MINNESOTA HIGHER EDUCATION ADVISORY COUNCIL

Meeting the Needs for Higher Education in the Twin Cities Metropolitan Region

A Response to the MSPAN I Study

Submitted Jointly By:

University of Minnesota
Minnesota State University System
Minnesota Technical College System
Minnesota Community College System
Minnesota Private College Council

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I. INTRODUCTION

Background

In 1988, the Minnesota Legislature authorized a two-part study of the post-secondary educational needs of the state (Laws of 1988, Chapter 703). The first phase, MSPAN I, concentrated on a geographic corridor from St. Cloud through the Twin Cities to Rochester and was completed in January, 1989. The second phase, MSPAN II, focused on Greater Minnesota and is scheduled to be completed in the spring of 1991.

As a follow-up to the MSPAN I study, the 1989 Legislature requested that plans be submitted for addressing undergraduate and practitioner-oriented graduate needs in the seven-county metropolitan area and that those plans be reviewed by the Higher Education Coordinating Board (HECB) and be forwarded with recommendations to the Legislature by February, 1990. (Laws of 1989, Chapter 293)

In response to the legislative request for plans, the Higher Education Advisory Council (HEAC), a body comprising the leaders of Minnesota's postsecondary educational systems, devoted considerable time and effort to developing a joint response to the Legislature. During this process, HEAC members concluded that it was premature to propose final plans on selected MSPAN I issues until the MSPAN II study was complete. Accordingly, to ensure a comprehensive perspective, HEAC representatives requested approval to revise the reporting timetable. Authorization was provided by the chairs of the appropriate legislative committees to substitute a progress report for final plans.

In the 1990 session, the Legislature restated its call for plans from the post-secondary systems for providing undergraduate and practitioner-oriented graduate programs in the metro area. The 1990 Legislature also modified the scope and timetable for the MSPAN II study. (Laws of 1990, Chapter 591)

This plan in response to the MSPAN I study is jointly submitted by the Technical College System, the Community College System, the University of Minnesota, the State University System, and the Private College Council.

Overview of the Report

Over the past year, HEAC representatives have maintained our commitment to presenting a joint response to the issues of higher education in Minnesota. Collectively, we have reviewed a broad array of immediate challenges and short-range solutions, as well as persistent problems and long-term remedies. Individually each system generated and shared its plans for responding to perceived undergraduate and graduate needs in the metropolitan region. Those individual plans are appended and provide the detail necessary to fully understand the joint response which is the heart of this plan.

In the immediately following pages we present specific chapters describing our joint plans for meeting the needs for both undergraduate and graduate education. But of perhaps greater significance is the chapter entitled "Intersystem Cooperation." While we have made major advances in our cooperative endeavors in recent years, we have during the development of this plan extended intersystem planning and coordination to important new levels. These arrangements, as much as the specific program plans we present, represent our commitment to meeting the higher education needs of the people of Minnesota.

The Concern for Educational Quality

The foremost priority of all HEAC members is maintaining the highest possible level of quality in our systems and institutions and insuring access to that quality education for as many Minnesotans as possible. But as the SRI consultants on MSPAN and other analysts have noted, a substantial shortfall in current public funding for higher education exists in Minnesota. In spite of the fact that Minnesota taxpayers ranked 6th in the nation in per capita expenditures on higher education in 1988-89, the high level of participation in higher education spreads these resources too thinly over the large number of students served. The expenditure per student is actually 12 percent below the national average, and Minnesota ranked 41st in the nation in 1988-89, down from a rank of 22nd in 1984-85.

This joint plan, therefore, is tempered by the fiscal realities within which our systems must operate. While we believe we have a responsibility to present our vision for the future and our common needs, the financial facts dictate that our response be a practical one.

MSPAN I and MSPAN II

This document addresses the educational needs of the metropolitan area. However, students from throughout Minnesota make individual choices about where to enroll in postsecondary education. Similarly, the management and operation of each of the systems involve critical interrelationships between the campuses in the metro area and those in Greater Minnesota.

