

REPORT TO THE GOVERNOR
AND THE 1973 LEGISLATURE

Recommendations on State Policy and Action
For Meeting Minnesota's Post-Secondary Education Needs

Submitted by
Minnesota Higher Education Coordinating Commission

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COORDINATING COMMISSION

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TABLE OF CONTENTS

INTRODUCTION

PART ONE: FINANCING POST-SECONDARY EDUCATION IN MINNESOTA

- I. PROMOTING ACCESS TO POST-SECONDARY EDUCATION
- II. MEETING THE FINANCIAL NEED OF MINNESOTA STUDENTS
- III. TOWARD MORE EFFECTIVE USE OF RESOURCES
- IV. IMPROVING THE BUDGETING AND FACILITIES PLANNING PROCESS
- V. A PERIOD OF ADJUSTMENT IN THE APPROPRIATIONS PROCESS

PART TWO: ASSESSING NEEDS AND PROVIDING NEW OPPORTUNITIES

- VI. MEETING NEEDS IN PLANNING REGIONS NINE AND TEN
- VII. THE NEED FOR ADDITIONAL AREA VOCATIONAL-TECHNICAL INSTITUTES
- VIII. EXPANDING OPPORTUNITIES THROUGH INTER-STATE RECIPROCITY
- IX. MEETING POST-SECONDARY EDUCATION NEEDS OF DISADVANTAGED STUDENTS
- X. FACILITATING THE MEETING OF POST-SECONDARY EDUCATIONAL NEEDS BY PRIVATE INSTITUTIONS

PART THREE: IMPROVING POST-SECONDARY EDUCATION THROUGH EDUCATIONAL RESOURCES AND PROGRAMS

- XI. THE COORDINATED REVIEW AND USE OF COMPUTER TECHNOLOGY
- XII. EXPANDING AND IMPROVING USE OF TELEVISION IN POST-SECONDARY EDUCATION
- XIII. EXTENDING LIBRARY RESOURCES TO STUDENTS, FACULTY AND CITIZENS

PART FOUR: IMPROVING POST-SECONDARY EDUCATION THROUGH EXPANDED COOPERATION AND COORDINATION

- XIV. EXPANDING INTER-INSTITUTIONAL COOPERATION IN MEETING REGIONAL NEEDS

- XV. THE RELATIONSHIP BETWEEN AREA VOCATIONAL-TECHNICAL
INSTITUTES AND JUNIOR COLLEGES
 - XVI. COORDINATING INSTRUCTIONAL PROGRAM OFFERINGS
 - XVII. MEETING MANPOWER NEEDS IN MINNESOTA
 - XVIII. COORDINATING CONTINUING EDUCATION AND COMMUNITY
SERVICE
 - XIX. COORDINATING MEDICAL EDUCATIONAL PROGRAMS
-
- APPENDIX A: MINNESOTA HIGHER EDUCATION COORDINATING
COMMISSION ADVISORY COMMITTEES
 - APPENDIX B: MINNESOTA HIGHER EDUCATION COORDINATING
COMMISSION MAJOR REPORTS AND PUBLICATIONS
THROUGH DECEMBER 1972
 - APPENDIX C: ENROLLMENT REPORT
 - APPENDIX D: NEED FOR STUDENT AID FUNDS
 - APPENDIX E: NEED FOR STUDENT LOANS
 - APPENDIX F: REPORT ON STATE SCHOLARSHIP AND GRANT-IN-AID
PROGRAMS
 - APPENDIX G: AN EXAMINATION OF TUITION ALTERNATIVES
 - APPENDIX H: PROGRAM REVIEW REPORT
 - APPENDIX I: PRIVATE COLLEGE CONTRACT REPORT
 - APPENDIX J: PRIVATE COLLEGE CONTRACT PROGRAM SUPPORTING
DATA
 - APPENDIX K: MINNESOTA-WISCONSIN RECIPROCITY AGREEMENT
 - APPENDIX L: FEDERAL INTEREST GRANTS PROGRAM REPORT
 - APPENDIX M: FEDERAL UNDERGRADUATE INSTRUCTIONAL
EQUIPMENT PROGRAM REPORT
 - APPENDIX N: FEDERAL ACADEMIC FACILITIES PROGRAM
 - APPENDIX O: INTER-INSTITUTIONAL TELEVISION PROGRAM
REPORT
 - APPENDIX P: MINNESOTA INTER-INSTITUTIONAL INSTRUCTIONAL
TELEVISION PROGRAM

APPENDIX Q: MINITEX REPORT

APPENDIX R: CRIMINAL JUSTICE RESEARCH FELLOWSHIP PROGRAM
REPORT

APPENDIX S: COMMUNITY SERVICE AND CONTINUING EDUCATION REPORT

APPENDIX T: COMPUTER REPORT

APPENDIX U: COMPUTER REVIEW GUIDELINES

APPENDIX V: ST. PAUL RAMSEY HEALTH EDUCATION REPORT

APPENDIX W: MINNESOTA HIGHER EDUCATION FACILITIES AUTHORITY
ANNUAL REPORT

PART ONE: THE FINANCE OF POST-SECONDARY EDUCATION IN MINNESOTA

I. PROMOTING ACCESS TO POST-SECONDARY EDUCATION

In reviewing tuition for public post-secondary education as requested by the 1971 Legislature, the Commission early recognized that tuition charges were but one of the costs of attending post-secondary education. In addition to tuition, the student is faced with many other charges, including room and board, the cost of books, fees, clothing, transportation, and the many other expenses he faces in living from day to day. This, coupled with the fact that the student while he is in college is not generally earning the income he would be if he were not in college, indicated that tuition is a relatively small proportion of the total cost of attending post-secondary education.

It was also recognized that tuition policy was part of the much broader issue of how to finance public post-secondary education. It was not simply a question of the relative costs of post-secondary education to be paid by the student and the state. The problem was more clearly understood when it was realized that the state is making a substantial investment in post-secondary education by providing resources directly to students and directly to institutions. The essential question the Commission faced, then, was how to allocate these two forms of investment in a manner that would more effectively enable post-secondary education to meet the needs of the citizens of the state.

The Commission has considered a variety of proposals in its review of tuition policy for public post-secondary institutions. They included:

The continuation of present policy;

No tuition for the first two years of post-secondary education;

Tuition waivers based on the ability of the student

and his family to pay for post-secondary education;

Tuition charges based on the full-cost of instruction with student grants provided to those students with financial need;

and several other proposals. Many of these proposals, or variations of them, are being considered or are in the process of implementation in other states.

For each proposal the Commission was faced with the following questions:

1. To what extent and in what manner would the tuition policy affect student behavior as it relates to matriculation to post-secondary education;
2. To what extent would the tuition policy promote equal financial access to post-secondary education;
3. To what extent would the tuition policy provide a sound financial base for public post-secondary institutions;
4. To what extent would the tuition policy be responsive to the competing demands for public revenue;
5. To what extent would the tuition policy reflect the cost of obtaining an education - the cost to the state and the cost to the individual student;
6. To what extent would the tuition policy serve the needs of the State, the institutions, and the student;

The deliberations were further complicated by the fact that enrollment at the state collegiate institutions declined over the last two years, with the result that there are now approximately 5,200 vacancies among these institutions when compared to their peak enrollments. In addition, although approximately 75 percent of high school graduates continued their education this fall, over 17,000 students did not. Furthermore, even though the greatest proportional enrollment of students from families with income under \$9,000 is at the area vocational-technical institutes, the greatest number of students from the same income strata is enrolled

in the state colleges, and over two and a half times as many students from these income strata are enrolled in the state collegiate institutions than are enrolled at the area vocational-technical institutes.

A basic question relevant to the issue of the tuition policy is for what reason should income from tuition equal anything less than the total cost of providing post-secondary education. In other words, why does the state use tax dollars to pay part of the cost of providing post-secondary education rather than simply relying on the student to cover such costs through payment of tuition in an amount equal to instructional costs? Clearly, the answer is that post-secondary education is of sufficient importance to the state and its residents to justify lowering the effective cost to the student in order to permit larger numbers of Minnesota residents to continue education beyond the high school without undue financial hardship.

It is equally relevant to question why any tuition is assessed to students. In other words, if post-secondary education is sufficiently important to justify payment of part of the costs of instruction from tax dollars, why should not all of the costs of instruction be paid by the taxpayer rather than by the student? The answer clearly is that the amount of tax dollars available for providing state services is limited and many students can afford to pay part of the costs of instruction through tuition.

It follows then that by subsidizing post-secondary education the state is seeking to make such education realistically available to a larger number of Minnesota residents than the number who could benefit from post-secondary education if the student were required to pay tuition equal to the full cost of instruction. Similarly, the state cannot justify paying the total cost of instruction from tax dollars in view of the fact

that the needs and desires for state services exceed available tax dollars.

Given the objective of making post-secondary education financially accessible to as many Minnesota residents as possible and the condition of limited tax dollars with which to subsidize post-secondary education, the relevant question becomes in what manner should the state distribute its investment of post-secondary education to achieve the goal of providing financial access to post-secondary education for as many Minnesota residents as possible?

In the past, most of the state's investment in post-secondary education has been allocated to institutions in order to subsidize a significant portion of instructional costs and hence to keep tuition relatively low. Indeed, it was not until 1967 that the State Legislature began to distribute part of the state's investment in post-secondary education directly to students in the form of state student aids rather than to institutions.

At first glance, it might appear that subsidizing institutions with a view to keeping tuition low might represent an effective approach for making post-secondary education financially accessible to all Minnesota residents. Action of the 1967 Legislature establishing a state scholarship program recognized the fact that many students cannot continue education beyond the high school without undue financial hardship even when tuition is low, since tuition represents only a small part of total costs which the student incurs.

By maintaining low rates of tuition without additional forms of student subsidies in substantial amounts the state, in effect, is providing greater assistance than is necessary to permit some students to continue education beyond the high school, but providing less assistance than is

necessary for low-income students to pursue post-secondary education.. In other words, the student who could and would pay larger amounts of tuition is not requested to do so, and the student who does not have sufficient resources to meet the non-tuition costs of attending post-secondary education is granted less assistance than necessary for meeting the objective of making post-secondary education financially accessible to as many Minnesota residents as possible. Accordingly, the present policy of distributing most of the state's investment in post-secondary education to institutions and very little directly to students represents an inefficient and costly means of attempting to achieve the objective of making post-secondary education financially accessible to as many Minnesota residents as possible.

If sufficient resources were available, the Commission would favor a program of free tuition in all public post-secondary institutions with a large enough investment in student financial aids to assist every Minnesota resident for whom the non-tuition costs of attending post-secondary education represents a hardship. Since sufficient resources for financing such a program would not appear to be realistically available, the Commission believes that the funds available for post-secondary education should be distributed in a manner which will contribute to achieving the objective described above as efficiently as possible. Accordingly, the Commission recommends that the 1973 Legislature bring about a modest redistribution of the investment in post-secondary education by providing a substantial increase in the amount allocated directly to students with a corresponding decrease in the amount distributed directly to institutions. The effect of such a redistribution will be to increase tuition slightly permitting those students who can pay higher costs to do so and increasing the amount invested

in the student aids significantly to provide greater financial accessibility for those students for whom meeting the costs of post-secondary education is a serious hardship.

The emphasis in the proposed tuition policy, therefore, is to provide additional resources to those students who cannot now afford to attend post-secondary education while providing the necessary resources for the effective financing of post-secondary education institutions in the state. The recommendation is not based on a determination of the subsidy provided to specific students; (e.g., junior college students vis-a-vis Ph.D. students) nor is it based on the relative subsidy provided to the students from different income strata. Rather, it is based on a recognition that the majority of students can pay more than they are now asked to pay and that many students are not now attending post-secondary education because they cannot afford it.

When the Commission examined the subsidy provided the students in institutions of post-secondary education, however, it was faced with a perplexing problem. On the one hand, the students at junior colleges are asked to pay tuition if they are not enrolled in a vocational program. On the other hand, students at area vocational-technical institutes are not required to pay tuition. While it is recognized that students enrolled in vocational programs either at the junior colleges or at the area vocational-technical institutes are not required to pay tuition, it is not clear whether this policy derives from a substantive educational objective or whether it is a policy that attempts to maintain a disparity in tuition policy between the two systems. Based on the assessment of the discrepancy in tuition policy for junior colleges and area vocational-technical institutes and based on a determination that free tuition for the first two years of post-secondary education was not viable in the present fiscal climate, the Commission concluded that free tuition at the area vocational-technical institutes was no

longer appropriate.

A somewhat different problem confronted the Commission when it examined the tuition charges at senior institutions. The tuition charged students at the lower division was a much higher percentage of the cost of instruction than was the tuition charged students in the upper division, in professional programs, and particularly in graduate programs. In spite of the fact that tuition charges vary by level and program at the University¹, the same generalization obtains. The Commission felt that this policy tends to inhibit access by requiring lower division students to pay a disproportionate amount of instructional costs. Although the Commission does not anticipate that this policy can be changed immediately, it felt that certain immediate steps can be taken to correct the problem and that gradually tuition, as a percent of instructional costs, should be equalized for each level of the senior institutions.

In reviewing the tuition policy for public post-secondary institutions in Minnesota, the Commission arrived at the following conclusions:

1. A primary objective of the state's program of investing in post-secondary education should be to permit as many Minnesota residents as possible to attend an institution appropriate to his needs and interests without undue financial hardship.
2. While providing post-secondary education at low rates of tuition is an effective means to provide access to post-secondary education for those students who can pay the non-tuition costs of pursuing post-secondary education without undue hardship, providing educational opportunities at low tuition rates does not address the problem of lower income students

¹The state colleges were unable to provide cost information by level of instruction. Their tuition charge is equal for all levels, however, and assuming that their instructional costs increase for each level, it is inferred that lower division students at the state colleges also are paying a disproportionate cost of instruction.

who need assistance in meeting the non-tuition costs of post-secondary education.

3. In order to facilitate achievement of the objective more efficiently, the state should substantially increase the proportion of its post-secondary investment which is distributed directly to students.

4. If providing the substantial increase in funds distributed directly to students through student aid programs cannot be accomplished by increasing the total investment in post-secondary education, the relative amount distributed to institutions should be reduced and re-distributed to students.

5. In order that every Minnesota resident will have a realistic opportunity to pursue the type of post-secondary program appropriate to his needs, interests and qualifications, all forms of post-secondary education should be made financially accessible to students from all socio-economic groups in order that each student can select the type of program to enter on the basis of the nature of the program and not on the price charged for the program.

6. The current practice of making vocational education available without tuition while other forms of post-secondary education require tuition is discriminatory in that it implies that all forms of post-secondary education should be made available to students from higher income families while only vocational programs need be available to students from lower income families.

7. If limited financial resources require that the effective costs of post-secondary education (tuition plus other costs minus student aids) cannot be kept low for all students, the differential subsidy should

be based on the ability of the student to pay rather than on the type of institution or program which the student enters.

8. The current practice of charging tuition for students of age 21 and over and not charging tuition for students under age 21 in area vocational-technical institutes is dysfunctional; charging higher tuition for a student of age 21 than for a student of age 20 serves no useful educational or social purpose.

9. The relationship of tuition charges to instructional costs for lower division students at the senior institutions tends to inhibit access by requiring these students to pay a disproportionate share of the total instructional costs of the institutions.

10. Tuition policy as one of the complex of issues that affect the finance of post-secondary educational institutions should be continually reviewed by the Commission to determine if it is enhancing the accomplishment of post-secondary educational goals.

In keeping with the above conclusions, the Commission submits the following recommendations:

1. *In order to promote equal financial access to post-secondary institutions by making resources available to students who cannot now attend, the Commission recommends that the State Scholarship and Grant Programs be increased from \$7,330,000 during the 1971-73 biennium to \$22,650,000 for the 1973-75 biennium. As a result of the cumulative affects of commitment for continuing awards, this represents a net increase in the request for student aid of approximately \$8,000,000 for the biennium.*
2. *In recognition of the fiscal constraints faced by the State and its taxpayers, but cognizant of the need for continued support of public post-secondary education, the Commission recommends that the policy of the State on tuition rates in public institutions be that income from tuition be a minimum of 30 percent of instructional costs (as represented by direct and indirect expenditures for instruction and departmental research), at the University, state colleges, and for non-vocational programs at the junior colleges. The*

Commission further recommends that each student at area vocational-technical institutes and in vocational programs in the junior colleges should pay a reasonable and justified proportionate share of the instructional cost. Accordingly, the Commission requests that the State Board for Vocational Education, in consultation with representatives of each institute, assess their instructional costs among area vocational-technical institutes and report to the Higher Education Coordinating Commission by January 1, 1973 on a plan to implement the above recommendation. After consideration of this proposal, the Higher Education Coordinating Commission will report to the Legislature on a plan for area vocational-technical institutes.

- 3. Recognizing that the proposed tuition policy will increase expenses for students who are currently enrolled in post-secondary education and who are not eligible to apply for state aid, the Commission recommends that \$4,000,000 be appropriated, during this biennium only, to be distributed to students at public post-secondary institutions who require assistance to offset the tuition increase in order to continue their education.*
- 4. As an additional impetus to equal access to post-secondary education, the Commission recommends that immediate studies be initiated by the state colleges and the University to establish tuition charges for lower division, upper division, graduate, and professional students that will result in tuition charges, as a percent of instructional costs, to be more in balance for each of these levels. It is recommended that the State College System and the University should study this tuition level policy and report to the Higher Education Coordinating Commission by January, 1974 in regard to the plans and problems in the future implementation of the policy.*
- 5. In order to determine the extent to which this policy enhances or inhibits equal access to post-secondary education and the extent to which it contributes to the effective financing of Minnesota post-secondary education, it is recommended that the Higher Education Coordinating Commission continue to review the recommended tuition policy.*

In summary, the review of present tuition policy led the Commission to a broader consideration of the financing of public post-secondary education in Minnesota. The primary objective of the Commission's recommendations was to promote equal financial access to post-secondary education while providing a sound basis for financing institutions. Thus, rather than recommending dramatic changes in the policy, the Commission chose to

recommend a minor modification which through continued review and revision as appropriate, will enable the state to gradually approach its goal of providing post-secondary education to all who desire to attend. Specifically, the Commission recommended a small re-allocation of the state investment in post-secondary education that would result in a substantial increase in subsidy provided directly to students, thereby making post-secondary education accessible to those who cannot now afford it. Realizing, however, that tuition policy is a complex issue that both affects and is effected by a variety of circumstances, the Commission recommends the continued review of tuition policy to determine the extent to which it is contributing to the realization of state post-secondary educational goals.

II. MEETING THE FINANCIAL NEED OF MINNESOTA STUDENTS

Each new generation enters a society more technologically advanced and more socially and economically complex. Manpower, the supply of human talents and skills, must be trained to meet ever changing needs. The role of and need for post-secondary education in the future will assume new dimensions of importance. The productivity of the people, individually and collectively, will depend largely upon the type and extent of their educational training. Therefore, the Commission reaffirms its conviction that the state must adhere to the principle of equal opportunity and must pursue the policy of meeting the post-secondary education needs of an increasingly larger proportion of Minnesota residents.

Equality of opportunity for post-secondary education is desirable for more fundamental reasons than its contribution to economic growth, but its importance to the state's economy should not be minimized. Incentive and opportunity are two keys to growth. Unnecessary and unwarranted situations of foreclosed opportunities retard growth. Only when each individual in our society has the opportunity to develop his potential fully and has the opportunity to utilize his talents and skills to the utmost can we achieve maximum output from available human and non-human resources.

Recognition of the democratic principle of human rights led to recognition that the policy of equal opportunity for post-secondary education is just good economic sense for a free and competitive society.

"No task before our nation," said President Kennedy, "is more important than expanding and improving the educational opportunities of all our people. The concept that every American deserves the opportunity to attain the highest level of education of which he is capable is...a traditional ideal of democracy."²

Aspirations and potential for higher education are present at all income levels. Yet today, and more than we like to admit, economic status and social privilege control the door to post-secondary educational opportunity. How, then, can we move toward a more open-door policy of encouraging students with ability, regardless of socio-economic status, to develop their talents and potential skills to full capacity?

The Commission agrees with the precepts that "early identification of competent students" and "then motivating them with counseling that will result in increased motivation for continued education"³ are essential ingredients of a sound educational program. But, further, the Commission submits that (1) increasing the supportive resources for financial aids and (2) utilizing the most equitable method of distributing such resources to those demonstrating the need for them are the vectors proven to be the most effective in lowering, or removing entirely, the economic barrier to post-secondary education.

Despite the diversity and level of support of student financial aids, they are yet inadequate to fulfill the objective of offering to

²President John F. Kennedy's message to the United States Congress, February 6, 1962.

³Ralph F. Berdie. "Assumptions Underlying Scholarship Proposals." *College and University*. Fall 1958, pp. 86, 87.

