.20
Valley City	14628	1386	20.4	42.00	10.55	58.60
Total	233299.5	19579	15.1	54.68	11.92	66.20

Source: Unpublished data available from the Office of the Commissioner, Board of Higher Education, Bismarck, North Dakota.

TABLE 8

JUNIOR AND SENIOR MAJORS BY ACADEMIC AREA, FALL 1971

Program	Minot	State Colleges Valley			Mayville	Two Universities	Total Four State Colleges
		Dickinson	City				
General or Unclassified	29	-	7	2	-	38	
Biological Sciences	29	34	24	7	205	94	
Agricultural Sciences	-	-	-	-	156	-	
Fish & Wildlife	-	-	-	-	23	-	
Health Sciences							
Nursing	26	15	-	-	249	41	
Medical Technology	-	-	-	-	98	-	
Occupational Therapy	-	-	-	-	51	-	
Physical Therapy	-	-	-	-	54	-	
Pharmacy	-	-	-	-	248	-	
Pre-Med.-Dentistry	-	-	-	-	11	-	
Health Technologies	35	-	-	-	-	35	
Math, Computer & Phy.Sci.							
Mathematics	40	41	24	27	133	132	
Computer Science	-	-	-	-	9	-	
Chemistry	7	9	3	1	65	20	
Physics	5	4	-	3	14	12	
Geology	-	-	-	-	43	-	
Earth Sci. & General	21	2	-	12	6	35	
Engineering Sciences	-	-	-	-	531	-	

TABLE 8--Continued

Program	State Colleges				Total	
	Minot	Dickinson	Valley City	Mayville	Two Universities	Four State Colleges
Behavioral Sciences						
Psychology	38	1	-	-	140	39
Economics	14	-	1	-	42	15
Geography	-	8	17	1	13	26
History	41	21	21	2	137	85
Political Science	1	2	-	-	98	3
Sociology	6	3	-	3	99	12
Agric. Economics	-	-	-	-	77	-
Business Economics	-	-	-	-	173	-
General & Other	41	3	29	34	79	107
Humanities						
Art	38	18	17	6	60	79
Music	49	27	30	28	64	134
General	-	1	-	-	11	1
English	46	52	42	19	175	159
Journalism & Commun.	-	-	-	-	48	-
Speech & Drama	15	15	-	-	109	30
French	1	-	-	-	30	1
German	2	-	-	1	26	3
Spanish	-	2	-	-	12	2
Other Languages	-	-	-	-	1	-
Philosophy	-	-	-	-	12	-
Religion	-	-	-	-	7	-

TABLE 8--Continued

Program	State Colleges				Total	
	Minot	Dickinson	Valley City	Mayville	Two Universities	Four State Colleges
Professions						
Business						
Accounting	-	-	-	-	170	-
Business Administra.	-	-	-	-	173	-
Marketing	-	-	-	-	45	-
Banking & Insurance	-	-	-	-	14	-
Personnel Mgmt.	-	-	-	-	38	-
Public and Police Adm.	-	-	-	-	26	-
General & Other	78	-	-	-	3	78
Indust. Mgmt.	-	-	-	-	34	-
Education						
Business Education	154	129	82	53	67	418
Elem. Ed. & New Sch.	158	-	171	-	365	329
Elem. & Spec. Educ.	-	-	-	-	68	-
Industrial Tech.	-	-	7	-	67	7
Library Science	2	2	-	-	24	4
Spch. Path. & Audio.	31	-	-	-	68	31
Phy. Educ.	98	85	81	79	253	343
Mentally Retarded	52	-	-	-	-	52
Agricul. Educ.	-	-	-	-	69	-
Home Econ.	-	-	-	-	221	-
General Educ.	165	88	-	92	13	345
Home Economics	4	-	-	-	191	4
Vocational-Technical	3	-	-	-	4	3

TABLE 8--Continued

Program	State Colleges				Two Universities	Total	Two State Colleges
	Minot	Dickinson	Valley City	Mayville			
Other Professions							
Social Work	-	-	-	-	121	-	-
Aviation Administra.	-	-	-	-	46	-	-
Architecture	-	-	-	-	88	-	-
Gen. Pre-Prof.	-	-	-	-	8	-	-
Total	1,229	562	556	370	5,478	2,717	

Source: Fall 1971 Enrollments at North Dakota Institutions of Higher Education, Table 14a, Board of Higher Education Office.

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