We cannot, therefore, address the needs of the metropolitan region independently of those in Greater Minnesota. Our final plans must be statewide plans and can be rendered only after the completion of a comprehensive review of the MSPAN II study.

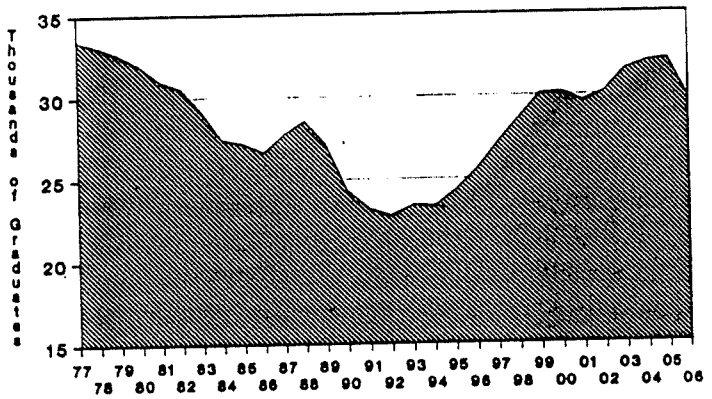
Upon completion of MSPAN II, we intend to conduct a similar cooperative assessment of the findings and to relate the results to these MSPAN I plans.

The Demographic Picture

Effective educational planning for the metropolitan region must be grounded in the demographic facts. We believe that two important sets of factors drive the new challenges for postsecondary education over the next decade.

The first factor is the change in the demographics. The number of high school graduates in the metro area has been declining since 1977 and will continue to decline until the mid-1990s. In 1977 there were 33,442 high school graduates. This figure dropped to 28,546 high school graduates in 1988, and is projected to decrease to 23,710 in 1995. The number of graduates is expected to rebound again to 28,452 by 2001. Another measure of potential "traditional" students -- those aged 20-24 -- shows a Twin Cities area total of 191,755 in 1985, dropping to 137,370 by 1995. Thus the traditional age student cohort will be significantly smaller for most of the next decade.

ACTUAL AND PROJECTED TWIN CITIES AREA
HIGH SCHOOL GRADUATES 1977-2006



Act. 1977 to 1989, Prel. 1990 to 2006
Source: Actual - State Dept. of Educ.
Projected - Higher Educ. Coord. Board

During the same period, however, the so-called "baby boom generation" -- will continue to make up one-third of the Twin Cities area population. This group has displayed a tremendous appetite for educational services at both the undergraduate and graduate levels. At the same time, these nontraditional students are often placebound and timebound by the responsibilities of family, work, and home. As the baby boomer cohort approaches their mid to late 30's it is unclear what the higher education participation patterns of these non-traditional students will be.

The aging of this group marks another significant related demographic trend -- the aging of the work force. The number of entry level workers will continue to decline and the number of older citizens will increase over the next two decades. If the State of Minnesota is to remain competitive, it will need to educate a larger share of the younger population for the jobs of the future, as well as "re-educate" those older workers to deal with changing job requirements.

The second factor is the changing trend in participation in higher education. During a period of projected enrollment decline (based on the demographic changes in the

traditional age student group), enrollments in postsecondary education have increased. Over the last five years, enrollment (headcount) in Minnesota's public and private colleges and universities has increased over 14 percent with significant increases in the community colleges (37%) and the state universities (30%).

Two key groups account for a large share of this growth -- older students (over 25), and a larger proportion of the high school graduates going on to college. The increasing participation by these groups signals both a stronger commitment to the notion of "life-long learning" and the increasing awareness that a high school education is no longer sufficient for workforce requirements in today's world.

In light of these factors and trends, the real question is what are the educational needs? Whose needs are being met and whose are not? Which group or groups should be the target of planning and building for the future? How should scarce public resources be prioritized across various segments of the population?

The typical 18-year old often has the mobility to take advantage of numerous options both in the metro area and beyond. But the individuals who are placebound by family, work, or home or who face technological change in the workplace or who got by on a high school education in the past but now need to further their education -- these individuals should be an important focus of state planning for higher education into the next decade.