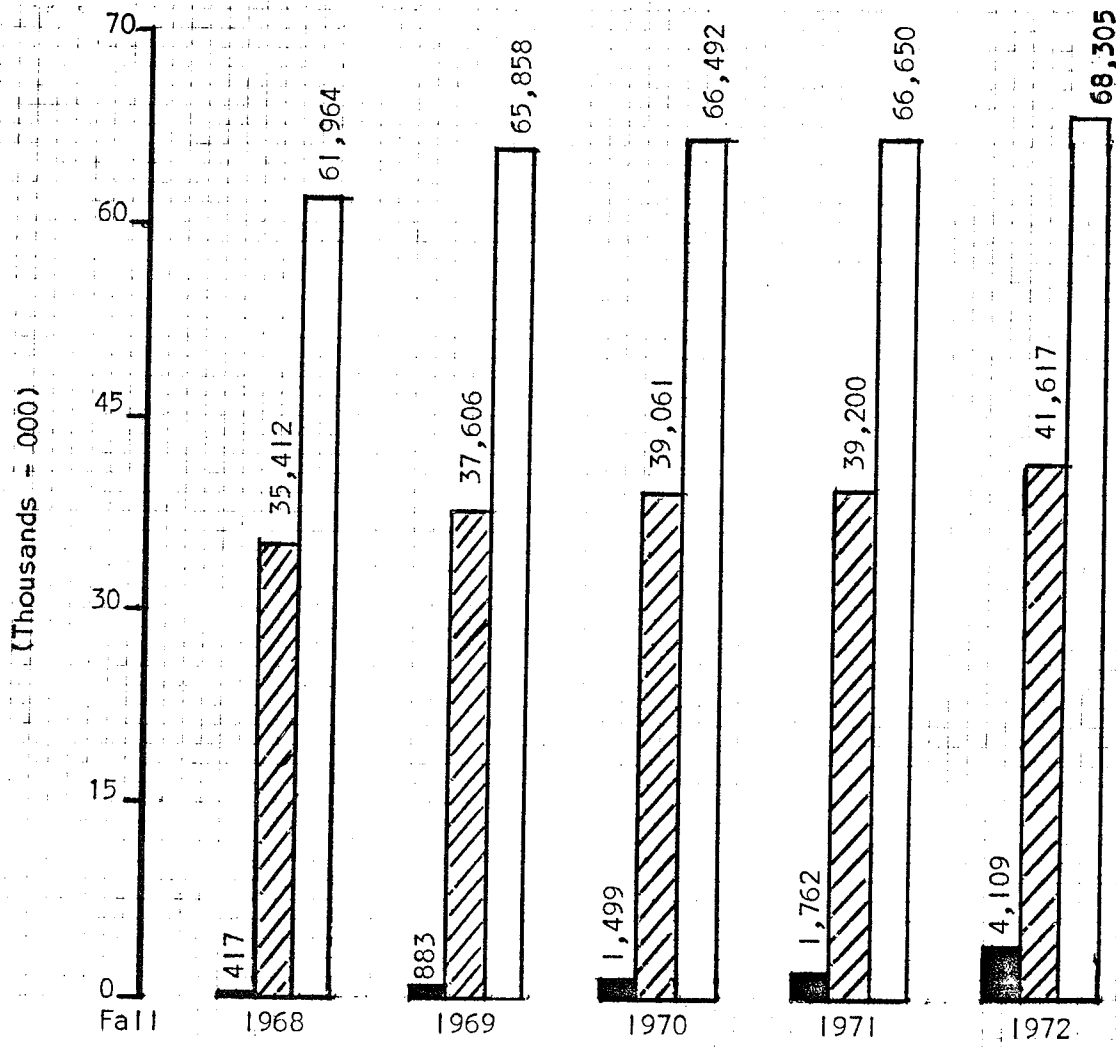
those academically qualified but financially handicapped realistic opportunity for post-secondary education. Rising costs have priced many of our able young men and women out of the education marketplace. But it is a differentiated marketplace; some who are priced out of the high-cost educational institutions may seek training in the low-cost ones; others, with little or no resources, are priced out of the educational marketplace entirely. Such under utilization of human resources greatly affects the productivity of our state's citizens.

Scholarships and Grants

By establishing state scholarships in 1967 and state grants-in-aid in 1969, the Legislature recognized the importance of making post-secondary education more accessible to the financially disadvantaged. Increased support of these student aid programs by the 1971 Legislature expressed its conviction that the state must continue to pursue the policy of improving accessibility to post-secondary education. These first steps toward providing equality of opportunity for post-secondary education are highly significant. But much more needs to be done if Minnesota is to achieve the objective of post-secondary education for all who can benefit. Combined appropriations for scholarships and grants-in-aid for Fiscal Year 1973 provided partial financial assistance to only six percent of 1972 graduates of Minnesota secondary schools.

Insert Bar Graph

COMPARISON OF MINNESOTA HIGH SCHOOL GRADUATES, ENTERING FRESHMEN IN MINNESOTA EDUCATIONAL INSTITUTIONS AND RECIPIENTS OF STATE SCHOLARSHIPS AND STATE GRANTS-IN-AID



LEGEND



Minnesota High School Graduates



Entering Full-time Freshmen



Recipients of State Scholarships and Grants-in-Aid

Currently, 23 states support need-based student financial aid programs for undergraduate residents of the state to attend either public or non-public institutions of post-secondary education. Table I shows how these states rank in terms of per capita support of need-based student aid programs. For the biennium 1971-73, Minnesota's state scholarship and grant-in-aid programs were supported at an annual average cost of \$.97 per capita, 13th in rank among states providing similar student aid programs. Although the average per capita appropriation for student aids in 10 states was below that of Minnesota, it should be observed that Minnesota's average annual support was less than one-half the mean per capita appropriation of all states in the biennium 1971-73.

Insert Table 1

The distribution of initial state scholarships and grants-in-aid to undergraduate students in Minnesota post-secondary institutions is shown in Appendix F.

To make post-secondary education financially available to a greater number of Minnesota residents will require substantially larger appropriations for both scholarships and grants-in-aid.

The Commission recommends that the 1973 Legislature continue its effort toward the goal of assuring that post-secondary education becomes financially available to all qualified Minnesota residents by appropriating \$9,175,000 for the State Scholarship and State Grant-in-Aid Programs for Fiscal Year 1974 and \$13,475,000 for Fiscal Year 1975.

The Commission's estimate of the need for non-family support of Minnesota residents in post-secondary educational institutions in Minnesota

Table 1

Per Capita Ranking of Financial Need-Based Student
Aid Funds in Existing State Programs 1971-73⁴

<u>Rank</u>	<u>State</u>	<u>Total Appropriation</u>	<u>Ratio of Average Annual Dollars to 1970 Population</u>
1	Vermont	\$ 4,900,429	\$5.51
2	Pennsylvania	117,958,000	5.01
3	New York	151,600,000	4.17
4	Illinois	90,800,000	4.09
5	New Jersey	46,558,488	3.21
6	Rhode Island	3,609,940	1.90
7	Indiana	16,188,164	1.56
8	Michigan	26,891,360	1.52
9	Iowa	8,525,000	1.51
10	Ohio	31,000,000	1.46
11	Massachusetts	16,000,000	1.41
12	California	46,884,409	1.18
13	Minnesota	7,330,000	.97
14	Wisconsin	8,086,500	.92
15	Maryland	6,270,600	.80
16	Connecticut	3,022,745	.50
17	Oregon	2,000,000	.48
18	Washington	3,120,147	.18
19	Kansas	1,289,633	.29
20	West Virginia	725,000	.20
21	Texas	4,000,000	.21
22	Tennessee	1,200,000	.16 ^{a)}
23	Florida	1,460,000	.11
Total		\$599,420,315	2.00 ^{b)}

a) Based on one year (1972-73) appropriation.

b) Based on total population for 23 states with comprehensive programs.
This represents 73.5% of total U.S. Population, 1970.

⁴Adopted from Joseph D. Boyd, *1972-73 Comprehensive State Scholarship/Grant Programs*, Illinois State Scholarship Program. (Deerfield, Illinois, 1972), pp. 2, 3.

was derived through a careful analysis of (a) current enrollments in systems of post-secondary education in Minnesota, (b) the distribution of family income of students within systems, (c) a family's ability to pay towards educational expenses from a given income and (d) current price tags on post-secondary education by system. The basis for and the computation of this projected need is presented in Appendix D.

From Table V of Appendix D, it is estimated that Minnesota residents who enter Minnesota educational institutions directly from high school as full-time students expend \$70,743,945 their first year for tuition, fees, books and maintenance. Of this amount, students and their parents or guardians are able to pay \$47,633,410 (67%) from current income. They must look to other resources to provide the balance needed to meet educational costs - \$33,110,535 (33%).

Present policy, enacted by the 1971 Legislature, prescribes that a state scholarship or state grant-in-aid shall not exceed one-half of the applicant's demonstrated need. Full funding for first-year scholarships and grants by this formula would require a minimal appropriation of \$16,000,000 for new or first year awards. Although the Commission affirms its belief "that the state should provide sufficient funds to meet at least one-third of the demonstrated need for financial assistance of the members of each of the state's high school graduating class who seek entrance to post-secondary education",⁵ the Commission recognizes that appropriations of over \$10,000,000 per year to support new scholarships and grants in addition to continued support of renewal awards is not a realistic expectation for the next biennium. Nevertheless, the Commission

⁵*Meeting the Challenge*. Recommendations for State Action in Meeting Minnesota's Needs for Post-Secondary Education. (St. Paul, Minnesota: Minnesota Higher Education Coordinating Commission, January 1971), p. 11.

affirms its previous endorsement of the primary purpose of student aids and recommends that appropriations provide for about one-sixth of the demonstrated need of each entering class or \$5,000,000 for new awards for each year of the biennium, 1973-75.

The Commission proposes that appropriations for new or first-year awards be \$1,000,000 for State Scholarships and \$4,000,000 for State Grants-in-Aid for each year of the biennium, 1973-75. Distribution of the proposed appropriation would be as presented in Table 2.

Table 2

	Fiscal Year 1974			Fiscal Year 1975		
	New Awards	Renewal Awards	Total Awards	New Awards	Renewal Awards	Total Awards
Scholarships	\$1,000,000	\$2,175,000	\$3,175,000	\$1,000,000	\$2,875,000	\$ 3,875,000
Grants-in-Aid	\$4,000,000	\$2,000,000	\$6,000,000	\$4,000,000	\$5,600,000	\$ 9,600,000
Totals	\$5,000,000	\$4,175,000	\$9,175,000	\$5,000,000	\$8,475,000	\$13,475,000

The 1971 Legislature approved the Commission's recommendations that (a) the amount of a state scholarship or grant-in-aid should not exceed one-half of a student's demonstrated need for non-family support and (b) to increase the maximum of an annual award to any one student from \$800 to \$1,000. The former action provided a more equitable relationship between a student's need and his award; the latter action recognized the increased cost of post-secondary education and made it possible to provide assistance equal to one-half of a student's need at any public institution of post-secondary education in Minnesota.

The Commission recognizes that the cost of post-secondary education has risen during the current biennium and that it is expected to rise during the next biennium. Moreover, the Commission's recommendations

pertinent to tuition policy will result in increased tuition charges at all publicly supported post-secondary institutions. With the increase in tuition and other costs of post-secondary education during the next biennium, the present \$1,000 maximum for an award will not provide one-half of the demonstrated need of some students at the University of Minnesota.

In recognition of increased costs in both public and private post-secondary institutions and to ensure that a state scholarship or grant-in-aid can meet one-half of a student's demonstrated need for non-family support in a public post-secondary institution,

the Commission recommends that the maximum annual amount of a state scholarship or state grant-in-aid be increased from \$1,000 to \$1,200.

Loans

The continuing rise in costs of post-secondary education heightens the barrier to the educational goals of ever increasing numbers of Minnesota students. While a relatively large segment of our adult population continues to be unemployed, the opportunity for part-time employment for those students who must depend largely on this resource to meet their educational expenses is substantially reduced. Increasingly, students have been forced to pay a greater share of the cost of post-secondary education from future income, rather than current resources, through loans.

When families are unable to pay the increasing costs of education from current income and liquidation of assets, even at great sacrifice, it is the student who must assume these costs with borrowed funds. During Fiscal Year 1972, 31,711 Minnesota residents borrowed \$33,888,634

to finance the costs of post-secondary education under terms of the Federally Insured Student Loan Program. The amount borrowed by students and their families from other sources is estimated to be in excess of \$10,000,000 in Fiscal Year 1972.

To assess the need for additional student loan resources in Minnesota the Minnesota Higher Education Coordinating Commission contracted with Cresap, McCormick and Paget, nationally recognized fiscal consultants, to study the Federally Insured Student Loan Program in the State of Minnesota. The findings of this study were essentially that at present the program is serving Minnesota residents very well. This study indicates that less than two percent of students who applied for these loans were rejected by lending institutions. Therefore, the conclusion is that the program is very effective under present conditions.

One disturbing factor is prominent in the consultant's report. All assumptions concerning the projected ability of the Federally Insured Student Loan Program to meet student's needs are predicated upon no significant change in the money market. Any change in the prime interest rate and/or relative liquidity of financial institutions may exhibit adverse effects on this program. Upward movement of the prime interest rate tends to make student loans less attractive to lending institutions, even considering the market adjustment bonus, and may siphon off available student loan funds into more fiscally attractive areas. Declining liquidity ratios may force reductions in student loans, as financial institutions may feel that priority must be assigned to their traditional customers at the expense of student loans. This possibility cannot be ignored, because the major portion of loan volume is concentrated in relatively few banks and savings and loan associations. One lender alone provided 25 percent of

the total student loan funds under the Federally Insured Student Loan Program during the academic year 1971-72. Changes in the money market which would lead this and other lenders to significantly reduce their participation in the Federally Insured Student Loan Program would leave a large number of student borrowers without funds. Should this occur, it is doubtful that other lenders, faced with similar conditions, would increase their participation in the Federally Insured Student Loan Program.

In summation, the Commission concluded that as conditions stand in the fall of 1972, the Federally Insured Student Loan Program is effectively meeting the needs of Minnesota residents who require these funds. A major change in the money market is apt to upset this rather delicate balance and these conditions should be monitored so that necessary adjustments can be made.

III. TOWARD MORE EFFECTIVE USE OF RESOURCES

Throughout the deliberations on tuition policy, the Commission has been troubled by two conflicting concerns: (1) if a larger share of the responsibility for meeting the rising costs of post-secondary education is placed on the state, the apparent problem of generating more tax revenue to support state services becomes intensified, but (2) if a larger share of the responsibility for meeting the rising costs of post-secondary education is placed on the students, many prospective students may be discouraged from pursuing education beyond the high school and an increasing number of Minnesota residents will be denied the opportunity to develop their talents through post-secondary education. Neither simply increasing tuition in order to avoid increasing tax revenue required to support post-secondary education nor simply increasing state support in order to hold tuition constant seems an adequate response to the complex problem of meeting the rising costs of post-secondary education. Accordingly, the Commission also has addressed attention to the costs of post-secondary education with a view to assessing the feasibility of curtailing continuing increases in expenditures for post-secondary education.

Must the costs of post-secondary education and the amount of funds required to support post-secondary education continue to increase? All available evidence suggests an affirmative response to this question. There is no hope of holding the costs of post-secondary education constant without either seriously limiting the access of Minnesota residents to post-secondary education opportunities or significantly impairing the quality of post-secondary education. The reasons for this fact are made

abundantly clear in the report on the recent national study of the costs of post-secondary education by the Carnegie Commission on Higher Education.⁶

Can the rate of increase in the costs of post-secondary education be reduced? The Carnegie Commission has suggested that the rate of increase in costs can be reduced and has proposed several means for accomplishing the reduction. The Higher Education Coordinating Commission believes that the rate of increase in Minnesota must be reduced and recommends implementation of the Carnegie proposals as follows:

Reducing the Number of Students in Post-Secondary Education at Any One Time

The Carnegie Commission suggests that the number of students in post-secondary education institutions at any one time may be reduced by (1) accelerating programs in order to reduce the total time required for the average student to achieve his post-secondary education objective, and (2) reducing the number of reluctant attenders in post-secondary education. The Commission agrees with the Carnegie Commission that the amount of time required for students to complete most post-secondary education programs can be reduced. Chancellor Mitau, of the State College System, recently recognized the fact that too much of the instruction at the collegiate level duplicates that which is taught in high school. In addition, some of the course work presently required for completion of programs would not appear to be essential to the objective of these programs. On the other hand, the Commission does not see any significant change in the numbers of students in post-secondary education institutions by efforts to reduce reluctant attenders.

Accordingly, the Commission recommends that all Minnesota institutions and systems of post-secondary education undertake immediate efforts to reduce the time required for completing post-secondary education programs of all types by at least 15 percent and wherever possible by 25 percent.

⁶The Carnegie Commission on Higher Education, *The More Effective Use of Resources: An Imperative for Higher Education*, (New York: McGraw Hill Book Company, June 1972).

Savings in current operating expenditures for post-secondary education from implementation of this recommendation are estimated to be approximately 10 percent per year.

Achieving Better Utilization of Physical Facilities.

The investment required for physical facilities to increase the capacity of post-secondary education institutions can be reduced through achieving more complete utilization of existing facilities by increasing the hours and days on which facilities are fully utilized and by structuring academic calendars and programs in such a way as to achieve the fullest possible utilization of facilities at all times of the year.

Accordingly, the Commission recommends that all institutions and systems of post-secondary education make any scheduling adjustments feasible for achieving more effective use of physical facilities and that decision to expand the physical facilities of institutions be based on a careful assessment of needs including alternative means for effective use of existing facilities.

Creation of Any New Ph.D Programs

Most advanced graduate programs require a reasonably high level of financial support. Undue proliferation of high cost programs is unnecessarily expensive. While establishing some additional advanced graduate programs may be in the best interests of the state, the need for additional advanced graduate programs is limited and decisions to establish any new advanced graduate programs must be based on adequate demonstration of need for the program and careful assessment of the cost implications. While these factors are obviously associated with Ph.D programs, they also apply to many other advanced graduate programs. Accordingly, the Higher Education Coordinating Commission proposes to grant favorable review of proposed new instructional programs at the advanced graduate level only under very special circumstances during the next biennium, and

the Commission recommends that (1) institutions proceed with deliberate care in deciding to propose new instructional programs at the advanced graduate level and (2)

the Legislature proceed with appropriate caution in appropriating funds to support new programs at the advanced graduate level.

Achieving Minimum Effective Size for Post-Secondary Education Institutions

By analyzing the relationship of per student costs and size of institution or campus enrollment, the Carnegie Commission has demonstrated that institutions with less than certain minimum enrollments tend to be more costly than larger institutions. The Carnegie Commission also found that savings in per student costs diminish significantly when institution enrollments continue to grow beyond the minimum enrollment required for achieving a favorable cost-benefit ratio. The minimum and maximum enrollments for various types of institutions or campuses are recommended by the Carnegie Commission to be as follows:

<u>Type of Institution</u>	<u>Minimum Enrollment</u>		<u>Maximum Enrollment</u>	
	FTE	Headcount	FTE	Headcount
Doctoral Granting Inst. ¹	5,000	5,900	20,000	23,500
Comprehensive Colleges ²	5,000	6,000	10,000	12,000
Liberal Arts Colleges ³	1,000	1,100	2,500	2,700
Two-Year Institutions ⁴	2,000	2,500	5,000	6,200

¹Includes institutions such as Twin Cities campus of University of Minnesota

²Includes institutions such as Minnesota state colleges.

³Includes institutions such as Morris campus of University of Minnesota.

⁴Includes institutions such as Minnesota state junior colleges and area vocational-technical institutes.

Comparison of the size of Minnesota institutions of post-secondary education with the ranges proposed by the Carnegie Commission suggests that while only a few Minnesota institutions exceed the upper limit of the recommended enrollment ranges, many Minnesota institutions are well below the bottom of the recommended ranges. Although achieving the minimum enrollments recommended for all institutions represents a desirable development in terms of per student cost-quality factors, achieving the recommended

institutional size for all institutions may not be appropriate in terms of the need to make post-secondary education opportunities geographically accessible to all Minnesota residents.

Previous studies of the Higher Education Coordinating Commission of factors associated with college attendance have demonstrated a positive relationship between proximity of post-secondary education opportunity and student propensity to continue education beyond the high school.⁷ In other words, a higher percentage of students who reside within commuting distance of post-secondary institutions enter post-secondary institutions than the percentage of students who reside outside the commuting area of any institutions.

In the judgment of the Higher Education Coordinating Commission, the desirability of extending the benefits of post-secondary education to all segments of the Minnesota population outweighs the savings which would accrue to the state by maintaining only those institutions which can meet the recommended minimum enrollments. Accordingly, the Commission believes that the policy guidelines of maintaining some kind of public post-secondary education institution within 35 miles of every Minnesota community with a population of 5,000 or more, as recommended to the 1969 Legislature⁸, is an overriding objective which will require maintaining some institutions with enrollments less than the recommended minimum size.

On the other hand, economies which can result from institutional size should be achieved when doing so does not limit access of Minnesota residents to post-secondary education. New institutions should not be allowed to proliferate unnecessarily. Existing institutions should achieve

⁷Richard C. Hawk et al, "Rates of College Attendance in Minnesota," *Minnesota Higher Education*, (St.Paul: Minnesota Higher Education Coordinating Commission, March 1970).

⁸Minnesota Higher Education Coordinating Commission, *Proposal for Progress: Guidelines for State Policy and Comprehensive Planning of Post-Secondary Education*, (St.Paul: Minnesota Higher Education Coordinating Commission, January 1969), p.14.

the recommended minimum size whenever feasible and the state should continue to support existing institutions of less than the recommended minimum size only to the extent that such institutions are currently needed and providing geographical accessibility or if they are meeting other demonstrated needs.

The Commission recommends that a policy of maintaining only those institutions that can achieve sufficient size to provide quality instructional programs at the lowest feasible cost guide further state action insofar as this policy does not conflict with the goal of providing geographical accessibility to all Minnesota residents. The Commission further recommends that the policy related to maintaining institutions with enrollments of less than the recommended minimum size be continuously reviewed.

Raising the Student-Faculty Ratio

The Carnegie Commission suggests that *caution* should be applied when increasing the student-faculty ratio. The Carnegie Commission urges caution because (1) the student-faculty ratio rose (the number of students per faculty member increased) during the last decade and (2) far too little is known about the impact of student-faculty ratio on quality of instruction. Accordingly, the Carnegie Commission suggests that plans to raise the student-faculty ratio should be made on a case-by-case basis reflecting assessments concerning the impact of such changes on a campus-by-campus and department-by-department basis. Since raising the average student-faculty ratio by one would reduce the costs by about 3/10 of one percent per year, raising the student-faculty ratio should be accomplished to the fullest extent possible without sacrificing educational quality.

Accordingly, the Higher Education Coordinating Commission recommends that all institutions and systems assess opportunities for raising the student-faculty ratio and that systems and institutions experiment with larger student-faculty ratios in some institutions and programs in order to determine the affects of modest increases in student-faculty ratios on the quality of education.

Re-examining the Faculty Teaching Load

The Carnegie Commission has concluded that reductions in faculty workload which occurred during the last decade have tended to rectify situations in which inordinately heavy workloads prevented even the most able and conscientious teacher from achieving desired effectiveness. The Carnegie Commission also has concluded that the faculty workload may now be increased slightly in some instances without impairing effectiveness. In reaching this conclusion, the Carnegie Commission recognized that assessments of faculty workload must be based on the total effort which must be **extended** by faculty members and not classroom hours alone. Studies have shown that faculty members often work longer than the normal 40 hour week of the American work force as a whole.

Accordingly, the Higher Education Coordinating Commission recommends that each of the systems and institutions carefully assess each individual situation with a view to identifying any opportunities for achieving savings through modest increases in faculty workload.

Improving Management and Budgeting Processes

The advantages of improved institutional management and more effective utilization of the budget process for guiding decisions and relating expenditures to achievement of objectives are obvious. The Higher Education Coordinating Commission concurs with the Carnegie Commission's assessment that improving cost effectiveness in post-secondary education can be facilitated through adequate provision for well-trained, middle-management personnel and through budgetary processes which generate

better information for decision-making and which relate expenditures more directly to objectives.

The Higher Education Coordinating Commission recommends that the Legislature stimulate and support efforts to improve the budgeting process at the institutional system and state level and that the Legislature and the systems make adequate provisions for effective middle-management personnel.

Creating More Off-Campus Alternatives

Minnesota already is making significant progress in developing educational programs which include a high proportion of off-campus experiences, the most notable examples being the Minnesota Metropolitan State College and the University of Minnesota's "University Without Walls" program. Similar approaches are being planned for other institutions. While considerable savings would appear to be possible though greater utilization of such concepts as the "open university" and "credit by examination," relatively little is known about the ultimate costs and impact of such efforts on educational quality.