The baby boom generation represents one-half of Minnesota's workforce. This group has already begun to exhibit its desire and need for educational upgrading in a fast-changing, technology-oriented information age. Minnesota will desperately need this pool of workers, operating at their highest potential, if it is going to compete in an increasingly competitive global economy.

At the same time, the state must continue to recognize the needs of traditional age students. More than 40,000 students--nearly 70% of all students enrolled in the Minnesota State Universities outside the Metropolitan area--are in the 18-23 age group. Because of fiscal constraints, there are very real trade-offs between these two populations.

II. INTERSYSTEM COOPERATION

The history of postsecondary education in Minnesota is characterized by development first of individual institutions and then later of systems. Each of the systems are still evolving. The creation of HEAC in the early 1970s has been an important vehicle in the continuation of this evolution.

Up until recently, the planning and policy emphasis on intersystem relationships has been to underscore the differences between the systems to avoid duplication. Mission delineation mandates have led to clearer definitions of the various system roles. But in view of the continued demand for postsecondary education in Minnesota and the continuing decline in resources available, the thinking has shifted

to ways in which systems can actively cooperate to serve students' needs within the resources likely to be available from the state.

To elevate the commitment to such cooperation the systems have agreed to form a structure for management of intersystem collaboration activities. This effort will involve deputy chancellors and chief academic officers of the four public systems and will have responsibility for planning and implementation of major cooperative intersystem initiatives. An executive director and staff drawn from the systems and campuses will carry out these efforts. Through this structure, the Systems will maintain close communication of its efforts with the Private College Council and the Higher Education Coordinating Board.

The cooperative agenda for FY 1991 and 1992 will focus on (1) improving enrollment planning, (2) improving transfer and articulation between all four systems, and (3) improving minority access to institutions. Each of these areas are described in more detail below. In addition, HEAC believes that increased attention must be focused on relations between postsecondary education and elementary and secondary education.

Improving Enrollment Planning for Public Postsecondary Education in Minnesota

The enrollment planning decisions made by one system can have enrollment implications for other systems. For example, as the University of Minnesota announced plans to reduce enrollments, community college and state university enrollments increased. Increased enrollments and program expansion at Metropolitan State, additional transfer and articulation agreements, technical college restructuring, and joint technical and community college degree programs all have intersystem enrollment management ramifications.

It is obvious that students make individual, independent choices about which postsecondary institutions they will attend, and the ability to affect those decisions is limited. Nevertheless, HEAC believes it is in the best interest of students and institutions that the systems establish a much greater degree of collaborative enrollment planning. A major priority of the intersystem collaboration group will be to address common enrollment planning issues, beginning with a study of access to upper division programs at both the state universities and the University of Minnesota for community college transfers, focusing first on the seven county metropolitan region and later on the entire state.

Related to the broad issue of enrollment planning is a concern about undergraduate access within St. Paul. The City of St. Paul with its diverse neighborhoods has been served educationally by a number of entities at a variety of sites. The consolidation of some of Metropolitan State University's operations at the Dayton's Bluff site provides a focus for upper-division offerings in St. Paul. Coupled with lower division offerings by Lakewood Community College at Dayton's Bluff, St. Paul residents have access to baccalaureate opportunities. Lower division offerings can be even better organized to improve access in St. Paul, particularly for nontraditional and

historically underserved populations. A targeted effort within cooperative enrollment planning should address this need.

HEAC proposes that representatives of the systems and of Lakewood and Inver Hills Community Colleges, St. Paul Technical College, Northeast Metropolitan Technical College and Metro State University develop a coordinated approach to insuring access in St. Paul. This initiative will address the possibility of a single higher education point of access for individuals seeking information and counseling on the various opportunities available. Similarly, improved coordination of schedules and calendars could ease organizational logistics. And joint publications, perhaps in multiple languages, and catalogs, could make information gathering easier for both new immigrants and long-time residents. If these models prove successful, the possibility of replication in other parts of the metro area or state can be considered.

Improving Transfer and Articulation

Transfer students, principally from community colleges, are making up an increasing share of the enrollment in upper division programs in the Minnesota State University System and the University of Minnesota. To assure both an adequate supply of transfer opportunities and a smooth transition for transferring students, the collaboration group will give major attention to transfer and articulation matters.