The Higher Education Coordinating Commission recommends that the educational quality and costs of alternative off-campus approaches be carefully evaluated and that such approaches be implemented and continued to the extent that quality can be maintained without increasing per student costs.

Establishing Consortia Among Institutions and Merging Some

While the benefits or previous experiences with consortia appear to be mixed, some consortia, such as the Tri-College University in Fargo-Moorhead, offer significant potential for increasing service without corresponding increases in cost through the cooperation of several institutions. Additional discussion and recommendations on consortia appear in a later section of this report.

The question of merging institutions is highly sensitive since people associated with any institutions regard consideration of merging their institution with another institution as a serious threat. System officers express similar concerns as was evidenced by the reaction of Department of Education personnel to recommendations of the Region Nine and Ten Study Consultant Panel in favor of merging the Rochester Area Vocational-Technical Institute with the Rochester State Junior College. The political ramifications of any proposal to merge institutions are obvious and the question must be approached with extreme care. Nonetheless, the possibility of merging some institutions should not be dismissed simply because of the apparent difficulties in such efforts.

Accordingly, the Higher Education Coordinating Commission recommends that opportunities for achieving savings and/or improving the educational setting by combining two small institutions into one larger institution be realistically assessed and that all institutions explore every feasible opportunity for achieving the advantages which may be available through consortia or other cooperative arrangements.

Preserving Quality

Sacrificing educational quality in order to reduce the cost of post-secondary education represents a false savings which will lead to the deterioration of Minnesota's ability to meet post-secondary education needs of its residents effectively. Accordingly, the Higher Education Coordinating Commission concurs with the Carnegie Commission's assessment that the temptation to achieve short-run savings which reduces the long-run effectiveness of post-secondary education should be firmly resisted.

In accordance with the view, the Commission recommends that the Legislature not attempt to achieve savings by unwarranted reductions in funds for

(1) necessary maintenance, (2) library expenditures for new books and journals, (3) student aid and (4) salaries, as such reductions in faculty salaries lead to excessive turnover.

Facilitating Institutional Cost Effectiveness

The nature of institutions of post-secondary education and the decision-making structure which pervades these institutions creates significant difficulties in developing sensitivity to and placing responsibility for cost effectiveness. The Carnegie Commission deliberation of the situation deserves repeating:

The campus is a peculiar type of institution. It has been run, in its academic aspects, quite properly, with a professional mentality toward standards. But the academic profession has been one whose members do not directly subject their wares to a market test. Other professionals (doctors, lawyers) also have a professional mentality, but they are more in touch with the market for their services. The faculty, in a great majority of academic institutions, is in control of or has strong influence over teaching loads, courses, research projects, class sizes, admissions, grades, degrees---over its own work loads and its own products. The administration, however, raises the money. The people who spend the money do not raise it and the people who raise it have only modest influence over how it is spent. This disjunction is a source of problems. It is hard both to assess responsibility (to the administration or to the faculty?) and to affect results (by global actions or by specific controls?). The campus is like an independent artisan economy from the point of view of producing services but is a collective enterprise in terms of securing income---and the chief artisans have tenure. The president has little control over the component outputs or the totality to which they add up, but he must take the totality and present it for the highest price he can get in a market where there is often only one big purchaser---the state. It is not like a corporation with hierarchical control over employees nor like a government agency. Comparisons with either are false and can lead to unwise policies.

Current attempts to solve some problems peculiar to higher education include an effort to turn the communal artisan endeavor into a public utility enterprise---to determine its prices, specify its output, assign its customers to it by public fiat: to impose more and more specific financial formulas controlling income in detail; to set work loads and class

sizes: to manage the enterprise by remote control. There are several things wrong with this: (1) Outputs are difficult to specify and quantify. (2) Many services are performed by many different people in many different combinations--the diversity of effort is almost infinite. (3) Morale is at the essence of the enterprise and it is founded on self-determination of effort and self-generated goals. (4) The campus can become a perfect environment for the "Good Soldier Schweik" who follows all the rules but cleverly sabotages the whole endeavor.

The problem is complex. The essence of the solution lies in conditions that (a) draw forth the maximum of voluntary effort at a high level of competence and (b) achieve effective use of resources. The artisan approach generally satisfies (a). Faculty members do work hard (a few abuses aside) and some of their contributions in teaching and research have been superb. This kind of performance can neither be controlled in detail nor coerced. It has been a productive form of mild anarchy--internal free enterprise. The spirit of the enterprise can be killed by driving the public utility approach farther and farther into the details of the operation. We support continued faculty responsibility for the essentials of academic life.⁹

The Higher Education Coordinating Commission agrees with the Carnegie Commission that state policies must be designed to solve the problem of effective use of resources in spite of the difficulties suggested above and gives its full support and endorsement to the following proposed solution:

(1) general tests of performance and general formulas for support by the state; (2) greater reliance on the market, such as:

(a) Money received through the hands of the students, as now is the case of private colleges and universities -- let them conduct the search for lower costs, higher quality and greater diversity.

(b) Auxiliary enterprises placed on a self-supporting basis or turned over to independent enterprises.

(c) Research funds given out by panels of experts on a project by project basis in competition with each other

(3) greater self-discipline within the academic enterprise, a greater sense of responsibility for effective use of resources--much has been left to the conscience of the academic community but this conscience now needs better ways to inform itself and to assert itself. We believe it is important to preserve the essential quality of and thus the essential faculty responsibility

⁹The Carnegie Commission on Higher Education. *The More Effective Use of Resources: An Imperative for Higher Education* (New York: McGraw Hill Book Company, June 1972), p. 21.

for academic life. It is also important to realize what different kinds of external pressures both can and cannot do--they can guide but they cannot coerce effort. The Procrustean bed is not a productive instrument in academic life: and yet we have been moving in that direction.¹⁰

Given the nature of the academic enterprise as described above, achieving the self-discipline necessary for adequate attention to cost effectiveness will require specific action.

In order to aid institutional self-discipline, the Higher Education Coordinating Commission endorses and recommends the following Carnegie Commission proposals:

- (1) Improving the budget-making process. We suggest that the budget assign total costs to each endeavor (including rentals for space and equipment--there is little incentive to save on what are "free" goods); that it consolidate consideration of capital and operating budgets so that the impact of each on the other can better be seen and trade-offs can be made, for example, in considering year round operations; that it look at the long-term and not just the individual year; that it concentrate more on outputs and less exclusively on inputs, and particularly more on "value added."
- (2) Obtaining better data and making it more widely available within the academic community. It is particularly important to have (a) global cost and output data among institutions of comparable quality and with comparable endeavors and (b) specific cost and output data among departments within the same institution. Quality is of the essence in academic life and it is hard to measure; but among carefully selected institutions and within the same institution it may be assumed to be sufficiently equal so that comparisons can be made--it is easier to compare quality than it is to measure it. But even within these restricted limits great care must be taken in making comparisons; they are a starting point but not the end point of proper consideration. The best measure of output is student credit hours--for example, student credit hours per \$1,000. "Data pools" can be helpful--like the ACE studies of quality at the graduate level. Regional associations also can be helpful in creating them and some, in particular the SREB in the South and WICHE in the West, are. The U. S. Office of Education has a particular responsibility in regard to cost and output data. Consortia, as among certain private colleges in Pennsylvania, can also be helpful in gathering and exchanging data. The information system is now very poor in higher education.

¹⁰ *Ibid.*, pp. 22,23

(3) Maximizing flexibility in creation of space and in making commitments to people. This assists the process of necessary change. New projects should be on a trial basis; faculty members with tenure should be a reasonable proportion of the total instructional staff; early retirement on a part-time or full-time basis should be possible; young faculty members should be hired with regard to their adaptability to future assignments--the young faculty members hired in 1972 will retire in the year 2012; certain of the positions vacated should be recaptured for central re-assignment; and so forth.

(4) Setting a quota of "liberated" money each year, as suggested above, perhaps 1 to 3 percent. This money, taken from old assignments either on an across-the-board or selective basis, can then be used for reform, for new projects, for meeting the more volatile career and academic interests of students. Some old activities should be stopped altogether.

(5) Having a competent central staff with adequate authority.

(6) Creating incentives to save. The state can share savings with the campus rather than demand them all and thus make them disappear. The faculty can be assured benefits from savings, for example, some proportion might be assigned to salary increases or library purchases; and also the students--for example, more money for student aid or lower tuition increases. Faculty and students will need to share in some advisory role in budget making for these incentives to be fully effective.

The only way to keep faculty salaries ahead of the cost of living, to improve the library, to get more money for scholarships, to keep down increases in tuition, to get academic reform may be to make other adjustments in resource use. Hard choices must be made. Incentives can help both in making them and gaining their acceptance.

(7) Convincing the faculty of the need to be more cost conscious. The severity of the new situation is not as yet always fully appreciated. The 1960's were an unusual period; not par for the academic course. Salaries cannot keep rising so fast on a comparative basis; teaching loads may have to be increased instead of reduced; facilities and amenities cannot be so significantly improved; new Ph.D programs cannot so readily be added.¹¹

Achieving the Proper Role of the State.

Decreasing the rate of increase in the costs of post-secondary education without curtailing educational quality must necessarily remain a

¹¹ *Ibid.*, pp. 23, 24

responsibility of the institutions and systems. However, the state can assist institutions and systems with such efforts and can take actions which will facilitate accomplishment of the desired objectives. In setting out to bring about a reduction in the rate of cost increases, the state must take the necessary care to be certain that its policies and actions will facilitate rather than impede institutional efforts to achieve the desired results.

The Higher Education Coordinating Commission commits itself to pursuing the actions recommended by the Carnegie Commission for states and coordinating agencies, and recommends that the Legislature, the Governor, and other State Agencies follow these recommendations which are stated in the Carnegie Commission report as follows:

The states (and their coordinating councils) base budgets on broad formulas that consider quality and quantity of output and costs among comparable institutions; provide bonuses for accelerated degree programs; set standards for optimum size of each type of campus; share savings with institutions; support private institutions to a reasonable extent and in reasonable ways; encourage year-round operations if only by looking at year-round utilization rates among campuses when deciding where new construction is most justified; provide for differentiation of functions among systems and campuses; support the extension of the D.A. degree; inaugurate "open" universities on a state or regional basis; and look at the general situation and leave the detailed adjustments to the campus. ¹²

¹²*Ibid.*, p. 25

IV. IMPROVING THE BUDGETING AND FACILITIES PLANNING PROCESS IN PUBLIC POST-SECONDARY EDUCATION IN MINNESOTA

In *Meeting the Challenge* the Commission recognized the need to move toward an improved budgeting system for public post-secondary education. Pointing out that as higher education becomes more complex, improved bases for developing budget requests by the systems and making appropriations to the systems by the Legislature are required, the Commission recommended several steps to improve the budgeting appropriation process. In another section of this report ("A Period of Adjustment in the Appropriations Process") the Commission has discussed the importance of coordinating the accounting and budgeting process of the systems to provide comparable information to the Legislature in order to improve decision making in the appropriations process.

That this problem is of concern to the Legislature is obvious from the Bill of Particulars from the 1971 Legislature which instructed the Commission, in part, to attempt "to develop a uniform method of identifying the applicable cost factors for the three systems" in the determination of instructional cost. High priority was assigned to this project by the Commission because it recognized the debilitating effect that the lack of comparable information was having on the appropriations process. The efforts of the Commission were substantially successful in that it was able to develop, with the assistance of representatives of each of the systems, a common method for determining instructional cost. The broad principles, as specified below, were reviewed and endorsed by the Higher Education Advisory Council.

The Commission recommends, therefore, that determination of the cost of instruction in all post-secondary education institutions and systems be based on computations in accordance with the following guidelines:

I. The following shall be deleted from cost computation:

- A. Building and Land Costs (including leases).*
- B. All costs reimbursed by special appropriation supplements identified as catch-up monies for specific deficiencies.*

II. The following shall be included in cost computation:

- A. All costs reimbursed by special appropriation supplements for new or developing institutions.*
- B. All costs reimbursed by special appropriation supplements for specific instructional programs.*
- C. Equipment costs (investment; 15 year amortization or single year write-off).*
- D. Library costs (amortized in the year in which the expenditure is made).*
- E. Direct costs of instruction and departmental research (all instructional and departmental research expenditures of the departments, colleges, schools, and instructional divisions of the institution).*
- F. Indirect costs of instruction and departmental research. To be determined in the following manner:*
 - 1. Direct expenditures for sponsored programs are subtracted from total sponsored programs' revenue to determine assignable sponsored programs' revenue.*
 - 2. Total expenditures for libraries, physical plant operation and maintenance, and other educational and general expenditures (not listed under direct expenditures for instruction and departmental research) are added. These are total indirect expenditures.*
 - 3. Assignable sponsored programs' revenue is subtracted from total direct expenditures to derive non-recoverable indirect expenditures.*

4. *Non-recoverable indirect expenditures are assigned to expenditures for instruction and departmental research, public service (non-sponsored programs), and auxiliary enterprises in proportion to their total direct expenditures or by use of other appropriate allocation methods.*

The recommended approach for computing instructional cost can and should be refined with the adoption of specific procedures for implementation of the Guidelines. The Commission is confident that the systems will cooperate in this endeavor with the result that the method of determining cost of instruction will be improved further. In the meantime, use of the Guidelines will provide for computing instructional cost on a comparable basis for all institutions and systems.

Another important element in the planning and budgeting process is assessments of the use of facilities. Unfortunately, a variety of procedures have been used to measure, evaluate, and plan for the use of facilities in post-secondary education. In an effort to develop standard definitions and procedures for Minnesota, the Commission sought to have the data elements developed by the National Center for Higher Education Management Systems (NCHEMS) of the Western Interstate Commission for Higher Education (WICHE) adapted for use by Minnesota post-secondary institutions. The result of this process was the approval by the Higher Education Advisory Council of the Standard Data Elements, Definitions and Procedures for Facilities outlined below.

Accordingly, the Commission recommends that the following Standard Data Elements and Definitions for Facilities and the specified procedures will be applied by all Minnesota post-secondary institutions and systems:

1. *The use of Standard Data Elements and Definitions in Facilities and Space Utilization*

The following data elements and definitions relating to facilities and space utilization are featured from the Data Element Dictionary: Facilities, and from the glossary in Manual Seven of the Higher Education Facilities Planning and Management Manuals, technical reports of the National Center for Higher Education Management Systems at WICHE:

<u>TITLE</u>	<u>DESCRIPTION</u>
Gross Area	The sum of the floor area (square feet) - included within the outside faces* of exterior walls for all stories, or areas which have floor surface.
Net Assignable Area, Facility	The sum of the floor areas (square feet) available for assignment to an occupant,** except those areas assigned to Custodial, Circulation, Mechanical, and Construction areas.
Physical Condition	Rating of the physical condition of the facility: a) Satisfactory b) Needs major renovation c) Needs remodeling d) Should be razed
Functional Suitability	Rating of the appropriateness of the facility for the assigned activity: a) Satisfactory b) Needs major renovation c) Can accommodate other programs with remodeling d) Hopeless for present or future program
Room Type	A code to classify room types: a) Classroom b) Laboratory

*Disregarding cornices, pilasters, buttresses, etc., which extend beyond the exterior wall face.

**Including types of spaces functionally usable by an occupant.

TITLEDESCRIPTION

- c) Office
- d) Study
- e) Special-use
- f) General-use
- g) Supporting
- h) Medical care
- i) Residential
- j) Pro-rate
- k) Non-assignable
- l) Un-assignable

Actual Stations

Number of stations at which people may be assigned.

Average Room Utilization Rate (AvRUR)

The average number of hours per week a group of rooms is scheduled for use.

$$\text{AvRUR} = \frac{(\text{Scheduled Weekly Room Hours})}{(\text{Number of Rooms})}$$

AvRUR includes only scheduled Weekly Room Hours (WRH). As a matter of convention, Average Room Utilization Rate (AvRUR) is used with respect to the total number of classrooms (or class laboratories) in an institution (or for some aggregation of rooms with different Station Counts or of different types).

Average Section Size (AvSS)

The average number of students in a group of class sections. For the purpose of these manuals, the Average Section Size is derived by dividing the total Weekly Student Hours (WSH) taught in a group of rooms by the total Weekly Room Hours (WRH).

$$\text{AvSS} = \frac{(\text{Total Weekly Student Hours})}{(\text{Total Weekly Room Hours})}$$

$$\text{AvSS} = \frac{(\text{WSH})}{(\text{WRH})}$$

Average Station Occupancy Ratio (AvSOR)

The average proportion of Stations used when a group of rooms is scheduled for use. As a matter of convention, Average Station Occupancy Ratio (AvSOR) is used with respect to the total number of classrooms (or class laboratories) in an institution (or for some aggregation of rooms with different Station Counts or of

TITLE

DESCRIPTION

different types.)

$$\text{AvSOR} = \frac{(\text{Scheduled Wkly Student Hours per Station})}{(\text{Scheduled Wkly. Room Hrs. per Room})}$$

Average Station Utilization Rate
(AvSUR)

The average number of hours per week the total number of Stations in a group of rooms is scheduled. As a matter of convention, Average Station Utilization Rate (AvSUR) is used with respect to the total number of classrooms (or class laboratories) in an institution (or for some aggregation of rooms with different Station Counts or of different types).

$$\text{AvSUR} = \frac{(\text{Scheduled Weekly Student Hrs})}{(\text{Number of Stations})}$$

also

$$\begin{aligned} \text{AvSUR} &= (\text{Average Room Utilization Rate}) \times \\ &\quad (\text{Average Station Occupancy Ratio}) \\ &= (\text{AvRUR}) \times (\text{AvSOR}) \end{aligned}$$

2. Continuous Cooperation in Facilities Reporting

Institutions and systems will continue to cooperate in state-coordinated efforts to provide facilities information which assures a high degree of compatibility in statewide and national reporting.

3. Yearly Review and Updating of Facilities Files

A review and update of facilities files, including definitions and standard data elements, will be accomplished at least once each year.

4. Common Coding and Editing Programs

Common coding formats and editing programs could be developed for facilities data elements, if such coding and editing programs are considered useful for institutional, system, and statewide procedures.

5. 1973-75 Biennial Budget Format and Plant Operation and Maintenance

A program-type budget for operation and maintenance of buildings and grounds will be prepared for inclusion in the 1973-75 Biennial Budget. This presentation will be in addition to the regular object-of-expenditure budget.

V. A PERIOD OF ADJUSTMENT IN THE APPROPRIATIONS PROCESS

The use of formulas in state budgeting for higher education may be defined as attempts to equitably *estimate future fiscal needs of institutions* based on certain assumptions about the relationship of enrollments, numbers of faculty, average salary, and other such measurable items to investment payoff in higher education that the public desires. Berdahl uses such a definition in his analysis of the state appropriations process for higher education and further identifies that formula approaches "are presently used to formulate *asking* budgets, not *spending* budgets."¹³

This general definition of formulas in the budget process is consistent with the Commission's recommendation in 1970 that a "6 Cell" formula (defined in *Meeting the Challenge*) be used as a base in the future for institutional requests for additional teaching positions. However, in studying the "6 cell" formula or any modification or alternative, we should first turn our attention to the underlying assumption that there are measurable relationships between those items used in the formula and the investment interests the public has in higher education. We do this because what an institution requests, how it requests it (by formula in this case) and how it is spent--are all related, and if the underlying assumptions in any part of this process are faulty, weak, or nonapplicable--the whole process is affected.

When reviewing the idea of relationships or assumptions of relationships between public investment interests in the "6 cell" faculty/staffing formula in interviews with institutional budget officers, legislative staff,

¹³Robert O. Berdahl, *Statewide Coordination of Higher Education* (American Council on Education: Washington, D.C., 1971) p. 124.

and educational researchers, there was general agreement in all cases that there was little empirical evidence for a particular choice of faculty to student ratios. Instead, the indicated ratios develop over time through the appropriation-negotiation process. Institutional factors that combine in this process include:

1. Various types of educational delivery mechanisms used by individual teaching units;
2. Variability in mission among and between systems, institutions and departments;
3. Enrollment constraints and considerations; and
4. The market for teaching manpower.

Legislative factors that are involved in shaping these ratios include:

1. Funding climate at any given time;
2. Needs to simplify, if possible, the ever increasing complexity of budget evaluations; and
3. Needs for uniform methods and measures for comparing a variety of different programs.

Moreover, since the negotiation process naturally elicits discussions of how to evaluate the forthcoming marriage of institutional plans and public monies, both educators and legislators tend to use staffing ratios as proxies for evaluative "input" and "output" measures of education.

Brandl comments that this development grows out of economists' attempts to estimate the behavior of firms. He points out, however, that the economist evaluating the behavior of the firm has two advantages over the education evaluator:

"(1) Economics provides a theoretical rationale (growing out of a profit maximizing hypothesis) for arguing that the relationship which he finds will be efficient--that it will indicate the lowest-cost way of achieving any particular level of output. Since we do not know what school administrators are maximizing, the economists' approach *can only yield a description of current practice in education, not necessarily any insight into how to do things better* (emphasis added).

(2) The profit maximization hypothesis simplifies statistical or econometric analysis. Whatever school administration are maximizing--or the American public(s) wants to do--it is more complicated than a single measure can show."¹⁴

The reasons behind Brandl's strictly analytical viewpoint is that we do not have large scale, scrupulously controlled, educational experiments which might clearly identify production like factors and relationships.

Forgetting, for the moment, the analysts' pessimism regarding educational "formulas," it is worthwhile to point out some of the practical benefits of the formula approach to budgeting. The first aspect, as mentioned earlier, is that formulas move in the direction of simplification of complex issues. Simplification can be good if it clarifies fundamental, invariant relationships without "throwing out the baby with the bath water". This point, if achievable, is beneficial to both sides of the bargaining table.

A second advantage often claimed by institutional representatives is that formulas can provide institutions fiscal flexibility and equitable funding treatment. Fiscal flexibility arises if the formulas are used to present *asking* budgets, not *spending* budgets. An institution granted dollars on the basis of formulas and other justifications and then left approximately free to spend where needed understandably identifies fiscal flexibility as a benefit of the formula approach. In times of scarce

¹⁴John E. Brandl "Education Program Analysis at HEW" *Public Expenditures and Policy Analysis* (Chicago: Markham Pub. Co., 1971) p. 555.

resources, however, asking budgets and spending budgets move closer together and the vexing problems related to measuring the educational assumptions connected with formulas emerge.

Equitable funding treatment of institutions is noted by Miller as the greatest success scored by formulas and cost analysis procedures in the appropriations process. He states that this success is especially true if no attempt is made through the formula to eliminate existing programs.¹⁵ The notions of equity emerge, in part, from the concern that the real conflict legislators face is not the determination or judgement of over-all level of support to higher education but rather the distribution of funds among state institutions. Equity develops because formulas compel movement toward standard definitions of formula cost elements such as Full-Time Equivalent Student and the identification that different levels or kinds of instruction have different costs. The Commission's recommendations to the 1971 Legislature regarding improving the budgeting process and its recent adoption of guidelines for uniform costing methods are examples of this movement. Other states show similar developments.

On the cautionary side regarding the use of formulas, it is fair to state that the temptation to use formulas in place of judgement may be large. The formulas cannot make policy, and with understanding of their definition they are excluded from such roles. The formulas, when they are used, should be introduced *prior* to program policy decisions to provide a proxy for an economic perspective.

¹⁵James E. Miller, "State Budgeting for Higher Education," *The Use of Formulas and Cost Analysis* (Ann Arbor: Univ. of Mich., Institute of Public Administration, 1964) p. 152.

Since the formulas are basic to and contingent upon enrollment, predictions through ratios and unit costs to estimate future institutional budgetary requirements, they should have the features of adaptability. Adaptive aspects, if they can be designed into the budgetary process, should be directed toward mitigating such estimation problems. One method of adaptation is to make budgeting allocations based on projected enrollments, contingent upon actual enrollments. A complimentary method of adaptation is to periodically review the formula cost elements and ratios. This latter method encourages the keeping of current input data, invites comparative analysis, and draws attention to time influenced variables. However, such reviews have the tendency to re-open policy questions which otherwise might be looked upon as "settled." This may be considered as a decided advantage by those who challenge existing practice and are concerned with re-examining key issues and keeping up-to-date.

Another cautionary note is the question of new, innovative programs. These often are inefficient at their beginnings and have little chance of competing against established programs if funds are granted by formulas based on student load. Provisions must be made so that formulas do not obscure the continuing need for support of creative and innovative programs at all institutions.

Reviewing the 6-Cell Formula

In response to the legislative charge to further study the "6 cell" faculty/student staffing formula and recommend possible modifications and/or alternatives, the staff conducted a number of interviews with system representatives, legislative staff, and educational researchers to identify guidelines for study. The major themes that emerged from these discussions

were the following:

1. There was little empirical evidence to support a particular choice of staffing ratios to be used for determining how colleges and universities should project funding needs.
2. When used in the budget process, staffing formulas should be simple, direct, and should reflect a continuity with past practices and staffing patterns.
3. Because of the continuing progress being made toward developing uniform methods for identifying instructional costs, a possible long-range alternative to a staffing formula budget approach is program budget process.
4. The "6-cell" formula gives a correct ordering by level of the relative costs of instruction. Namely, lower division has a lower cost than upper division; and upper division has a lower cost than graduate/professional offerings.

Another theme that emerged from these discussions was that the "6-cell" formula yields upper division and graduate/professional staffing patterns that are higher than existing experience. This picture is best described by looking at the responses to using the "6-cell" formula during the 1971 Legislative Session and comparing this with the anticipated system responses in the upcoming 1973 session.

In 1971, the Junior College System found no inconsistencies in using the formula for preparing their "asking" budget. The lower division model was a reasonable fit for their system.

The State College System did not use the whole formula during the last session. They used the lower division portion and presented other

justifications for the upper division and graduate levels.

The University of Minnesota used the "6-cell" formula as prescribed and found that the resulting request was divergent from their existing staffing patterns by 16 percent (an increase of 628 teaching positions). This situation also was divergent from legislative expectations.

One alternative to this problem is simply to "thin out" the staffing formulas at the upper division and graduate/professional levels by some agreed upon amount. The risks involved with this approach are pointed out in the Carnegie Commission Report, *The More Effective Use of Resources*, when they recommend caution in ratios as "we know far too little about the impact of faculty-student ratios on the quality of instruction." This concern is particularly important in a time when the Coordinating Commission has asked the University to emphasize graduate/professional training. Such an alternative runs a risk of magnifying divergent goals among our Commission's recommendations. As a last comment on the alternative, it must be remembered that the formula-budgeting process directly driven by student load emerged some fifteen years ago when resources were full and students were entering post-secondary education in ever increasing numbers from year to year. Thus, the formula approach was not developed or tested in the context of leveling or declining enrollments, such as many institutions are now experiencing.

The conflict thus posed by the formula-budgeting approach is the problem of trying to use simple methods of budget justifications in a time of scarce resources and leveling student loads. Such an environment demands more precise justifications for all operations and programs.

In response to this problem, all systems of higher education in Minnesota for the 1973 Legislative Session are moving towards a display of budget requests on a program or teaching unit basis.

Such a movement is, indeed, more complex than a formula system. It does, however, more precisely reflect the reality of fund expenditures within systems of institutions. This complexity implies that both the systems' officers in preparing requests and legislative or executive representatives in understanding the reasons for justification must "reach a bit further" in the mutual process of evaluating values of higher education.

Conclusion

In view of the preceding discussion, the Commission concludes that it would be inappropriate to continue using the 6-cell staffing formula in the review of systems' budgets in the appropriations process. Although the formula provided a mechanism for evaluating the requests of the institutions on a comparable basis, and although it was adoptive to changes in enrollment trends by level of instruction, it did not nor was it intended to provide the basis for a staffing entitlement. To continue using the formula during a period of leveling or declining enrollments would only add to the complexity that exists in the present budgetary process.

The Commission urges the systems to exert immediate efforts to reallocate staff and programs in a manner that is adoptive to the present and projected enrollment trends in order to return staffing patterns to their 1971 level. In so urging, however, the Commission recognizes that programs cannot always be terminated immediately without seriously affecting the quality of the overall institutional offering. Thus, the

Commission also urges the Legislature to recognize this period as one of adjustment and to use the 1971 approved staffing patterns only as benchmarks, not as objective standards, recognizing that it will be necessary, in some cases, to have higher faculty-student ratios (produced by declining enrollments) than previously existed in order to maintain the quality and to accomplish the objective of existing programs in institutions that are experiencing declining enrollment.

Recommendation

The Commission recognizes, however, that the budgetary process would be vastly improved if the budgets submitted by the public systems of post-secondary education were all prepared and submitted on a comparable basis so that inter-system comparisons could be made. Such a process would make the requests of the systems more understandable, it would more clearly identify the relevant trade-offs that are the heart of the budgetary process, and as a consequence, it will lead to better informed decision making.

It is further recognized that post-secondary education is in a period of unstable enrollments with rather dramatic fluctuations occurring among the systems and with a probable leveling or possible downturn in enrollment occurring with the decade. Thus, the continued application of student load driven formula budgeting processes, which were developed to handle rapidly increasing enrollments, will prove increasingly inadequate during this period. It is necessary then, to look to different procedures to provide a more effective budgetary process.

This has already begun in several different ways. The Department of Administration has initiated an "Activity Analysis" in an attempt to relate expenditures of state funds to specific activities carried on by state

agencies including public post-secondary educational systems. The systems themselves have initiated efforts to introduce program-oriented accounting and budgeting procedures which will provide them with better management information for the administration and evaluation of their educational programs and products. The Junior College System has developed a program budgeting process that is more or less operational. The state colleges expect to have a program-oriented budgeting system operational by 1975. And the University is proceeding with the development of its own budgetary system that will relate expenditures to the specific programs offering by the University.

Desirable as these developments may be an effort to move from formula budgeting, the fact remains, however, that each of the systems is proceeding with the development of its own budgeting system. Although they are defining data elements in ways that are based on national standards, they are establishing allocation procedures that are based on their own budgeting and accounting needs, and they are discretely identifying programs and their products in accordance with their institutional missions. The Commission does not mean to suggest that this is inappropriate. Indeed, the primary purpose of a budgeting and accounting process should be to serve the management needs of those responsible for the administration of the enterprise. But it is also true that these independent processes will lead to budgetary procedures for each of the systems that only inadvertently will result in comparable and compatible budgetary information for the Legislature.

Accordingly, the Commission recommends that the budgeting systems being developed in each of the systems be investigated to identify areas of incompatibility and to develop a plan for the implementation of an intersystem budgetary process

that would serve the needs of individual systems while, at the same time, provide comparable budgetary information to the Legislature in order to improve the decision-making process in the appropriations process.

PART TWO: ASSESSING NEEDS AND PROVIDING NEW OPPORTUNITIES

VI. MEETING NEEDS IN PLANNING REGIONS NINE AND TEN

In referring the question of a branch of the University of Minnesota in Rochester to the Commission, the 1971 Legislature also requested an assessment of the possible need for additional public institutions in the southeastern area of Minnesota designated as Planning Regions Nine and Ten. The 1971 Legislature also directed the Commission "to describe the nature of any proposed institution for which the Commission identifies a need and of feasible types of institutions" and "to assess the implications of establishing any proposed new institution for existing post-secondary institutions in the area and the anticipated impact of such new institution on existing institutions."

In order to fulfill this complex charge, the Commission (1) invited, received, and reviewed testimony and information from interested citizens and groups, (2) conducted extensive research on present and projected post-secondary needs and activities in Planning Regions Nine and Ten, (3) established and sought advice from a panel of out-of-state consultants consisting of nationally recognized scholars and administrators in post-secondary education, and (4) invited views and suggestions from the Higher Education Advisory Council. The Commission also reviewed previous studies and statements concerning a University branch in Rochester.

Testimony and information presented to the Commission by interested parties was focused almost exclusively on the specific issue of a University branch in Rochester. For the most part, presentations from citizens of Rochester and officials of the University of Minnesota indicated strong desire and important advantages for establishing a University campus in Rochester. On the other hand, presentations from representatives of some other communities and institutions in the area reflected concern that a University campus in Rochester would be an unnecessary duplication of post-secondary programs in the state and the area and

might have a negative effect on existing institutions in or near Rochester.

Members of the panel of consultants established to assist with the Region Nine and Ten Study were selected in consultation with the Higher Education Advisory Council for their expertise and experience in planning post-secondary education. Selected were: Dr. Richard Bond, President, University of Northern Colorado, Chairman; Dr. Selma Mushkin, Director, Public Services Laboratory, Georgetown University; Dr. Raymond Young, Senior Staff Consultant, Arthur D. Little, Inc.; and Dr. James Wattenbarger, Director, Institute of Higher Education, University of Florida.

The consultants were given the charge of (1) guiding and reviewing research conducted by the Commission staff and (2) advising the Commission on needs and possible means for meeting unmet needs. A preliminary report was presented by the consultants at the Commission meeting of August 24, 1972 and a final report was submitted on September 22, 1972.

The consultants found existing institutions to be more than adequate in number to meet post-secondary needs in Regions Nine and Ten for the foreseeable future. However, they contended that some relocation and restructuring of institutions in the Rochester-Winona area would provide for meeting area needs more effectively. Conclusions of the consultants were stated as follows:

1. Access to educational programs of up to two years duration beyond the high school in Regions Nine and Ten appears to be adequate both currently and for the next decade. There may be, within existing institutions, some need for expanded facilities, but we find no need for additional or duplicating institutions at this level.
2. The existence of public junior colleges and area vocational-technical institutes offering post-secondary level programs in close

proximity most often represents an unnecessary duplication of effort. This arrangement also creates artificial distinctions detrimental to the educational process and inhibits the free lateral movement and options of students among the variety of programs.

3. Access to upper division and graduate levels of education is inadequate in the Rochester area.

4. Empty spaces exist at the upper division and graduate levels in state colleges serving Regions Nine and Ten. Duplication of opportunities at these levels is detrimental to existing institutions as well as an unwise expenditure of funds.

5. The 89 full-time equivalent graduate students (273 headcount) enrolled at Winona State College in the fall of 1971 do not constitute the critical mass needed for graduate education.

6. In the fall of 1971, there were approximately 1400 FTE students at the upper division level at Winona State College.

7. Winona State College is mainly a local rather than a regional institution. Among its 1970 undergraduates, approximately 29 percent of its students come from Winona and Fillmore counties; about the same number come from all the rest of Region Ten. Winona and Fillmore counties comprise approximately 17 percent of the total population of Region Ten.

8. The blunt fact in 1972 is that Winona State College is in the wrong place to serve adequately as a regional institution.

9. The complex problems of higher education in Regions Nine and Ten which have heretofore defied solution will continue to do so and will continue to be the subject for additional studies unless decisive and bold action is taken.

Five alternative proposed developments were reviewed and rejected in the consultants' preliminary report. These rejected alternatives are: (1) preservation of the status quo, (2) establishment of a new institution, either four-year or upper division and graduate, in Rochester, (3) establishment of a University of Minnesota branch in Rochester, (4) vertical expansion of Rochester State Junior College, and (5) establishment of a cooperative upper division center.

The preliminary consultants' report contained five recommendations, which are as follows (summarized):

1. That the Rochester Junior College and the Rochester Area Vocational-Technical Institute be combined under the governance of the Minnesota State Junior College System.
2. That the upper division/graduate portion of Winona State College be translocated to Rochester as a separate nonresidential institution, to be located as nearly contiguous to Rochester Junior College as possible.
3. That the lower division of Winona State College be merged with the Winona Area Vocational-Technical Institute to become a community-junior college under the Minnesota State Junior College System.
4. That the new Winona Junior College accept a special responsibility in the state.
5. That advanced graduate programs in the Rochester area beyond the master's degree, including those in medicine, be continued either as an extension service of the University of Minnesota, or as a part

of a cooperative higher education center with major emphasis upon connection with and direction from the degree-granting departments.

Strong negative reactions to the consultant recommendations were expressed by representatives of the University of Minnesota, the State College System, the State Department of Education, and Rochester. In view of these reactions, the Commission requested the consultants to recommend an alternative plan for improving the post-secondary education arrangement in the Rochester-Winona area. The consultants agreed to make such a recommendation and invited any additional information which interested parties thought should be considered.

In their final report, the consultants re-affirmed their preliminary report as representing "the best educational judgment of the panelists after examination of all data and after consideration of public reaction to the recommendations." They also proposed some "interim steps to solve in the near term the problems in the Rochester area" as an alternative to be considered in the event their recommendations were not viewed as feasible. These steps involve (1) establishing a consortium to offer upper division and graduate level work in the Rochester area, (2) combining the state junior college and the area vocational-technical institute in Rochester, and (3) giving consideration to converting the Winona Area Vocational-Technical Institute into a community college. The consultants proposed that such an interim solution involving no larger new institutional commitment be reviewed in a few years when future enrollment demands and demands for professional and technical personnel become more certain.

Members of the Higher Education Advisory Council have offered useful suggestions on the issue under consideration. However, as of November 10, members of the Council had not agreed on a recommendation to the Commission.

After careful review of research on post-secondary education needs and existing institutional capacities in Regions Nine and Ten and full consideration of the advice and proposals provided by citizens of the area, representatives of post-secondary institutions and systems, and the panel of consultants, the Commission has reached the following conclusions:

1. Existing institutions are sufficient in both number and variety to provide the capacity necessary for meeting post-secondary education needs in Regions Nine and Ten.
2. In view of the above, any decision to establish a new institution would have to be based on meeting special local needs.
3. Access to upper division and graduate level opportunities in Rochester is less than fully desirable.
4. The Rochester community offers an unusually fine setting for an institution of post-secondary education.
5. Establishing a senior institution of post-secondary education in Rochester would affect Winona State College adversely and would result in inefficient use of resources.
6. While moving the upper division and graduate level programs of Winona State College to Rochester would provide better placement of educational opportunities for meeting needs of the region, such a plan is not politically feasible.
7. Present statewide post-secondary education needs do not justify establishing an additional post-secondary institution.

8. Access to upper division and graduate level of post-secondary opportunities in Rochester could be improved through a carefully planned program which draws on the capacities of existing institutions.

9. Declining enrollments and limited tax dollars for post-secondary education suggest that meeting special local needs in the future must be accomplished through interinstitutional and inter-system cooperative efforts rather than through developing new institutions which will compete with existing institutions for both students and funds.

The complexity of the situation is reflected by these conclusions. On the one hand, Rochester provides a fine setting for a senior collegiate institution and making upper division and graduate level opportunities more accessible to residents of Rochester and the immediately surrounding area would be advantageous. On the other hand, existing institutions can provide sufficient capacity to meet needs of Regions Nine and Ten, and present statewide trends simply do not justify recommending establishment of an additional senior institution. While transferring the upper division and graduate level programs of Winona State College to Rochester would provide better placement for meeting needs of the region, the dislocations and turmoil involved in such a move would appear to make such a plan unrealistic. In effect, the problem of meeting all of the post-secondary needs in Rochester is sufficiently complex to defy any solution which satisfies all of the conflicting needs, conditions and interests.

In the judgment of the Commission, much of the need for improving access to upper division and graduate level post-secondary education in Rochester

can be met through establishment of a consortium which offers cooperative interinstitutional programs drawing heavily on the resources of existing institutions. The Commission recognizes that such an arrangement may not fully satisfy the desires of Rochester residents who wish to have a University branch in Rochester. Similarly, the plan may not fully satisfy representatives of the University of Minnesota. However, a consortium arrangement offers significant potential for addressing unmet needs and represents a clear improvement over the status quo.

The kind of consortium envisioned by the Commission would not involve the large investment of capital funds required for building a campus for a new institution. It would not pose the pervasive threat to Winona State College which is inherent in alternative plans. In addition, the level of activity and of the investment in such a consortium could be increased and reduced as changing needs and experience may indicate with relative ease. The entire arrangement could be terminated, wherever appropriate, without creating the serious dislocations associated with the nearly impossible task of closing an institution. Moreover, such an arrangement provides the opportunity for testing an innovative interinstitutional cooperative approach to meeting needs which may serve as a model for other interinstitutional and inter-system efforts. Cooperating in a consortium arrangement of the magnitude envisioned for Rochester may provide significant positive experience for Minnesota post-secondary institutions and systems.

Based on these conclusions, the Commission recommends that the 1973 Legislature pass legislation establishing a Rochester Higher Education Consortium with the following characteristics and conditions:

- 1. The consortium shall be governed by a board consisting of the Higher Education Advisory Council plus the executive director of the Higher Education Coordinating Commission, who shall serve as chairman.*

2. The consortium shall be administered by a coordinating provost to be appointed by the board and to serve at the pleasure of the board.

3. The coordinating provost shall serve as chief executive officer of the board in addition to assuming primary responsibility for administration of consortium affairs under the policies prescribed by the board.

4. The board shall have the authority to appoint such other officers and employees as may be necessary for accomplishing the purposes of the consortium within the constraints of available funds; officers and employees of the consortium may also be employees of a cooperating institution or system at the discretion of the board and the cooperating institution or system.

5. The coordinating provost and the board shall be advised by a curriculum planning committee consisting of one representative each from Rochester State Junior College, Rochester Area Vocational-Technical Institute, the University of Minnesota Rochester Extension Center, the Twin Cities Campus of the University of Minnesota, Mayo Clinic, Winona State College, Mankato State College and two representatives of private colleges in Regions Nine and Ten appointed by the Private College Council.

6. The coordinating provost and the board also shall be advised by a citizens advisory committee consisting of five persons appointed by the Governor of Minnesota from Regions Nine and Ten.

7. The purpose of the Rochester Higher Education Consortium shall be to offer or arrange to have offered courses and programs at the upper division and graduate level which can be developed through cooperation of existing institutions and which will meet specific needs in Rochester and the immediately surrounding areas; emphasis should be placed on structuring offerings in such a manner as to minimize any adverse effects on Winona State College.

The Commission further recommends that the consortium board and provost be requested to develop a specific plan for fulfilling the purposes of the consortium with modest legislative appropriations, such plan to be submitted to the Higher Education Coordinating Commission by July 1, 1974, and such plan to serve as a basis for recommendations by the Commission to the 1973 legislature on continuing development of the consortium. The plan shall include but not be limited to resolution of such issues and problems as:

1. Should the consortium offer degrees or should degrees be awarded by cooperating institutions?
2. Should the consortium collect tuition for courses offered or should tuition be paid to a cooperating institution?
3. Should the consortium pay salaries of instructors and other expenses incurred with offering courses or should such salaries and expenses be paid either singly or jointly by cooperating institutions?
4. Should the Rochester Extension Center be continued as a separate entity or subsumed and replaced by the consortium?
5. What specific courses and programs should be offered by the consortium over the next five years?
6. What is the projected amount of direct costs which should be covered by legislative appropriation to the consortium and the amount which should be assumed by cooperating institutions or secured from other sources during the next five years?

The Commission further recommends that, in addition to developing the plans for future development of the consortium, the board and coordinating provost be charged with stimulating, coordinating, and implementing programs consistent with the purpose and conditions specified above as fully as feasible with the cooperation of participating institutions during the next biennium.

The Commission further recommends that the 1973 Legislature appropriate \$50,000 for the first year of the biennium and \$80,000 for the second year of the biennium to the consortium and that such appropriation be in addition to appropriations for the Rochester Extension Center and for institutions of post-secondary education in the area.

VII. THE NEED FOR ADDITIONAL AREA VOCATIONAL-TECHNICAL INSTITUTES

The request by the 1971 Legislature that the Higher Education Coordinating Commission study the need for additional public area vocational-technical institutes stimulated a review of the policy on establishing and supporting institutions of post-secondary education as recommended by the Commission to the 1969 Legislature. The policy-recommendation was stated as follows:

- A. A publicly-supported institution of post-secondary education should be located within 35 miles of every Minnesota community with a population of 5,000 or more.
- B. A public institution which offers at least the first two years of collegiate studies leading to the baccalaureate degree should be located within 20 miles of every Minnesota community with a population of 10,000 or more.
- C. When the peculiar characteristics of an area clearly indicate the desirability of establishing and supporting institutions in addition to those established and maintained through implementation of guidelines A and B, the determination to establish additional institutions should be based upon the special intensity and extent of need in the area and should be considered in the context of the total needs of the state for post-secondary education.

Two conclusions emanate from the review of the policy:

- 1. The policy is sound and does not require modification to take into account any changes which have occurred since 1969, and
- 2. The state has made remarkable progress in meeting the policy guidelines.

Examination of Figure 1 which shows the location and 35 miles commuting region of each of the area vocational-technical institutes reveals that more than 90 percent of all Minnesota residents reside within 35 miles of an area vocational-technical institute and at least 60 percent of all Minnesota residents are within 35 miles of two or more area vocational-technical institutes.

FIGURE 1

LEGEND

Areas in Minnesota within
35 miles of Area Vocational-
Technical Institutes.

International Falls is the
only community with 5,000 or
more population not within
one of the areas.