Over time, it is HEAC's goal to establish a comprehensive set of intersystem policies and agreements on transfer and articulation. "Comprehensive" means that all programs in which students can transfer will be reviewed for curricular articulation between lower and upper division offerings, and formal agreements defining the conditions for joint admission and the transfer of credits will be established. These agreements would affect transfer policies within systems, as well as between systems.

An additional aspect of this effort will be improving student support services for transfer students, e.g., transfer specialists on both college and university campuses with responsibility for assisting students and maintaining effective transfer procedures and jointly published transfer and dual admission information.

Improving Minority Access and Success

Each of the postsecondary systems have established major initiatives, including goals and strategies to address the needs of a more culturally diverse student body and methods to increase the chances of success for traditionally underserved populations. But these programs have been established in relative isolation by each system.

While each system's individual goals are laudable, the potential exists for unnecessary duplication of effort and competition. What is needed is a coordinated and cooperative intersystem plan to meet the needs of minority students. Such a plan would ensure that minority enrollment goals would not be mutually unachievable and that a variety of programs be coordinated and articulated.

This integrated effort has already been identified as a key component of the emerging "enrollment planning partnership" between the systems. The intersystem collaboration group will conduct careful analysis of existing data, and collect information about barriers to matriculation and success. Once findings are established, recommendations for further action will be developed.

Improving Linkages with Elementary-Secondary Education

An increasing proportion of high school graduates are going on to higher education. This is a major factor in the high postsecondary participation rate in Minnesota. This increase in the share of high school graduates has raised questions about the academic preparation of many of these students. While the segment of students in the top quartile academically of their high school classes has historically received "college prep" instruction, more and more students in lower academic ranks are realizing the need for some postsecondary education in order to compete in today's job market. Many of these students are entering Minnesota institutions without all the necessary prerequisites for college-level instruction. Some are coming directly following high school while others come later in their lives.

At the same time, educational reforms may be changing the structure of K-12 education. State mandated student outcomes, postsecondary options, expanded graduation requirements and school years all have implications for postsecondary education. And as changes occur in our higher education institutions, they must be clearly communicated to secondary school officials so that students and parents are effectively informed.

HEAC believes that a major effort must be undertaken to increase the discussions between elementary-secondary and postsecondary educators. The goals of this exchange are an increased understanding of the issues facing both sectors of education and the development of an on-going system for sharing information and developing policy.

The Commissioner of Education is a statutory member of the Higher Education Advisory Committee. Through this relationship HEAC hopes to pursue avenues for bringing state elementary-secondary and higher education leaders together to explore common issues, improve communications, and address mutual problems.

III. UNDERGRADUATE EDUCATION

We believe the basic infrastructure to provide access to quality undergraduate education in the metropolitan region exists today. The network of public and private colleges and universities provides a foundation on which to make the improvements in higher education necessary for an even stronger Minnesota in the 21st century. The improvements that are needed are relatively limited and specific.

What are the major components of this undergraduate plan?

- The University of Minnesota's Twin Cities campus will continue to serve as the major provider of undergraduate education in the region, even after further reductions in undergraduate enrollment through 1993. Improvements in the student experience will be guided by the Initiative for Excellence in Undergraduate Education.

- The University of Minnesota will continue to encourage more students to begin their undergraduate education at community colleges, then transfer to the University. Along with retention improvements, this should result in a modest shift from lower to upper division enrollment.

- Metropolitan State University will increase its enrollment and add several structured, upper division majors in high demand fields while consolidating its locations. While Metro State is developing new programs and facilities, the programs offered in the metro region by Mankato and St. Cloud State Universities will continue at their present levels. The Council of Minnesota State Universities serving the metropolitan region will work to assure students needs are met. Once Metro State has instituted full service programs, the needs of students served by other state universities will be assessed.

- The six metro community colleges will continue their role as the primary provider of lower division general education in the region and accommodate students diverted from the four year institutions.