International Falls

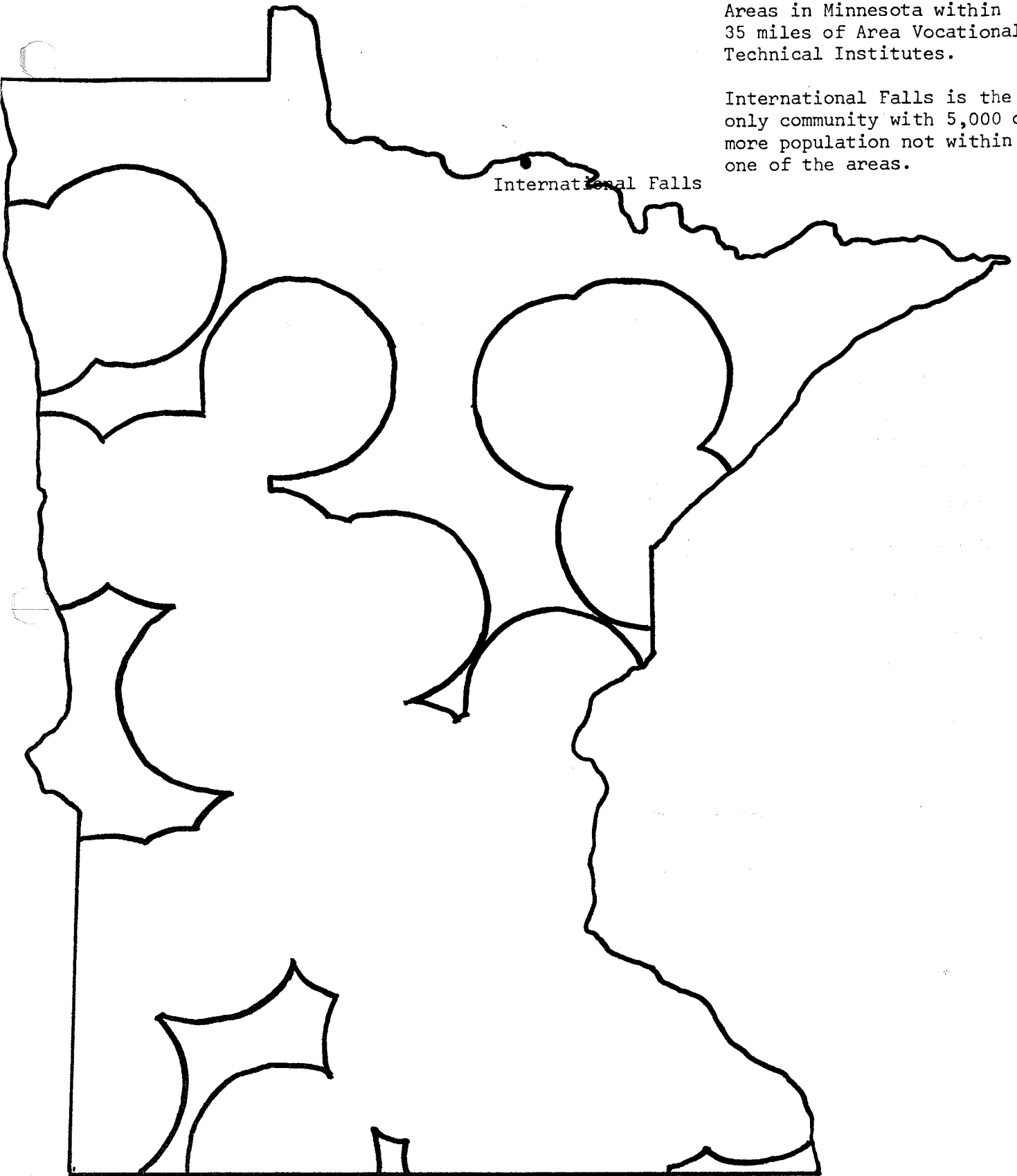


Figure 2 reveals the fact that a substantial portion of that population not served by an area vocational-technical institute has access to a public junior college or four-year institution within 35 miles. Only two communities with population exceeding 5,000 (East Grand Forks and International Falls) were not served by an area vocational-technical institute within 35 miles when the Commission initiated the study as requested by the 1971 Legislature.

On December 2, 1971, the Higher Education Coordinating Commission took favorable action on the proposal for establishing an area vocational-technical school in East Grand Forks. The Commission's decision on the proposal was reached after careful consideration of the report on the proposal by the Department of Education, additional information provided by the Commission staff, a presentation to the Commission by representatives of the East Grand Forks community, and testimony at a public hearing on the proposal. The decision was based on the conclusion that the present and future needs of the residents of East Grand Forks and the surrounding area is sufficient to justify the investment necessary for an area vocational-technical school and that establishing such a school is a viable means for meeting needs in the area.

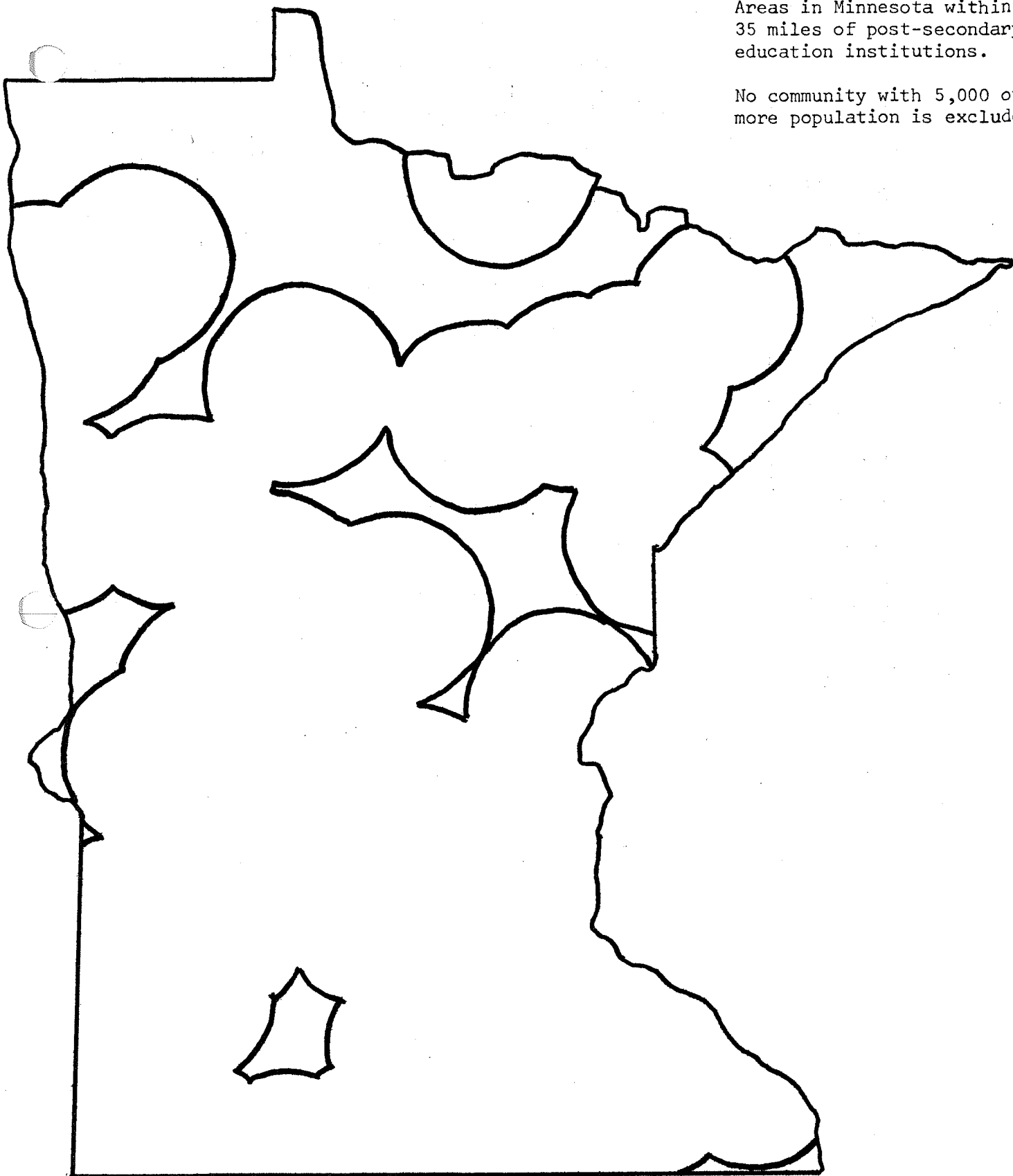
The Commission's basic policy on establishing new institutions reflects the goal of extending the benefits of post-secondary education to as many Minnesota residents as feasible. In providing that a public post-secondary institution should be available within 35 miles of every Minnesota community with a population of 5,000 or more and within 20 miles of every community with a population of 10,000, the policy also recognizes the demonstrated relationship between accessibility of post-secondary opportunities and the propensity of residents to pursue education beyond the high school.

FIGURE 2

LEGEND

Areas in Minnesota within
35 miles of post-secondary
education institutions.

No community with 5,000 or
more population is excluded



Careful review of the situation revealed that the spirit and intent of the policy on new institutions had not previously been fulfilled in the East Grand Forks area. While the University of Minnesota Technical College at Crookston is within 35 miles of East Grand Forks, the technical college is a special purpose institution with instructional offerings limited to programs in agriculture and closely related areas. The technical college provides a specialized statewide service and is not maintained for the purpose of meeting the comprehensive needs for post-secondary vocational education in the immediate vicinity of the college. The absence of a more comprehensive institution within commuting distance of East Grand Forks with a population exceeding 7,500 and the surrounding area leaves a void in the state's effort to make post-secondary education as accessible as feasible to all residents. This void can be filled effectively by a public area vocational-technical institute.

The East Grand Forks-Grand Forks population center provides a favorable setting for an area vocational-technical institute. The industry and business service activities of the area clearly are sufficiently extensive and varied to provide significant resources for vocational education. Residents of the area have demonstrated a strong desire to provide the leadership and support necessary for a successful post-secondary vocational effort.

In view of the present and future needs of the residents of the East Grand Forks area for post-secondary education, the absence of any Minnesota public post-secondary education institution offering a comprehensive program within reasonable commuting distance, and the favorable setting for vocational education, establishing an area vocational-technical institute in East Grand Forks was determined to be both feasible and desirable.

With the establishment of an area vocational-technical institute in East Grand Forks, International Falls remains the sole Minnesota community with

population in excess of 5,000 which is not served by an area vocational-technical institute within 35 miles. However, International Falls and the surrounding area is served by a state junior college located in International Falls. Since the state junior college can and does offer terminal vocational programs as well as programs designed for transfer to a senior institution, and since the population in the area is not sufficiently larger to justify two public institutions in the area, establishing an area vocational-technical institute in the International Falls area would not represent judicious investment of public funds.

Establishing a state junior college in New Ulm as recommended by the Commission in the Commission report to the 1969 Legislature would make post-secondary education opportunities available within the 35-mile commuting distance to a portion of the Minnesota population not presently served as fully as desirable. While establishing additional area vocational-technical institutes or other post-secondary institutions to serve the remaining Minnesota residents who do not have an institution within 35 miles of their place of residence might be desirable, these remaining residents are dispersed geographically in such a way that providing post-secondary institutions within 35 miles of their places of residence is not feasible.

Previous concern for providing the number of post-secondary institutions appropriate for meeting needs in more densely populated areas of the state has been largely alleviated by the establishment of additional area vocational-technical institutes in the seven-county metropolitan area during the past few years. The number of area vocational-technical institutes in this metropolitan area now has grown to six. With six state junior colleges, the Twin Cities

campus of the University of Minnesota, Metropolitan State College and 18 private collegiate institutions and 37 private vocational institutions, the seven-county metropolitan area is reasonably well served and no demonstrated need for additional area vocational-technical institutes remains. The Commission continues to believe that establishing a state junior college in St. Paul, as recommended in the Commission report to the 1969 Legislature, is both feasible and desirable. Establishing a state junior college in St. Paul would fill a void in the distribution of comprehensive lower division opportunities and would meet demonstrated needs of inner-city residents of St. Paul. The population of St. Paul is more than adequate to justify both the existing area vocational-technical institute and a state junior college in St. Paul.

Establishing additional public post-secondary institutions in order to increase the range of opportunities in some additional areas of the state is both desirable and feasible, but the need is not pressing and such developments probably cannot command high priority among total post-secondary needs of the state at this time. The primary instances of this situation are reflected in the recommendations for establishing state junior colleges in Owatonna and Alexandria, as presented in the Commission report to the 1969 Legislature.

Meeting post-secondary education needs in the Rochester area is a complex problem. Since the 1971 Legislature requested a special study of this situation within the context of needs of Planning Regions Nine and Ten, the Commission's assessments and recommendations concerning Rochester are presented separately.

In summary, the Commission has not identified any demonstrated need which is great enough to justify establishing any additional area vocational-technical institute. The Commissioner of Education, who serves as the chief executive

Office of the State Board for Vocational Education, agrees with this assessment of the situation.

The Commission recommends that no new area vocational-technical institutes be authorized until such time as greater need and feasibility becomes evident. In addition, the increasing excess capacity at other public institutions in the state indicates that caution should be exercised in expanding existing area vocational-technical institutes. Accordingly, the Commission recommends that the State Board for Vocational Education not approve any additional construction at existing area vocational-technical institutes without prior review of the proposed construction by the Higher Education Coordinating Commission.

VIII. EXPANDING OPPORTUNITIES THROUGH INTER-STATE RECIPROCITY

In planning for meeting the post-secondary education needs of Minnesota residents, it was recognized several years ago that part of the increasing needs for availability and accessibility could be met through reciprocal agreements with neighboring states rather than always establishing new institutions and developing new institutional programs.

Historically Minnesota and its neighbors developed their respective state systems of post-secondary education unilaterally and one result was that many institutions were located near their borders. In some areas, such as Duluth-Superior and Fargo-Moorhead, institutions were situated merely a few miles apart. Consistent with the traditional interpretations of state autonomy, each state viewed its respective public institutions as serving its own residents. In many instances the states established barriers which mitigated against service to residents of the neighboring states. Frequently, the states levied substantially higher tuition charges for residents of neighboring states than for resident students, and applicants from out-of-state were often required to meet higher admission standards.

Under the prevailing conditions, many residents of both Minnesota and its neighboring states found that post-secondary opportunities which were accessible geographically were actually relatively inaccessible because of the barriers of invisible state lines. Since opportunities provided by neighboring states were not readily accessible, each state was faced with the problem of providing the complete range of opportunities needed by its residents, even though the inefficiencies of duplication of institutions and programs along state borders was the result. Joint planning which could lead to greater economy and effectiveness in meeting the needs of residents of neighboring states was precluded.

An important step toward improving the situation was taken by the Minnesota Legislature when it authorized the Higher Education Coordinating Commission to enter into reciprocity agreements with neighboring states. Since 1967 discussions have been initiated with appropriate agencies in Wisconsin, North Dakota, South Dakota and Iowa. An agreement has been in effect with Wisconsin since the 1969-70 academic year, and discussions continue with the other states with the hope of reaching some accord which will be mutually beneficial.

As a result of the agreement with Wisconsin, 300 students from each state were able to attend institutions across the border on a resident basis for both tuition and admissions standards during the 1969-70 and 1970-71 academic years.

The purposes of the agreement are to continue to improve the post-secondary education advantages of residents of Minnesota and Wisconsin through greater availability and accessibility of post-secondary opportunities and to achieve improved effectiveness and economy in meeting the post-secondary needs of the residents of both states through cooperative planning by the appropriate agencies in each state.

Developing and administering a viable inter-state higher education reciprocity agreement has been a challenging endeavor. Much of the difficulty has revolved around the fact that the number of Minnesota residents seeking to attend Wisconsin institutions is more than three times greater than the number of Wisconsin residents seeking to attend Minnesota institutions. In an attempt to minimize the difficulties and better meet the objectives of the program, the agreement was expanded for the 1972-73 academic year¹. The revised agreement made it possible for all residents of either state to be eligible to attend an institution of post-secondary education, including for

¹The full text of the revised agreement is printed in Appendix K.

the first time vocational institutes, as resident undergraduates in the neighboring state. As a result of the expansion and a growing awareness of the program, more than 600 students from each state are participating under the program in the 1972-73 academic year, and it is anticipated that the number will continue to increase annually.

Representatives from both Wisconsin and Minnesota are continuing in their efforts to improve the elements of the present agreement and to explore areas in which further expansion of the program may occur. The guidelines for the administration of the agreement have been modified annually to provide more widespread geographical access to the reciprocity program for Minnesota residents, while at the same time assuring that priority be given to those students from border communities who plan to commute to Wisconsin institutions. In addition, representatives from both states are continuing to investigate the possibilities of extending the agreement to include graduate students.

Although there was optimism in 1971 that the North Dakota Legislature would approve a proposed agreement with Minnesota, final approval has not been achieved.

The Commission proposes to continue discussion with North Dakota toward this end and recommends a continuation of the policy of seeking to improve the availability and accessibility of post-secondary education opportunities, including vocational-technical programs, to Minnesota residents through reciprocity agreements with neighboring states.

In addition to appropriate action at the state policy level, individual institutions working in concert with institutions in neighboring states can develop and implement plans for cooperative efforts to strengthen the individual institutions involved while eliminating unwarranted duplication. The foundation for such cooperation and considerable progress toward achieving cooperative goals has been demonstrated by Moorhead State College, North

Dakota State University and Concordia College. These three institutions-- one a Minnesota state institution, one a North Dakota state institution and one a private institution--have identified a variety of ways in which they can cooperate in providing better service to the Fargo-Moorhead area with greater economy of effort while strengthening the individual institutions.

IX. MEETING POST-SECONDARY EDUCATION NEEDS OF DISADVANTAGED STUDENTS

In the 1971 report to the Legislature, *Meeting the Challenge*, the Commission outlined several proposals for extending the benefits of post-secondary education to Minnesota's disadvantaged population. The recommendations were based on a 1969 study² that identified four major barriers to post-secondary education for the economically disadvantaged:

1. The need of many disadvantaged persons for compensatory education to improve basic skills;
2. The importance of counseling services to guide the student into the appropriate post-secondary experience and to retrain the student once enrolled;
3. The need for adequate financial support to provide a post-secondary educational opportunity for the disadvantaged student;
4. The need for appropriate, geographically accessible post-secondary educational programs.

As pointed out in *Meeting the Challenge*, the society in general and post-secondary education in particular lacks "continuity and breadth of experience in dealing with the disadvantaged population. Moreover, the prevailing structures and processes of post-secondary education have been developed primarily with reference to the needs and characteristics of the advantaged majority and not the disadvantaged minority." The problem then is to make post-secondary education both more accessible to

²Rafael A. Lewy et al, *Meeting the Post-Secondary Educational and Facility Needs of the Urban Disadvantaged in the Twin Cities: Alternative Proposals*, (St. Paul, Minnesota: Minnesota Higher Education Coordinating Commission, 1969).

disadvantaged students and more responsive to their needs.

The 1971 Legislature took important steps in addressing the needs of disadvantaged students by approving the Private College Contract Program and by increasing the appropriation for state scholarship and grant funds. During 1971-72 private colleges participating in the Private College Contract Program enrolled 228 students who received a State Grant and during 1972-73 it is estimated that they will enroll 512 more or a total of 740. (See Appendix I.) Thus, this program has resulted in a significant increase in the efforts of the private sector to deal with the disadvantaged student. Similarly, the increase in the appropriation for the State Grant-in-Aid program provided for assistance to 2,784 new students during the 1971-73 biennium.

In spite of our progress, the Commission believes that more can and should be done. Continued efforts must be made to strengthen elementary and secondary education to deal more effectively with disadvantaged youth and to provide the necessary counseling to guide them into appropriate forms of post-secondary education. As emphasized in many reports, the problems of the disadvantaged are not problems that can be solved entirely by post-secondary education. Efforts to deal with the problems of the disadvantaged population must extend throughout the entire educational system.

The Commission therefore reaffirms its previous recommendation that the capacity of elementary and secondary schools to educate disadvantaged students be strengthened substantially in order that the educational deficiencies of disadvantaged students may be overcome earlier.

Making post-secondary education genuinely accessible to Minnesota's disadvantaged residents will require significant increases in resources

available to help them pay for the cost. The Commission's statement on tuition policy, which appears in a previous section of this report, emphasized the fact that tuition is but one of the cost of post-secondary education and at public institutions tuition tends to be a relatively small portion of the total expenses associated with education beyond the high school. Accordingly, resources are necessary to provide assistance to disadvantaged youth to enable them to pay for the other costs of post-secondary education - room, food, clothing, books and supplies, etc. - in order to improve access among these potential students. As the state moves closer to its goal of equal financial access, it is clear that those that continue to be excluded are the students from the lowest income families - the disadvantaged youth. To improve this situation will require significantly increased student aid funds.

Recognizing the need to make post-secondary education accessible to all Minnesota residents, including the disadvantaged, the Commission recommends that the 1973 Legislature appropriate \$22,650,000 for the State Scholarship and Grant Program, thereby increasing this program by over 200 percent. It is further recommended that all funds for new awards be allocated to the Grant Program in order to provide greater access to post-secondary education for the economically disadvantaged.

It is important to realize, however, that a large proportion of students from disadvantaged backgrounds either lack the motivation or do not perceive the opportunities to develop their abilities through post-secondary education. Because they do not recognize post-secondary education as part of their world, they frequently do not seek it as a means to improve their situation. Thus, post-secondary education must seek them.

The Commission emphasises that unless the resources are available in the form of student aid to help disadvantaged students defray the cost

of obtaining a post-secondary education, efforts to seek them out will result in frustration and disappointment. Assuming, however, that adequate student aid is available, as recommended by the Commission, it is necessary to provide further services in order to attract disadvantaged youth to post-secondary education.

The Commission therefore restates its previous recommendation that in order to facilitate more effective efforts of all post-secondary education institutions in serving the largest concentrations of Minnesota's disadvantaged population and to provide a better link between this population and post-secondary education, the 1973 Legislature should appropriate \$750,000 to establish an experimental cooperative education center in the Twin Cities.

The primary purpose of the center, as specified in *Meeting the Challenge*, should be to provide a necessary link between the disadvantaged population and post-secondary education by providing (1) assessment, counseling, and recruitment services, and (2) a limited program of compensatory and basic education. Secondary purposes include assisting and coordinating the individual efforts of post-secondary institutions and advising institutions on needs of disadvantaged youth and an effective approach for meeting these needs. The center should be viewed as a cooperative effort of all post-secondary institutions, and the center director should report to an operating board comprised of two members each from the University of Minnesota, the state colleges, the state junior colleges, the area vocational-technical schools, and the private colleges, all appointed by the Commission, and one member of the Commission's staff. The board should have full responsibility for operation of the experimental center with review and evaluation by the Commission. A working advisory committee comprised primarily of

members of the disadvantaged population, but perhaps including others who work with that population, should be an integral part of the center's administrative structure. The center should be located near a major concentration of the disadvantaged population in the Twin Cities.

The Commission realizes further, however, that retention of disadvantaged youth in post-secondary education remains a serious problem. They are faced with new challenges and often confronted by different values. In many cases they are deficient in the basic skills required to compete successfully in the classroom. Because the problems of disadvantaged students are more extensive as the number of disadvantaged students entering an institution increases, the need for counseling services increases disproportionately. But unless these services are provided and unless institutions have the capacity to assume greater responsibility for the success of students than previously possible, post-secondary education will simply become another frustrating experience for the disadvantaged student, and retention will be low.

Accordingly, the Commission reaffirms its previous recommendation that the 1973 Legislature provide the funds necessary for Minnesota's public institutions of post-secondary education to meet the needs of individual students, both advantaged and disadvantaged, through effective counseling services.

X. FACILITATING THE MEETING OF POST-SECONDARY
EDUCATIONAL NEEDS BY PRIVATE INSTITUTIONS

Origins of state policy aimed at more effective use of private institutions in meeting Minnesota's post-secondary education needs emanated from the request by the 1969 Legislature for the Higher Education Coordinating Commission to conduct "a staff study of the current and emerging needs and alternative solutions for post-secondary education in Minnesota, in cooperation with post-high school institutions and private colleges and universities, which shall be reported to the Legislature and the Governor on or before November 15, 1970."

Clearly, the concern of the 1969 Legislature for identifying acceptable alternative means for providing the services of post-secondary education was justified. Expanding needs of the state and its residents for the services and benefits of post-secondary education together with rapidly rising costs provided urgent reasons for assessing new ways for the state to fulfill its responsibility for post-secondary education.

Traditionally, the establishment and financing of public institutions of post-secondary education had been the only means utilized by the state in providing post-secondary educational opportunities for its residents in developing an educated citizenry. Alternatives for providing post-secondary education had been limited to such considerations as the number of public institutions which should be established or financed by the state, where such institutions should be located, what type of institutions they should be, and how much the state should invest in the support of these institutions. Little serious consideration was given to other possible means of fulfilling the state's responsibility for post-secondary education.

Passage of legislation authorizing a State Scholarship program by the 1967 Legislature recognized the facts that (1) simply providing public institutions of post-secondary education is not sufficient for fulfilling

the state's responsibility to make post-secondary education realistically available to all Minnesota residents who can and should benefit from education beyond the high school, and (2) the state's interest in post-secondary education must be more pervasive than an interest in maintaining public institutions. In providing that a state scholarship recipient may attend either a public or a private higher education institution in Minnesota, the 1967 Legislature also recognized the fact that the state can appropriately provide post-secondary education opportunities for its residents in other ways. Action of the 1969 Legislature appropriating funds for state grants-in-aid, as well as increasing the appropriation for scholarships for students attending both public and private colleges and universities, represented increased effort reflecting recognition of these facts.

While post-secondary education has always been the responsibility of the state, privately controlled colleges had shared this responsibility voluntarily and without direct financial assistance from tax funds since the day Minnesota became a state. In the years immediately prior to 1971, the proportion of post-secondary needs being met by the state through public institutions had grown rapidly, while the proportion of needs being met voluntarily by private colleges had been declining rapidly. In 1971, students attending private colleges comprised less than 20 per cent of total post-secondary enrollments in Minnesota, and the private college percentage of total enrollment was projected to decline in the future.

The 1971 Legislature took positive action on three Commission recommendations to alter these trends and to facilitate greater utilization of private colleges in addressing the needs for post-secondary education in Minnesota. To improve the opportunity for residents to attend the institution of their choice, the Legislature approved an increase in scholarships and grants-in-aid. To

facilitate desirable improvements in private college physical plants, the Legislature authorized the establishment of the Higher Education Facilities Authority. In addition, the 1971 Legislature authorized the Commission to contract with approved private colleges and universities for services rendered to the state through the education, in approved programs, of additional residents of the state.

The private college contract program was initiated in the fall of 1971 with 21 private colleges of the state participating. The contractual arrangement with participating institutions provides for payment to each institution an amount not to exceed \$500 per student in each institution which grants a bachelor's degree and \$400 per student in each institution which grants an associate's degree, for each Minnesota resident enrolled as a full-time student in excess of the number in the fall of 1970. In addition, participating two-year and four-year institutions receive \$400 and \$500 respectively for each state grant-in-aid recipient who is accommodated by a private college.

In the first two years of the program, the private colleges have responded positively to the new state policies and some have made significant efforts to enlarge their contribution to Minnesota by increasing the number of Minnesota residents being educated on their campuses. Many private institutions are meeting the needs of an increased number of low-income students who receive state grants-in-aid. As of the fall of 1972, the following institutions have been designated as eligible for participation: (see Appendix I for an itemization of awards each institution has received.)

Augsburg College	Hamline University	St. Mary's College
Bethel College	Lea College	St. Mary's Junior College
Carleton College	Macalester College	St. Olaf College
Concordia College, Moorhead	Minneapolis College of Art and Design	College of St. Scholastica
Concordia College, St. Paul	College of St. Benedict	College of St. Teresa
Golden Valley Lutheran College	College of St. Catherine	College of St. Thomas
Gustavus Adolphus College	St. John's University	William Mitchell College of Law

On the basis of the experience of the first two years and expectations for further development of the program potential, the Commission recommends:

That the Private College Contract Program be continued as constituted and that \$5,600,000 be appropriated for services to be rendered under the contract for the biennium beginning July 1, 1973. (See Appendix J for an explanation of the estimated funds that will be required for the program.)

That the Higher Education Coordinating Commission assess the effects of the Private College Contract Program, since its inception, and make recommendations regarding the future of the program and alternatives to the Legislature in 1975.

The Minnesota Higher Education Facilities Authority was established by the 1971 Legislature to enable private post-secondary institutions to improve their physical plants by providing low cost financing for construction of new buildings or the replacement of old and/or obsolete facilities. Indicative of the need for the program and the backlog of capital projects that existed in private post-secondary institutions, the Authority has received applications for projects in an aggregate amount of 22 million dollars (see Appendix W) or nearly one-half of the 45 million dollar authority granted to the Facilities Authority by the 1971 Legislature. The high level of interest on the part of private colleges and a successful bond issue demonstrate viability of the program. Based on present and projected demand for capital funds for the private sector, it is probable that project applications will exceed the \$45 million authorization before the end of the next biennium.

Accordingly, the Commission recommends that the Higher Education Facilities Authority be authorized to issue bonds not to exceed \$45 million during each biennium.

PART THREE: IMPROVING POST-SECONDARY EDUCATION THROUGH EDUCATIONAL RESOURCES AND PROGRAMS

XI. THE COORDINATED REVIEW AND USE OF COMPUTER TECHNOLOGY

Based on a report published in 1970 by the Governor's Advisory Committee on Information Systems, *Computers and Information Systems in Higher Education, 1970 - 1980*, the Commission recommended that all systems of higher education identify to the Commission their plans for computing for both facilities and operating costs in order that the Commission could review these proposals to determine how they were coordinated with the State Plan. This basic responsibility was approved by the 1971 Legislature and implemented by the Commission during the present biennium.

The Commission appointed a Computer Advisory Committee (COMPAC), consisting of two members from each public post-secondary system, two members from private colleges, plus one member from the State Department of Administration and one from the Governor's Advisory Committee on Information Systems to assist with the computer review process. Guidelines similar to those used for reviewing proposals for new institutional programs under the program review process were adopted by the Commission. (A copy of the Guidelines appears in Appendix U). The Computer Advisory Committee and the Commission staff applied the Guidelines to proposed new developments and reviewed the requests of the systems and prepared a report to the Commission summarizing the requests of the systems. The basis of the Committee's review of total requests for budgets for computer facilities and activities was the 1970 report of the Governor's Advisory Committee mentioned above which recommended a State Plan that would provide for the development of a computing capacity in Minnesota higher education that by

1975 would be adequate to meet two general goals:

1. "Provide educational computing services for all of higher education in Minnesota equivalent to that available at a few leading universities of the nation in 1967-68."
2. "Establish machine-readable data bases and an administrative data processing capacity which is sufficient to support the management information needs of institutions and systems of higher education and lay the basis for program planning and budgeting."¹

Since the State Plan contained specific recommendations of facilities and costs through 1975, the Committee and the Commission were able to review the requests of the systems based on the specific recommendations and projections of the State Plan. The complete report of the Computer Advisory Committee, *Summary and Review of Computing Activities and Budget Requests for their Support in Minnesota Post-Secondary Education, 1973-75*, is contained in Appendix T.

In Table I are summarized the total requests from public higher education (not including the area vocational-technical institutes). These are compared in each case with projections from the Plan. (A more detailed discussion of each of the requests is contained in Appendix T.) This display also shows the effects of an estimated five percent inflation of the State Plan projections for 1973-75, (The Plan used 1970 dollars and

¹Peter G. Roll and Peter C. Patton, *Computers and Information Systems in Higher Education: Part of Information Systems in the State of Minnesota 1970-80* (St. Paul: Minnesota Higher Education Coordinating Commission, 1970).

took no account of inflation). From the standpoint of costs, it can be seen that the total funds expended and requested, when inflation is considered, are somewhat below the Plan recommendations--it has been possible to save money over these recommendations while still making significant progress toward the functional goals of the Plan. Each of the systems of public higher education plans to have available by 1975 administrative computing capacity equivalent to that recommended by the Plan. All of the administrative applications envisioned may not be implemented by 1975 (though a large fraction will be). For educational computing, the University and State College Systems are progressing well according to the Plan recommendations. They will each have the capacity to serve their students near the level recommended in the Plan by 1975, if the budget requests can be funded. The junior colleges, on the other hand, will be functioning in 1975 at about half the level recommended in the Plan. This reduction is based on the experience of the past two years, which has shown that due to the dispersed nature of the system and the small size of many of the colleges, it is more difficult to educate the faculty and develop the instructional materials and applications for use in the junior colleges compared with the larger four-year institutions. The level of instructional computing proposed for the junior colleges is consistent with their needs as projected for the 1973-75 biennium, and a more significant amount of resources is being requested by the State Junior College Board to assist the junior colleges and their faculty in using the instructional computing services effectively in their academic and career-oriented programs.

TABLE I

TOTAL COMPUTING BUDGETS OF PUBLIC HIGHER EDUCATION COMPARED WITH STATE PLAN (a)

	1972-73		1973-74		1974-75	
	STATE PLAN	BUDGETED	STATE PLAN	REQUEST	STATE PLAN	REQUEST
University of Minnesota	\$2,461,900	\$2,064,000	\$2,861,000	\$2,574,513	\$3,072,000	\$3,051,994
State College System	1,650,000 ^b	1,726,834	1,698,000 ^b	2,087,934	2,048,000 ^b	2,190,370
State Junior College	359,694	347,196	458,741	440,060	572,688	548,636
TOTAL	\$4,471,594	\$4,138,030	\$5,017,741	\$5,102,507	\$5,692,688	\$5,791,000
(Inflation effects of 5 percent)			(250,887)		(284,634)	

^aAll State Plan estimates are in 1970 dollars.

^bThe State College System line uses the State Plan modified to reflect the decision to accelerate the planned upgrading of the St. Cloud facility and the need to upgrade Bemidji to third generation computing capability.

Based on its review of the requests of the three public systems of higher education and its review of the Computer Advisory Committee Report, the Commission finds these requests to be consistent with or reasonable deviations from the State Plan and, therefore, recommends their approval to the 1973 Legislature.

In addition to the requests of the individual systems which will enable them to improve the computing services of their institution, the Computer Advisory Committee identified other computing activities that have a statewide interest, and are therefore, not appropriately included in the requests of the individual systems. They include the need to improve the exchange and coordination of basic information and to expand and improve the review and coordination effort; the need to provide for the continued input of private post-secondary education into the coordination and review process; the need to enable institutions to expand their use of statewide time-shared computer facilities; and the need to improve the use of computer technology on the part of private colleges.

Accordingly, the Commission recommends that \$185,000 be appropriated by the 1973 Legislature to improve the coordination, review and use of computer technology by Minnesota post-secondary institutions.

The specific purposes for which these funds are requested (in the priority order recommended by the Computer Advisory Committee) are outlined below:

1. *The establishment within the Higher Education Coordinating Commission office of a position of Coordinator of Post-Secondary Education Computing.*

Though Minnesota has made a great deal of progress in coordinating its activities in computing in higher education, there is a need for more effective and continuing exchange of information between Minnesota institutions and with other institutions and organizations in the nation. Further, there is a need for more regular continuing support of the time-consuming coordination activities which are necessary within Minnesota to implement the mechanisms established by the State Plan and to assist in the collection and organization of the information which is required for those mechanisms to work smoothly and effectively.

During the past year, the coordination has been effected with excellent part-time assistance from the Commission staff and by dint of much hard work on the part of several Computer Advisory Committee (COMPAC) members. This effort will inevitably grow, and is more than can be sustained on a continuing basis by COMPAC members in addition to their regular institutional and system responsibilities. Therefore, COMPAC recommends the establishment of a staff position within the Commission to serve the needs of all post-secondary education by collecting and disseminating information among institutions in Minnesota and between Minnesota and programs in other states and nationwide; and by managing and supporting the activities of the Computer Advisory Committee and its working subcommittees (at present the Technical Standards Subcommittee and the MERITSS Policy Advisory Committee).

2. *The establishment of a fund for the reimbursement of non-publicly funded private colleges providing staff or facilities for use in statewide projects. (Approximately \$35,000)*

Over the life of the Computer Advisory Committee and other similar coordination activities, staff members from private colleges have made major contributions to the planning and programs that have developed. They have done this at considerable expense to their institutions and to their personal lives. Because of limited funds and staff, at least two individuals from private colleges have been asked by their administrations to limit or terminate their participation in statewide coordination activities. The Computer Advisory Committee feels that the State cannot afford to be without the expertise and the viewpoints that reside within the private colleges. Therefore, they recommend the establishment of a fund within the Higher Education Coordinating Commission to reimburse private colleges for the services of their staff members as consultants or major participants in coordination activities, and for the use of their facilities, when these services and facilities will benefit all of Minnesota higher education.

3. *The establishment of a fund to support the use of the statewide time-shared computer facility for research and development projects, innovative instructional usage, or ongoing activities. (Approximately \$45,000)*

Many institutions of post-secondary education are in need of time-shared computing facilities to enhance the quality of and supplement current programs, and to establish new programs of quality education to meet developing needs. However, many institutions simply lack the funds to meet these goals, knowing how recognizable and worthy they may be. This is especially true for the private colleges.

To meet this need, it is recommended that a fund be established to provide fifty percent matching grants for computer time (port charges) on the statewide time-shared computing facility (MERITSS).. These grants would not support costs of terminal equipment and communications. They would be awarded on the basis of the merits of proposals submitted and the consideration of previous legislative funding to the requesting institutions.

4. *Subsidies for computing costs incurred by private colleges for instructional and administrative computing utilizing publicly-supported facilities. (Approximately \$85,000)*

Since the private sector accounts for twenty-five percent of all students in Minnesota higher education, it is important that the quality of education and the quality and quantity of computing services be near the same level as in the public systems. It has been indicated elsewhere in this report that although the private colleges collectively are spending a substantial amount of money on computing, they are not, in general, achieving a level of computing services equivalent to that in the public institutions. The purpose of this recommendation is to provide assistance which will be necessary to some colleges if they are to have access to adequate computing services for their students, and to provide an incentive to use shared facilities in the public sector which ultimately will be less expensive for all concerned. It is proposed that these funds be distributed in the form of grants covering no more than fifty percent of the computer service costs, not including terminal equipment and communications. A similar recommendation in the 1970 State Plan for \$35,000, \$70,000, \$105,000 and \$140,000 respectively for the years 1971-72 through 1974-75 was not funded.

Finally, the Commission has reviewed efforts throughout the state to plan for the development and application of computer technology to education beyond 1975. A major thrust in this regard is a plan that would link all educational computing activities in the state. This plan is sponsored by the Governor's Joint Committee on Computers in Education, and it is investigating the establishment of a consortium arrangement to provide computing and data processing services to all educational institutions in the state. The Commission recognizes that many details and specifics in the consortium plan need to be refined and further developed. Nevertheless, the

Commission views this type of cooperative development as a potential long-range benefit to the state by providing a mechanism for more efficient use of scarce resources.

Consequently, the Commission endorses the concept of a consortium for providing computer services for all educational institutions (elementary and secondary as well as post-secondary) and urges that planning for such an arrangement should continue.

XII. EXPANDING AND IMPROVING USE OF TELEVISION IN POST-SECONDARY EDUCATION

Commercial and educational broadcast television have had a profound impact upon the lives of most Americans. The average citizen no longer is exposed only to verbal or written reports of events which influence the course of history. He now can see and hear, through television, what has occurred and often what is occurring. Television has become such an important and commonplace part of everyday living that it is now difficult to imagine what our society would be like without it.

Anyone who doubts the great power of effectively-used television upon opinions, attitudes, and information acquisition of the citizens of this country need only be reminded of the impact of television news coverage and the billions of dollars which advertisers find it profitable to expend for television commercials. Largely because of television, Americans know more than ever before about current events, and products which are available for purchase.

Lacking the resources of the business community, use of television for instructional purposes in colleges and universities has lagged far behind the rapid and impressive development of commercial television.

The 1965 State Legislature in recognition of the potential educational uses of television instructed the University of Minnesota to conduct a feasibility study of inter-institutional educational television. This study recommended the establishment of nine regional instructional television production centers and the development of inter-institutional instructional materials via television. The cost of implementing the recommendations of the feasibility study was estimated to be \$2,712,134.

The 1967 Legislature initiated the program by funding two regional television production centers to serve inter-institutional needs and seven classroom television production units to provide some experience with instructional television within institutions located at state-supported institutions of higher education. The television centers established at Mankato and Moorhead are open to all post-secondary institutions in their respective regions and with the seven classroom units have been actively developing the medium of television to improve instruction and extend the boundaries of the classroom.

The 1969 State Legislature appropriated \$540,000 to establish a third regional production center, to complete the two regional production centers established by the 1967 Legislature, and to develop inter-institutional educational television instructional materials. Winona State College joins the Mankato and Moorhead Regional Centers (both monochrome) as the first all color regional center. The continued development of the inter-institutional television was facilitated by a \$230,000 appropriation for developing instructional materials from the 1971 Legislature.

Minnesota's three regional television production centers (at Mankato, Moorhead and Winona) surpass the role of the traditionally equipped intra-institutional television facility. Their primary purpose is to serve *externally* on an inter-institutional basis. Their clients include institutions of post-secondary education from both private and public sectors, vocational-technical institutes and trade schools, as well as training programs in mental institutions, neighboring elementary and high schools and civic and professional groups. The regional centers have been the most frequent proposers of inter-institutional television projects. Of the total 109 projects funded, 71 have been developed by regional centers.

Regional centers serve first their regional areas, but because only three centers exist, they also have to endeavor to serve statewide needs. Associations between centers, institutions, even state agencies know no bounds. Projects are being developed by consortia of institutions located throughout the state, and in some instances several centers cooperate on a single production. The concept of inter-institutional sharing is alive indeed, and with adequate resources this accomplishment can enrich post-secondary education on an increased scale.

The experimental classroom centers at the Bemidji, St. Cloud and Southwest State Colleges and on the Duluth, Morris and Twin City campuses of the University have as a major function determining how television can best be used on an intra-institutional basis. These centers have aided in the initiation production of some inter-institutional work. These centers also serve as a laboratory in which students may become familiar with the use and care of equipment and the production of television lessons. Further, they provide nearby institutions the opportunity to observe ways in which television can be used for instructional purposes.

Instructional materials development is designed to encourage the sharing of existing resources by the use of inter-institutional television. Specifically, this is accomplished by increasing the use of existing quality T.V. materials, by increasing faculty knowledge about T.V. capability, by increasing faculty skill in the use of T.V. for instruction, and by increasing cooperation among institutions. The foregoing efforts are the inputs toward accomplishing the major goals of the inter-institutional statewide television program of improved instructional effectiveness and efficiency.

The accomplishments of the program have been significant. In addition to providing workshops, seminars, and formal coursework in the television arts, the regional television centers provide extensive services to many institutions (such as dubbing and editing), they serve as a clearinghouse of information on the use of instructional television, and they have stimulated faculty throughout the state and in all systems and sectors of post-secondary education to make increasing use of instructional television. Examples of the use currently being made of instructional television include micro-teaching, where the student teacher can observe the results of his efforts on video tape while receiving an evaluation by his peers; the image magnification to show microscopic results to the entire class simultaneously; the taping of lectures for later use or for wider distribution and many others. In addition, Appendix O is a directory of the hundreds of instructional materials that have been produced at the various television centers in the state.

This directory has been circulated throughout the state and the materials are used throughout the educational systems of the state.

In order to provide for the continued development of the inter-institutional television program to areas and evaluate the program, to provide for the expansion of the regional production centers, and to provide for the replacement of worn-out or obsolete equipment, the Commission recommends that \$1,181,000 be appropriated by the 1973 Legislature.

The proposed allocation of these funds is as follows:

1. Inter-Institutional Development Projects (\$490,000)

This item requests funding for project grants to develop and produce closed circuit television instructional materials for coordinate use by state colleges, University, private colleges and expanded utilization to include more state junior colleges and vocational-technical institutes. Projects developed at regional production

and classroom centers are utilized for instructional purposes by the producing and maintaining projects plus involvement of increased inter-institutional use of projects at more state junior colleges and vocational-technical institutes.

2. Planning, Research and Feasibility Study Update (\$45,000)

A review of the 1965 Feasibility Study is needed to assess and evaluate the overall program since its inception, ascertain whether original recommendations need revision or updating, and recommend plans on how to facilitate greater and more effective usage at additional institutions including state junior colleges, vocational-technical institutes, private colleges, private junior colleges and proprietary schools. With rapidly changing technology and its applications for educational uses, an up-to-date appraisal and recommendations are imperative to meet the needs of the '70's.

3. Regional Production Centers (\$396,000)

Three regional production centers are established and operating (Mankato, Moorhead, Winona). Two additional centers are needed to help meet increasing statewide needs. The 1966 feasibility study recommended nine centers. If five centers are established, a feasibility update could address itself towards the desirability of how many centers are needed to fulfill statewide post-secondary educational needs.

4. Regional Center and Experimental Classroom Center Improvement and Replacement of Equipment (\$250,000)

Obsolete or worn out equipment and hardware at the first two regional centers should be replaced for optimum efficiency and performance. In addition, with the increasing importance of color television, funds are requested to upgrade the existing monochrome centers and experimental classroom centers to provide for color production and playback. The only center currently with color capability is at Winona.

Finally, the Commission reaffirms the original recommendations of the 1965 Feasibility Study that the Higher Education Coordinating Commission be responsible for management of inter-institutional television in Minnesota. The uses and application of television for post-secondary education transcend institutional and system boundaries. The Legislature has supported this concept. The Commission believes this procedure is still valid in order to maintain maximum potential of the program on a statewide basis.

XIII. EXTENDING LIBRARY RESOURCES TO STUDENTS,
FACULTY, AND CITIZENS

In January, 1969, a two-year pilot demonstration project (Minnesota Interlibrary Teletype Experiment) was funded by the joint efforts of the Louis W. and Maud Hill Family Foundation and the Library Division of the State Department of Education through its LSCA Title III program. The project was designed to test the feasibility of sharing the University of Minnesota library resources with out-state libraries.

As a result of the success of the two-year project, the Higher Education Coordinating Commission requested and the 1971 Legislature funded a teletype custom-service library program for academic institutions in Minnesota. As implemented, the MINITEX program (Minnesota Interlibrary Teletype Exchange) includes an expanded and expedited interlibrary loan service, a bibliographic data base (Minnesota Union List of Serials), and a viable TWX communication network. The program is a beginning stage of a major library service which has the potential of facilitating maximum and multiple use of state library resources, of making judicious use of available funding, and providing the basis for sound development of collections by participating libraries. A history of participation by libraries and institutions in the program is provided in Appendix Q.

The purpose of MINITEX is to provide maximum and equitable multiple use of Minnesota Library resources with a minimum of effort and without conflict of interest. The program is based on the assumptions that no library can be self-sufficient and that no library can be responsive to all user demands individually. Recognizing that recurring needs are not

only best met, but must be met locally, and that each academic institution must provide the collection to support its curriculum, some cooperative program is essential. MINITEX helps in this by supplementing local resources and enables libraries to provide service which would be difficult to offer independently.

In times of cost escalation, insatiable user demands, uncertain funding, and the literature/information explosion, cooperative use and planning is essential to make judicious use of available funding. Individually and corporately, there is awareness of the inadequacies in library resources and the concomitant effect they have on the ability to provide quality education. Individual libraries are not likely to ever be able to adequately support the educational missions in Minnesota. MINITEX is specifically designed to assist in bridging the gap that these present and future inadequacies pose.

MINITEX provides access for students and faculty at all four-year accredited and most of the state junior colleges (four University, six state colleges, 16 private colleges, and 17 state junior colleges) to the research resources of the University of Minnesota Libraries. Specifically, it has provided approximately 175,000 items during the biennium, 1971-73.

By negotiating a reciprocal system-to-system arrangement with CLIC (a library consortium of seven private metropolitan colleges and the James J. Hill Reference Library) the program was extended to all private colleges including those in the Twin Cities not specifically covered by the appropriation. Furthermore, by utilizing MERITSS, the Time-Shared Computer System provided by Legislative appropriation, enough economies were gained to add more state junior colleges than originally anticipated.

Access is provided to all other Minnesotans through their Regional Public Libraries, and this portion of the program is supported by state and Federal (LSCA Title III) funds administered by the Library Division, State Department of Education.

The program has developed the foundations of a Minnesota bibliographic data base (Minnesota Union List of Serials). MINITEX has allocated approximately 25 per cent of its appropriation for this project in order to allow patrons to make their selections from owned sources, (approximately 10 per cent of the requests are for items not owned by the University) to allow more equitable and efficient sharing of state resources, and to provide for orderly statewide collection development.

The program also provides the communication network to facilitate sharing, expedite out-of-state interlibrary loans, and aid in the ordering and processing of materials.

The program has served as the catalyst for local sharing. This has been especially significant in locations of multiple academic institutions, i.e., Duluth, Mankato/St. Peter, Moorhead, Northfield, St. Cloud/Collegeville/St. Joseph, and Winona. The pilot demonstration project served as an example and the participants agreed to share their resources with each other. Providing the model, MINITEX has encouraged the significant advances in reciprocal borrowing, exchange of bibliographic data, joint collection development, courier service, and liberalized circulation policies that have increasingly taken place among the participants.

The program has assisted in identifying local staff needs. By designing a system which assures local resources are exhausted first (requiring a librarian as access provided many new contacts with patrons and offered opportunities to utilize their own collections), many libraries found it necessary to shift additional staff to reference and public

service. Many directors reported that their self- and campus-image experienced significant change as they more actively participated in the educational mission of their institution.

The primary value of MINITEX has been its contribution to quality education in Minnesota. It is estimated that a third of the academic faculty members outside the University's Twin Cities Campus have utilized the service to prepare their course presentation. Additional faculty utilization aided ongoing scholarly research or writing. Many faculty have testified to its usefulness in completing their degree. Most of the student use has been course related. Students have been allowed to pursue projects which are of primary interest and have become increasingly aware that information is available (identifiable and accessible) on almost any subject. Nationwide there has been a shift to independent study and adaptation to this trend simply would not have been feasible in Minnesota without the comprehensive research back-up provided by the University library resources.

There has been a significant contribution to the medical care, industrial development, and government administration in the state. Doctors, businessmen, and government officials effectively use the system through their public libraries. The fact that research resources are accessible to all who have information needs certainly adds to the quality of life in Minnesota.

An assessment of the MINITEX experience to date and its future development led to the identification of the following immediate and long-range objectives:

1973-1975

1. Continue expedited interlibrary service to all accredited (collegiate) institutions. Explore the possibilities of cooperation and sharing with the technical-vocational institutes.
2. Complete the state bibliographic periodical data base including built-in update and annual publication and distribution to all participants.
3. Encourage regional planning and development.
4. Develop state library resources by identifying and purchasing unowned and useful titles. Provide MARC tapes and access to data banks.

Long Range

1. Serve on an ongoing basis the needs of post-secondary education.
2. Become an integral part of the statewide library network including complete bibliographical data base, cooperative collection development, computer retrieval, cooperative processing, etc.
3. Explore the possibilities of personnel sharing both as a learning process and the sharing of expertise.

In order that continuing service may be provided under the MINITEX program and that the program may be further developed according to the objectives for this biennium, the Commission recommends that \$597,200 be appropriated for the following purposes:

NEEDS (for the 1973-1975 Biennium)

Inter-Library Service (\$440,000)

Expedited interlibrary service to all accredited (collegiate) institutions. Based on 100,000 items per year at a cost of \$2.00 per request = \$400,000. Ten percent overhead to the University Libraries.

Serial (Periodical) Data Base (\$57,200)

Maintenance, update and annual publication and distribution of the serial data base (MULS: Minnesota Union List of Serials). Based on an

estimated 11,000 annual update items at \$1.00 per item = \$22,000 and 44 copies at \$4.00 to be distributed annually = \$32,000.

Regional Sharing (\$28,000)

Regional sharing development. \$4,000 each to CLIC, Duluth, Mankato/St. Peter, Moorhead, Northfield, St. Cloud/Collegeville/St. Joseph, and Winona to encourage and support regional sharing, planning and development of resources. To be used for direct services.

Unique Collection Development (\$72,000)

Development of state resources. Identification, purchase, and dissemination of microfiche, microfilm collections, MARC tapes, data banks (Atomic Energy Reports, U.S. Patents, selected categories of government documents, census tapes) and other resources or services as needed in the state but not now owned by any library.

Inter-Library Service

The value of interlibrary service in Minnesota has been amply demonstrated by the volume of use to date. Conservative estimates suggest a volume of \$100,000 requests annually from the academic institutions will be the pattern of the future. During the project a concerted effort has been made to discover the most economical methods and procedures. As a consequence, and in spite of increasing costs, the unit price has continuously decreased. It may be of interest that the national average for interlibrary service is \$5.60 per transaction. This is not for expedited service; therefore, it does not include the benefits or the costs of TWX, photoduplication, and United Service delivery.

Serial (Periodical) Data Base

While the sharing of resources (interlibrary service) is important, the real benefits, both educationally and economically, will accrue from a state bibliographic data base. The knowledge of what is owned and where located is essential in order to make full utilization of all state

resources and to engage in meaningful long-range planning and collection development. It is the essential key to eliminating unnecessary duplication and gaps. The unprecedented spiralling costs of periodical purchase, processing, storage, bindery and retrieval necessitate overall planning in order to make judicious use of available funding.

While MINITEX has used \$80,000 of its 1971-73 appropriation, at least an additional \$150,000 was secured to construct the machine readable basic bibliographic data base. This is simply too valuable to not be maintained.

Regional Sharing

The purpose of the initial project was to test the feasibility of sharing the University library resources with other Minnesota institutions. It is aximatic that some sharing of and development of resources can and should be done on a regional basis. There are many research items that are rarely used and therefore, one copy is adequate for the entire state. There are other items which are needed in five or six regional locations. And, of course, there are some items that must be duplicated in each library.

Funds in this category could be most effectively used regionally to provide courier, communication or photocopy services. They would also support and encourage cooperative use of resources.

Unique Collection Development

Through the MINITEX requests it has been possible to identify needed items which are not available in the state. No institution could currently justify purchasing most of these items, but collectively they are certainly needed. If the MARC tapes (already purchased by the University) could be selectively disseminated, tremendous time and cost savings would be gain-

ed in the purchasing and cataloging procedures at the individual libraries. There are also data banks which should be available. While specific titles with cost estimates could be given, careful attention must be given to the choices in the future.

XIV. EXPANDING INTER-INSTITUTIONAL COOPERATION IN MEETING REGIONAL NEEDS

At the request of Governor Anderson, the Commission initiated a special study of cooperation among Minnesota institutions of post-secondary education. The results of this study, the report on which is published separately, indicates that (1) while there are some excellent examples of inter-institutional cooperation among Minnesota post-secondary education institutions, the potential for increased effectiveness through inter-institutional cooperation is far from being achieved and (2) most significant instances of inter-institutional cooperation involve either institutions within a single system or institutions located in close geographic proximity.

The apparent potential for inter-institutional cooperation among institutions located in the same geographical area provides a basis for addressing the recent resurgence in the concept of regionalism as it relates to activities of government and meeting social needs. While all Minnesota post-secondary education institutions have demonstrated a sense of responsibility for meeting needs of the residents of the area in which the institution is located, and some Minnesota institutions were founded largely to meet regional needs, there is less evidence of an effective sense of joint responsibility among institutions in the same area to serve that area. In addition, except in those instances where attention has been focused on establishing new institutions, planning activities generally have related to system-wide and statewide concerns or individual institutional concerns rather than to area concerns.

In view of the above considerations, the goal of stimulating greater and more effective inter-institutional cooperative efforts can appropriately be approached through the initiation of new structures and mechanisms for stimulating joint responsibility and cooperative planning with respect to

meeting area needs by institutions within each area of the state. Not only will such an approach stimulate greater cooperation among institutions from different systems, but it can provide effective responses to the resurging interest in regionalism and the legitimate concern for addressing attention to problems and needs on an area basis.

In viewing the resurgence of regionalism and gauging responses to it, some contemporary realities deserve recognition. First, it is apparent that higher education has now emerged from a period of intense growth accompanied by relatively clear mandates into a period characterized by uncertainty, rapid change, and greater competition for limited resources within the context of ambiguous mandates. Second, it must be recognized that Minnesota and other states are encountering increasing local and Federal pressure to incorporate sub-units of the state in planning for the use of fiscal, natural, and human resources in meeting the range of human needs of the future. There is substantial support for this approach especially where the participation in past planning decisions has been consistently low. Finally, because all post-secondary institutions have a common stake in the future of post-secondary education in this state, without deliberate attempts to increase the coordination and cooperation of activities the future for each of the post-secondary institutions will be collectively diminished. Interest in general regional planning, however, must recognize the specific concerns of post-secondary education institutions. In view of the complexity of challenges, balanced perspectives and flexibility are essential, for the challenges will not be met successfully with a single approach nor with dogmatic strategy. The diversity among Minnesota post-secondary educational institutions and the differences in style among them constitute a source of great strength which must be protected and fostered.

Accomplishments of Minnesota institutions in increasing their cooperative efforts are illustrated by the following examples:

1. Institutional consortia such as the Tri-College University, the Arrowhead Consortium, and the Urban Consortium.
2. Southwest Consortium for Community Service.
3. Central Minnesota Public Service Consortium.

Each of these programs was designed to increase the margin of institutional response to area-wide needs, and although they have had high levels of success, much more remains to be accomplished. There have also been statewide efforts which have strong regional planning components:

- 1) Study of post-secondary needs for Regions Nine and Ten.
- 2) Computer budget planning and development.
- 3) Inter-Institutional Television Program.
- 4) Inter-Institutional Library Program.
- 5) Agricultural Extension Service.
- 6) Academic Program Review.
- 7) Reciprocal agreements with other states for resident-tuition.

The examples cited reflect a record from which we may take pride, but from which we must now expand. The possibilities for expansion are manifold and might include:

- 1) Increased use of area-wide or multi-institutional faculty appointments;
- 2) Expanded development and use of educational television and radio for academic programming;
- 3) Increased inter-institutional coordination in public service projects;
- 4) Regionally based external degree and correspondence programming.

Exploring these and other possibilities could result in an increased regional focus by greater institutional cooperation among post-secondary educational institutions of the state on area-based social, educational, and economic problems. If approached in a cooperative spirit, these additional contributions could be viewed as those emanating from a partnership in which each has a stake in the resolution of area problems, rather than an attempt by the institutions to dictate both the definition and solution of problems.

As a means of facilitating increased inter-institutional dialogue and cooperation, the Commission proposed to establish regional advisory committees throughout the state. These regional advisory panels would offer the probability of developing a forum for the discussion of unique area problems and the alternatives available for solving them. The committees would also serve as an additional body to articulate the needs of the area to neighboring regions and statewide agencies.

It is proposed that the regional post-secondary advisory committees be charged such responsibilities as:

1. Exploring the possibilities and facilitating the implementation of substantive inter-institutional cooperation among the post-secondary institutions of the area.
2. Cooperating with existing and future regional planning commissions to improve the total regional planning effort.
3. Assisting in the assessment of regional post-secondary educational needs.
4. Working with the HECC liaison staff and making recommendations to the Higher Education Coordinating Commission.

5. Coordinating the identification of regional community service needs and the existing institutional resources which could be marshalled to meet such needs.

Memberships for the regional advisory committees will be drawn from the post-secondary education institutions of the region, but not be so great in number to hamstring the effectiveness of the group. The differences among the state planning regions suggest that the composition of each group should vary both in size and representation. It is also possible that two or more state Planning Regions could be combined to identify the area to be served by an advisory committee. Any combination of planning regions could be based on existing inter-institutional cooperative efforts. The Commission is prepared to provide staff liaison with the advisory groups and to assist in fostering their initial development.

XV. THE RELATIONSHIP BETWEEN AREA VOCATIONAL-TECHNICAL INSTITUTES AND JUNIOR COLLEGES

In recent years, considerable attention has been focused on the relationship between area vocational-technical institutes and other institutions, particularly state junior colleges. Interest in this matter has ranged from questions as to the possible need for clarification of institutional roles, to the possible need for greater cooperation between area vocational-technical institutes and junior colleges, to the proposals for merging the two types of institutions and for merging the two systems.

The basis for concern about the relationship between junior colleges and area vocational-technical institutes emanates from the facts that (1) the state provides substantial support for both types of institutions, (2) the state has authorized establishment of 53 non-senior, or lower-division, public institutions including 20 state junior colleges and 33 area vocational-technical institutes and (3) the geographic proximity of junior colleges and area vocational-technical institutes is extreme to the point of both institutions being located within 35 miles of one another in many instances and both institutions being located in the same community, even in communities with relatively limited population. In addition, the functions of the two types of institutions overlap. Junior colleges offer terminal vocational programs as well as programs designed to transfer to a senior institution. While area vocational-technical institutes offer terminal vocational programs only, a recent trend in the direction of accepting area vocational-technical institute courses in transfer by senior institutions raises further questions as to the extent to which the functions of the two types of institutions are in fact distinct from each other.

In response to a request by the 1969 Legislature for "an inquiry into the relationship between area vocational-technical schools and other institutions of higher education in Minnesota," the Commission developed a general guideline for differentiating the role of public post-secondary institutions in offering vocational programs. The recommended guidelines, similar to those presented to the 1971 Legislature, are as follows:

Occupational programs should continue to be offered by all types of post-secondary institutions. Area vocational-technical institutes should continue to offer a wide range of programs of two years or less which provide for initial occupational entry and retraining for advancement and occupational adjustment. State junior colleges located in areas which are not served by area vocational-technical institutes should offer the range of occupational programs which would be provided by an area vocational-technical institute if one were located in the area. State junior colleges located in areas which are served by an area vocational-technical institute should offer a more limited range of occupational programs, depending on the population and needs of the area, with emphasis on programs of two years in duration and those which are most closely related to the academic programs of the institution. Public four-year institutions should offer occupational programs of more than two years in duration. Four-year institutions which are located in areas served by area vocational-technical institutes, but not by state junior colleges, also should offer some occupational programs of two years or less with emphasis on two-year programs which are closely related to their academic programs in order to meet the commuter needs of the area. Four-year institutions also may appropriately offer a limited number of terminal occupational programs of two years or less for experimental or laboratory purposes or to meet the needs of students for whom completion of a four-year program is determined not to be an appropriate goal.

Proposals for establishing new public post-secondary institutions for all types should be reviewed by the Higher Education Coordinating Commission which should recommend legislative authorization for all proposed institutions receiving favorable review by the Commission.

Expanded cooperation between and among all higher education institutions offering occupational programs, which are located in the same or neighboring communities should continue to be encouraged. Economic incentives should be provided for those institutions which seek to adopt cooperative programs and which seek to add programs which are judged to insure that educational opportunity is made fully accessible to as many Minnesota residents as practical.

Economic incentives might include (a) additional state funds for cooperative, interinstitutional planning of educational services; (b) additional funding for providing courses amounting to an extension of institutional services on an overload basis; (c) equalization of tuition and fees where an institution has provided expanded cooperative programs; and (d) institutional reimbursement from state funds for interinstitutional use of facilities based upon a state average rate for operating maintenance funds.

Areas of cooperation might involve (a) joint program planning; (b) sharing the time of administrators and instructors where desirable; (c) encouraging students enrolled in one institution to take some work in the other institution assuring that credit earned will be accountable on an educational program where practicable; (d) use of auxiliary facilities, such as cafeterias, libraries, auditoriums, and gymnasiums by students of both institutions to the largest extent possible; and (e) operating joint extracurricular programs.

The policies established by the 1967 and 1969 Legislatures in seeking to improve the availability and accessibility of advanced educational opportunities to Minnesota residents through reciprocity agreements with neighboring states should be continued and extended.

The state of Minnesota should not only discourage unwarranted proliferation of occupational programs, but should also generate information to identify programs required to meet current and emerging needs in vocational and occupational areas. All institutions which conduct vocational-technical programs should follow, to the largest extent possible, a policy of qualifying for reimbursement from federal and state funds administered by the State Board for Vocational Education.

Area vocational-technical institutes prepare students for occupations through their programs by emphasizing job entry criteria. The University of Minnesota, with its programs in the General College and its Technical Colleges, tends to offer special occupational programs and substantial numbers of general academic curricula at the two-year level. State junior colleges offer all types of programs, many of which correspond with programs in area vocational-technical institutes and others which are geared to more general academic and occupational objectives. The primary emphasis of state junior colleges has been in the area of transfer programs. State colleges have offered some two-year programs in the past as a practical accommodation to their local and regional community needs when the curriculum could take advantage of specific efforts in existing four-year baccalaureate programs.

The area vocational-technical institutes within Minnesota provide most of the occupational programs available in the state (72 percent of the total offered). These schools are widely distributed geographically as are the state junior colleges, and to some extent, the state colleges

and the University of Minnesota. Although some institutions exist virtually along-side others within a local community, most of the institutions are within individual communities serving somewhat specific groups of students. For instance, high school juniors planning attendance at area vocational-technical institutes have definite ideas regarding their objectives for post-secondary training and are more decided in this regard than students in any other group. Occupational objectives are uppermost in the minds of these students. They appear to know that area vocational-technical institutes are mainly vocationally or occupationally oriented in their efforts. Students choosing area vocational-technical institutes are more interested in practical pursuits of business and finance, as well as health, trade, and industrial areas. College freshmen interests are substantially different from those of the area vocational-technical institute-bound students. Junior college freshmen are similar in their chosen majors to state college freshmen.

There are substantive differences in the background qualifications and loads of teaching staff found in the various institutions offering post-secondary occupational programs of two years or less. Academically-oriented institutions tend to recognize post-baccalaureate degrees earned by teaching staff in their salary schedules to a greater extent than do the area vocational-technical institutes. It is possible that future cost studies may reconcile these differences in sources of support and staff reimbursement for post-secondary programs.

Students enrolled in two-year post-secondary programs in Minnesota represent a broad cross section of academic aptitudes, interests, and backgrounds which reflect the general population of the state. While each institution and system could claim some degree of representation in each group of students, there is evidence to support the view that a particular type of institution attracts students who are generally similar in aptitude and background. In other words, specific programs of institutions and systems relate better to certain types of individuals; and programs among the different institutions and systems are not necessarily the same in specific content. Even though programs may receive similar titles within the state systems, the students to be served would require some differences in approach to programs and, therefore, greater diversity of educational effort on the part of institutions.

While the institutions may present quite similar programs, the results achieved with students would likely be quite different. Evidence available from a study of differential results of approaches to occupational education indicates, however, that the most important considerations in determining results or output are the student characteristics. Included are student aptitudes, backgrounds, attitudes, maturity and aspirations. Any similarities or differences in program inputs and outputs would largely be affected by student-related inputs.

If all two-year post-secondary institutions were to be governed as one structure, students would have the same choices as they do now but within one administrative structure. The local governance in the area vocational-technical institutes would be lost if all systems were to be combined.

There is a question as to gains, administratively, in generating a new central staff necessary to support such a large combined organization. The separate systems should not be allowed to grow, however, to the extent that they would offer overlapping opportunities.

The industries that are expected to need the largest numbers of persons by the year 1975 are trade, government, service, manufacturing and construction, which, for the most part, will require persons with occupational training. There will be needs for training and retraining in order that skills may be kept up to date because of rapidly changing technologies. All systems should look toward accommodating more students in the vocational-occupational area.

A compelling view associated with all programs as they relate to changing societal conditions is the need for broadened perspectives of programs to benefit students, for example, in taking advantage of necessary retraining when jobs change and for increased leisure time activities as they become more prevalent. Comprehensive program settings can emphasize additional preparation to allow students to accommodate to retraining and to utilize effectively their free time away from work.

It would seem that the options available are: 1) to create a statewide structure for governing all two-year post-secondary programs, or 2) the coexistence of local and statewide governance with additional mechanisms to insure coordination and cooperation in funding and in program maintenance and development.

Cost information resulting from staff studies revealed sources of revenue to the state junior colleges and area vocational-technical institute systems. It cannot be concluded that one system is more costly than another.

Since the area vocational-technical institutes and the state junior colleges serve substantially different populations and employ somewhat differing approaches, it can be considered that these costs would be changed only slightly with administrative reorganization if the amount of educational service is to be maintained.

From a study of governance systems in other states, it was learned that post-secondary institutions and systems of the 11 states surrounding Minnesota offered no consistent trend toward change in two-year post-secondary governance which may be said to be superior to the present systems in Minnesota. Two states have recently moved to adopt the community college concept while other states are generally remaining with a more diversified approach, which is being used somewhat successfully, in Minnesota. Our institutions and systems appear to be providing as much or more educational opportunity at this level than in surrounding states.

Existing public post-secondary institutions can offer substantial numbers of programs throughout Minnesota, carrying with them the main thrust of a goal for accessibility of post-secondary educational opportunities at the two-year level. These institutions assure that most Minnesotans have ready access to at least two years of post-secondary education.

The Minnesota Higher Education Coordinating Commission has, as one of its objectives, to plan for and achieve some form of post-secondary opportunity within a 20-mile radius of all major concentrations of the Minnesota population. At the two-year post-secondary level this goal has nearly been achieved. Area vocational-technical institutes and state junior colleges exist in most population density areas of Minnesota.

It should be noted that all public post-secondary institutions currently require legislative endorsement prior to establishment, with the exception of area vocational-technical institutes. To assure that an elected governmental body will be continually apprised of the total post-secondary needs and status of the state, it should be considered essential to report such actions to the Minnesota Legislature.

The guidelines adopted by the Commission and recommended to the 1969 Legislature ("Making Institutions Accessible" of *Proposal for Progress*, January 1969), and Commission enrollment projections, indicate that students seeking occupational and vocational programs can be accommodated through the year 1978 and thereafter by presently existing, (Commission-recommended, and legislative-authorized) post-secondary institutions, with the addition of a state junior college in St. Paul.

Cooperative efforts among post-secondary institutions offering occupational programs are tending to increase slightly. Most cooperation is happening between an institution and its community rather than as part of any inter-institutional post-secondary effort. It appears that the crucial point for maximizing post-secondary educational opportunity for all residents of the state is in the area of establishing and coordinating development of appropriate cooperative efforts among institutions. If it is accepted that students served by different systems vary in educational needs, interests, and aptitudes, and that this variance is consistent within a system, and each system and institution has its educational task to perform, it would follow that institutions of each type should be provided within an accessible distance to each population center. Realizing, however, that this could result in ineffective use of resources in some areas, it is the position of the Commission that total tasks of maximizing post-secondary education resources in the state can be facilitated best by strengthening cooperative arrangements and articulation methods between and among the institutions and systems which are capable of participating in such activity. For example, in communities where area vocational-technical institutes exist as the only post-secondary institution, arrangements might be made to provide general academic transfer curricula in the home community by allowing an affiliate college to offer coursework which could be coordinated with the area vocational-technical institute programs, and credit earned might be recognized in transfer to another college. Likewise, state junior college, university, and state college campuses where vocational and occupational programs may be needed could be served by faculty from a neighboring area vocational-technical institute. In addition, a vocational program could be contracted for or could be established as an ongoing program where need is evident.

Vocational and occupational programs and general academic programs have been developed in response to two fundamentally different educational philosophies. On a continuum where these philosophical bases would represent the extremes, at one end would be found the vocational orientation with objectives related to skills and knowledge for specific jobs or occupations; the other would be representative of an ideal general academic curriculum with its objectives relating more to a universe of knowledge and understanding of processes. None of the Minnesota post-secondary institutions or systems completely represents either extreme, at the two-year post-secondary level, although the area vocational-technical institutes are nearer to the vocational orientation by concentrating on a large quantity of programs in the occupational areas. No other institution or system totally represents the opposite end.

The enrollments which have been projected by the Commission, in cooperation with the post-secondary systems, would indicate that occupational and vocational students who will need to be accommodated in various types of Minnesota post-secondary institutions in 1978 will be accommodated by presently existing Commission-recommended (including a St. Paul State Junior College), and legislature-authorized institutions in Minnesota. Additional capacity may be added at existing or planned institutions, but no additional new institutions seem necessary to provide these programs at the present time.

A source of institutional support has been allotted by the State Board for Vocational Education for two-year vocational programs.

In addition, the Commission proposed that the 1971 Legislature give statutory responsibility to the Commission for coordinating the development of new instructional programs, including vocational programs, to be offered in or by all public institutions of post-secondary education. While the 1971 Legislature did not take specific action concerning the recommended guideline on vocational education in the several types of post-secondary institutions, the proposed policy seemed to be viewed favorably. The 1971 Legislature did pass legislation giving the Commission responsibility for program review.

In implementing program review, the Commission has followed the policy guideline and a concerted effort has been made to act on proposals for new instructional programs in such a manner as to preclude any unwarranted duplication between area vocational-technical institutes and junior colleges as well as other institutions. The program review process has proven to be an effective mechanism for monitoring the relationship between area vocational-

technical institutes and junior colleges as well as the relationship among other institutions of post-secondary education. The potential of the program review process clearly has not as yet been achieved and the process can be developed more fully as further refinements are instituted during the next biennium.

Effective implementation of the program review process and the policy guideline on vocational program offerings represent an effective response to the "bill of particulars" request from the 1971 Legislature that "The HECC is requested to continue to review the relationship between area vocational-technical schools and junior colleges in order to prevent unnecessary duplication of effort and programs."

Given the successful experience with program review during the initial stages of development, the Commission does not see need at this time for additional legislative action aimed at eliminating unwarranted duplication of programs in state junior colleges and area vocational-technical institutes. The Commission is convinced that the program review process can be improved and that effective attention can be directed to existing programs as well as proposals for new instructional programs as the process is developed more fully.

It should be noted that some excellent examples of cooperation between area vocational-technical institutes and junior colleges have emerged. These are discussed in another section of this report. It should also be noted that statewide meetings of state junior college presidents and area vocational-technical institute directors during the biennium indicate a willingness to engage in efforts to further improve the relationship between these two types of institutions. Such efforts are commendable and are to be encouraged.

It should also be noted, however, that cooperation between area vocational-technical institutes and junior colleges is not as extensive as desirable.

The Commission proposes to undertake efforts during the next biennium in order to bring about a higher level of interinstitutional cooperation for coordination within each area of the state, as indicated in a preceding section of this report.

As a result of its intensive investigation into the relationship between junior colleges and area vocational-technical institutes, as requested by the 1969 Legislature, the Commission looked closely at those institutions involving maintenance of both a state junior college and an area vocational-technical institute in areas of relatively limited population and recommended that officials and boards responsible for the institutions in these situations enter into joint assessments of the feasibility and problems of merging the two institutions. In several of these situations, institutional enrollments are well below the desirable size for an institution of post-secondary education. In a previous section of this report, the Commission recognized the fact that making post-secondary education accessible to Minnesota residents in all areas of the state requires the maintenance of institutions which are much smaller than the minimum size recommended by the Carnegie Commission on Higher Education. It is the Commission's judgment that the advantages of making post-secondary education opportunity as accessible as feasible to all Minnesota residents outweigh the obvious advantages of achieving desired minimum size. The advantage of maintaining two small institutions to serve an area are less apparent.

The Commission will continue to urge that the officers and boards responsible for the junior colleges and area vocational-technical institutes which are located in close proximity in areas of limited population assess fully and seriously the feasibility and problems of merging the two institutions. The Commission offers to assist with such assessments to the fullest extent possible as such assessments may be requested by the parties concerned.

In view of possible damage to educational programs which could result from merging institutions without full consideration of and preparation for the problems involved, the Commission is reluctant to recommend merger of area vocational-technical institutes and junior colleges located together in areas of relatively limited population. In view of the possible opportunity for strengthening institutions and achieving some economies, however, the Commission continues to believe that assessment of possible merger is desirable.

XVI. COORDINATING INSTRUCTIONAL PROGRAM OFFERINGS

The 1971 Legislature recognized the responsibilities of the Higher Education Coordinating Commission for coordination of the instructional efforts of public post secondary institutions through a process of reviewing plans, proposals, and priorities for new and existing educational programs. Specifically, the legislature charged the Commission with responsibility to:

Review, make recommendations and identify priorities with respect to all plans and proposals for new or additional programs of instruction or substantial changes in existing programs to be established in or offered by, the university of Minnesota, the state colleges, the state junior colleges, and public area vocational-technical schools, and periodically review existing programs offered in or by the above institutions and recommend discontinuing or modifying any existing program, the continuation of which is judged by the commission as being unnecessary or a needless duplication of existing programs.

A complete description of the program review process and a reporting of activities during the biennium appears in Appendix H.

While program review needs further development and continuing refinement, the process has had significant impact on planning and decision-making relating to the establishment of new instructional programs. In order to participate in program review, each institution must consider the implications of initiating a new instructional program in terms of total statewide needs and the efforts which other institutions may be making with similar existing programs. Moreover, plans and proposals for each new instructional program are scrutinized by representatives of all systems through the Curriculum Advisory Committee prior to final review of the proposal by the Commission. The Commission also receives an independent staff

evaluation of each program along with relevant data.

The result of this process is that (1) institutions seeking to establish a new program must consider the way in which the proposal will be viewed by representatives of other systems and by the Commission, (2) institutions are made more fully aware of plans and programs of other institutions, and (3) the context for decision-making is expanded beyond institutional and system concerns to statewide concerns. The joint efforts of representatives from the several systems on the Curriculum Advisory Committee represent a new level of interinstitutional and intersystem cooperation in addressing state needs.

In order that decisions on new instructional programs might be based on a comprehensive view of post secondary education, the Commission expanded program review by adopting guidelines which permit private colleges and universities to participate in the process along with public institutions. Three private college representatives were named to the Curriculum Advisory Committee along with the three representatives from each of the public systems. Participation of private colleges in program review throughout the current biennium has afforded the opportunity for considering the extent to which proposed programs in public institutions are duplicative of programs in private colleges and whether or not such duplication is desirable. In addition, the private college which participates in program review gains the benefit of having any proposed program scrutinized in terms of statewide needs and the efforts of public institutions.

While inclusion of private colleges in program review represented a significant step in making the process more comprehensive, the plans and programs of an additional component of post secondary

education (the private non-collegiate institutions) remained beyond the purview of program review. In order to correct this inadequacy and in recognition of the demonstrated interest of private non-collegiate institutions in program review, the Commission took action of November 10, 1972 to further expand program review to include plans and proposals for new instructional programs to be offered by private non-collegiate institutions. Accordingly, proposals from this additional component of post secondary education are now invited and the Curriculum Advisory Committee has been expanded once again to include representatives of the private non-collegiate institutions.

Since complete effectiveness of program review depends on comprehensive assessments of post secondary education, since the inclusion of the private sector of post secondary education in planning is consistent with the Commission's general legislative charge, and since effective arrangements for including private collegiate and non-collegiate institutions in program review have been developed,

the Commission recommends that the 1973 Legislature extend the Commission's statutory responsibility for program review by amending Minnesota Statutes 136A.04 to include private collegiate and non-collegiate institutions of post-secondary education.

XVII. MEETING MANPOWER NEEDS IN MINNESOTA

As is the case with most social institutions, post-secondary education serves a variety of complex purposes. Some of these purposes relate to the needs of the state and society, while others are aimed at the needs of individual students. There is, and there will continue to be disagreement over the relative importance of the various purposes. Indeed, some would question the very validity of those goals which others would regard as being of the highest priority for post-secondary education.

Lack of agreement as to function and purpose is neither unique to post-secondary education nor is it necessarily a weakness. Choosing from among diverse and often conflicting purposes is a problem faced by most social institutions and to a considerable extent it is this process that keeps social institutions both strong and responsive to varied and changing needs in a free and open society.

The relative emphasis to be placed on the different purposes of post-secondary education is particularly relevant in regard to the consideration of manpower policy. In a technological society experiencing increasingly rapid change and during a period of declining enrollment, the temptation is to focus exclusively on those programs that are directed toward the fulfillment of specific manpower needs. The Commission recognizes, however, that the purposes of post-secondary education are broader than those related to manpower needs. Many of the manpower needs of tomorrow are not known today and, as a consequence, educational efforts must be concerned with the production of a citizenry that can adapt to

changing circumstances. The Department of Labor, for example, projects that the average youth of today will probably shift occupations five times over the next forty years he is in the labor market. Jobs which existed in large numbers a few decades ago no longer exist, and others which were nonexistent a few decades ago are prevalent today.

Nevertheless, manpower consideration in post-secondary educational planning cannot be ignored. An important function of post-secondary education is to produce the manpower needed for the functioning and improvement of society. Thus, the development and review of academic programs and the overall plan for the development of post-secondary education must occur within a context that is responsive to present and projected manpower needs.

The Commission is not suggesting that manpower needs are the only base for planning post-secondary education, nor that academic programs should be designed to meet specific job requirements. In a technological society, it is necessary that its members be able to adapt to rapid change. They require transferable skills and general knowledge that can be applied to a broad range of occupations. Thus, although manpower information is an important component of educational planning, it should not dominate the planning process.

Within this context, the coordination and planning of the production of educated manpower has been and continues to be an important function of the Commission. Beginning with *Proposal for Progress*,¹ the Commission outlined the factors affecting the production of manpower in Minnesota. Pointing to the increase of young people as a proportion of the total

¹*Proposal for Progress: Guidelines for State Policy and Comprehensive Planning of Post-Secondary Education*, (St. Paul: Minnesota Higher Education Coordinating Commission, January 1969), pp. 58-66.

population and the labor force and pointing to the fact that those occupations that would provide the most opportunities for employment between 1960 and 1975 were the occupations that would require post-secondary education, the Commission recommended the initiation of the review of post-secondary education programs to improve the efficiency with which post-secondary education responded to the emerging manpower needs.²

The Commission has subsequently implemented its program review responsibility and in the process has made extensive use of that manpower information it could generate. The program review process is on-going and routine. So far in the current biennium the Commission has acted on 200 programs reviewed in these reports. Staff evaluation of programs, contained in the Curriculum Advisory Committee-Staff reports to the Commission, include in the program descriptions the design capacity of each program and an estimate of per graduate cost. The need section of the evaluation compares the proposed program's capacity with the total statewide capacity as determined by these studies and other data that may be available. A further comparison is made with the occupational demand for this educated manpower. The several systems and institutions recognize these questions and are continually developing improved means of addressing them within their institutions, and between systems prior to having proposals submitted for review to the Higher Education Coordinating Commission.

In addition, the Commission has been involved in many other projects that have used or generated manpower information. In academic disciplines and occupational areas, the Commission has inaugurated or participated in efforts encompassing almost the entire range of human services

²*Ibid.*, pp. 68-72.

occupations: social work, nursing, allied health, and elementary-secondary teaching. Another study attempted to apply the academic planning model to all programs and manpower needs in two planning regions of the state.

The study of social work programs, needs and occupations revealed new kinds of statewide information in a field that is altering direction and emphasis. The attendant coordination seminar is expected before the end of 1972. It will produce recommended policy directions for endorsement by the Commission and implementation by the institutions. The design of the seminars calls for participation by producers and consumers of educated manpower and by relevant agency representatives. These policy directions will also become specific criteria for continuing review of discrete programs in social work.

An advisory committee on nursing education has been established with the support of representatives from the total nursing community. After evaluating the three types of data collected by use of the planning model, this committee will also recommend policy directions related to the production of manpower for nursing.

The Commission staff participated in a study and Task Force on Allied Health under the auspices of Comprehensive Health Planning in the State Planning Agency. This study focused on information and planning processes and on existing programs and their output capacities in all institutions, including hospitals and proprietary schools. The study will be elaborated at the conclusion of Comprehensive Health Planning's current efforts to design an allied health manpower needs-projection model. The Task Force has proposed an allied health planning process and its work is to be reported to the Commission for joint endorsement.

Recognizing the impact of job demands on the teaching field, the Commission in February of 1972 requested reports from public institutions which prepare teachers for elementary and secondary schools. The staff prepared a study at the same time. Programs in teacher education have been altered because of the manpower market. Results of this effort have served as a basis for review of programs in this field.

Assessment of needs in southeastern and southcentral Minnesota undergirded the Commission's response to a legislative request for a new institution study affecting Rochester. Use of the academic planning model tested this kind of needs assessment as a part of the new institution planning process.

In summary, manpower considerations are essential to the planning and coordination process. In several ways the Commission provides for inclusion of manpower considerations either through its own endeavors or in collaboration with key agencies and decision-makers. Manpower considerations are now integral to Commission processes, both routinely and in specific efforts. These processes include research and planning leading to statewide policy and decision-making and to the creation of coordination among the producers of educated manpower.

In spite of the experience and efforts of the Commission in applying manpower information to the identification of manpower needs in the state, it continues to be severely handicapped by the lack of manpower information. For the most part, the Commission has been forced to develop its own data for the specific problems being investigated. This same problem is generalizable to other agencies in the state with a planning responsibility. Thus, manpower data are being generated in

different agencies to serve a variety of purposes, but no central source of manpower information exists. Fragmented manpower planning based on different data bases results in inefficient production of manpower information and relatively ineffective manpower planning.

In recognition of the inadequate manpower data available in the state and the fragmented manpower planning that occurs within the state, the Commission recommends that the 1973 Legislature address the need for coordination of existing manpower planning, for the development of state-wide manpower policies, and for collecting and providing manpower data to state agencies that require such information in the execution of their planning responsibilities.

The Commission is actively involved in manpower planning as it executes its day to day responsibilities. Although it has gained considerable experience and made significant progress in addressing manpower needs, the Commission continues to suffer from the lack of well developed and general manpower information.

In the absence of positive action on the above recommendation, the Commission recommends that it be provided an appropriation of \$100,000 to develop an on-going manpower data base that will enable it to improve its planning process.

XVIII. COORDINATING CONTINUING EDUCATION AND COMMUNITY SERVICE

The residents of Minnesota continue to expect that institutions of post-secondary education will apply their expertise and resources to meeting the needs for further education and to assisting in addressing the problems of the state and its communities. The varied programs in continuing education and community service throughout Minnesota have achieved successes in the past, but the challenges for the future are ever present.

Within recent years there have been changing notions of the definition of the "college-age" population to be served by post-secondary institutions and the result is a greatly expanded potential population with varying needs and expectations. Accompanying changes in the population have been recommendations from many quarters urging a broadening of post-secondary education options, a loosening of the lock-step approach to post-secondary education, the improved use of technology and other resources, and greatly increased inter-institutional efforts in all phases of post-secondary education.

There have been those in the past who have found it comfortable to view continuing education and community service as addenda, but the realities of the present dictate that these functions be reviewed as important elements of the overall range of post-secondary education activities and thus integral to the planning for this range of services.

Since 1966 the Higher Education Coordinating Commission has been actively involved in the coordination of the use of Federal funds available for continuing education and community service programs. The Commission will continue its role in this area seeking to maximize both the availability and use of Federal funds and providing active liaison

with institutions, inter-institutional and regional groups working in continuing education and community service.

There will be increased attention and demands for activity within the many forms of further education in the coming years and important policy questions will need to be addressed as a result. In preparation for these policy discussions the Commission proposes:

1. That HECC conduct a comprehensive statewide study of alternative academic programming (including correspondence, credit by exam, external degree) and alternative modes of program delivery (including mail, various electronic media, competency-based negotiation).
2. That the questions regarding the various funding processes for continuing education be studied within the context of a comprehensive examination of the financing of post-secondary education in Minnesota.
3. That HECC coordinate the review of the nature and effectiveness of past programs in community service and establish updated guidelines and priorities for future programs.

The reports of programs to date suggest that significant contributions are being made through community service programs. Experience with these programs has also demonstrated the presence of creative, imaginative, and socially sensitive faculty members who are willing to extend the resources of post-secondary education beyond campus boundaries.

In order to facilitate maximum effectiveness and economy of effort in meeting the state's needs for continuing education and community services, the Commission proposes to continue the work toward the development of a comprehensive, coordinated plan for further education and community service activities. To assist in the realization of these objectives,

the Commission recommends: An appropriation of \$60,000 per year to assist in matching Federal

funds available for community service projects and/or to provide a fund from which full state grants may be made for projects requiring funds in excess of Federal funds available or projects which differ from Federal funding guidelines. For the Federal matching funds, the ratio of one-ninth institutional; two-ninths state; and six-ninths Federal is recommended.

The appropriation of these funds would allow for the continuation of many of the types of programs currently active in Minnesota and would greatly enhance the opportunity for an increased number of institutions able to participate in community service projects as well as increase the variety of projects eligible for funding.

Finally, the Commission would recommend that in all aspects of continuing education and community service appropriate encouragement be accorded organized consortia and other inter-institutional efforts to meet the changing needs of regional and statewide clientele.

XIX. COORDINATING HEALTH EDUCATION PROGRAMS

In a special report to the 1971 Legislature, the Commission identified the need for coordinated development of health education of all types and at all levels of training in the state. (See Statement of Recommendations on Medical Education, Higher Education Coordinating Commission, March 1971.) The Commission has pursued this interest through many channels during the last biennium.

Cooperation efforts with the Comprehensive Health Planning Agency have been strengthened in two ways. The Commission staff, at the request of the Comprehensive Health Planning Agency, has collaborated in efforts to develop a comprehensive health manpower planning system, and the staff has established a formal relationship with the Comprehensive Health Planning Agency in the review of health-related educational programs.

Program review for health education programs in traditional institutions has proceeded in conjunction with the review of other academic programs. The Commission is presently moving to expand the program review process to include training programs offered in hospitals and other private non-collegiate institutions. (See Section XVI. Coordinating Instructional Program Offerings.)

In conjunction with a request from representatives of state professional nursing organizations, the Commission is conducting a statewide study of nursing education in order to develop policy guidelines for statewide planning for nursing education. The study is being conducted with the assistance of the Northland Regional Medical Program which has provided funding to the Commission to employ temporary staff to conduct the study. (Members of the Nursing Education Advisory Committee are listed in Appendix A.)

Based on the recommendation of the Commission the 1971 Legislature enacted legislation requesting the University Regents in collaboration with the Ramsey County Hospital Commission to develop and expand health education at the St. Paul-Ramsey Hospital and in the St. Paul area. This legislation provided an Advisory Committee to assist the University and directed the Commission to provide a secretarial and professional staff service.

The report of the Advisory Committee (See Appendix V) describes successful progress consistent with the legislative intent as well as the Commission's medical education report to the 1971 Legislature.

In view of the initial success of the experiment involving St. Paul-Ramsey Hospital, the Commission recommends that Hennepin County General Hospital be encouraged to develop parallel plans as recommended to the 1971 Legislature.