- Both the University of Minnesota and the State University System will continue to improve articulation and transfer arrangements with the community colleges to assure a smooth transition and sufficient opportunities for transfer students.

- Both the community colleges and the technical colleges will remain "open door" institutions to assure access to postsecondary education. Both systems will also continue to develop quality instructional support programs, including mandatory student assessment, improved counseling, advising, and developmental assistance, and monitoring of various student outcomes measures.

- The community colleges and technical colleges will continue to cooperate in developing and offering joint associate of applied science (A.A.S.) degree programs.

- The technical colleges will continue with recent initiatives in restructuring to course-based programs and in seeking North Central accreditation as college degree/diploma granting institutions. Such efforts prepare the way for exploration of transfer arrangements and occupational program articulation with the state universities.

- Certain of the 16 private colleges could serve as many as 8,000-10,000 additional students if need-based state financial aid improved realistic choice for students. This additional capacity could be achieved by maximum utilization of existing facilities as well as expansion and adjustment of schedules. This approach represents a cost effective alternative to expanding public sector capacity to meet expanded undergraduate demand.

- Currently a quarter of the transfer students to the private colleges are from the community colleges. The private colleges will continue to work closely with the community colleges to ensure they are a viable option for transfer students.

In addition to these broad trends, the Systems make the following points:

- Neither the state universities or the University of Minnesota plans to initiate 2+2 arrangements with community colleges at this time. Both systems believe that improved systematic relationships for transfer and joint admission must be attempted before 2+2 initiatives are explored.

- The community colleges are demonstrating their effectiveness at providing developmental/remedial services to students who then successfully transfer to four-year universities. They propose to assume a larger role in this area and, through the formal agreements, to provide these services where needed for the University of Minnesota and the Minnesota state universities serving the seven county metro area.

- All of the systems agree that undergraduate programs and services in St. Paul can be better coordinated and agree to cooperate on seeking solutions.

IV. GRADUATE EDUCATION

The MSPAN I Report suggested that there is an unmet need for practitioner oriented masters programs in the seven county metropolitan area. With the exception of engineering and computer science fields, the nature and extent of such need is difficult to define.

Currently the demands for master's programs in the Twin Cities region are met by the University of Minnesota, the State University System, and a number of private colleges and institutions. Thus, the University of Minnesota offers 180 master's programs of which 128 are "practitioner oriented." Metropolitan State University, Mankato State University, and St. Cloud State University also offer master's programs in the region. Additional M.A. programs are provided by the College of St. Thomas, the College of St. Catherine, Hamline University, and Augsburg College.

To determine and as appropriate address more effectively any unmet graduate level needs, we propose to take the following actions:

- Those systems and institutions that offer graduate programs will continue to explore jointly the changing educational needs of students and new ways to make advanced programs more accessible. As part of that examination, the University of Minnesota will specifically review the demand for expanded masters programs in architecture, technical communications, health care and nursing, and psychology related fields. Similarly, Metropolitan State University will consider additional programs in applied psychology, accounting, liberal studies, counseling, nursing, health care management, and urban services, administration and planning.

- The Minnesota State University System will coordinate its delivery of practitioner oriented master's programs through the formation of the Council of Minnesota State Universities serving the metropolitan area. Plans are also underway for the establishment of a Graduate/Professional Development Center. The Center's activities will be led by Metropolitan State University and will include joint planning involving all State University System campuses, the University of Minnesota, and those private institutions that offer graduate level programs.

- The University of Minnesota will expand master's programs in engineering and computer science on the Twin Cities campus subject to additional state funding for the requisite student, faculty, space and programmatic needs.

- The University of Minnesota will continue to assert its role as the state's major provider of graduate education and the sole public provider of the research doctorate. The State University System, in cooperation with the University of Minnesota, will consider offering doctoral level programs in applied areas such as education and psychology subject to the following conditions: 1) there is a carefully demonstrated need; 2) the University of Minnesota cannot or does not meet that need; and 3) the State University campus proposing the doctoral program is prepared to devote the resources necessary to offer a program of high quality.

V. IMPROVING THE USE OF INSTRUCTIONAL TECHNOLOGY

The rapid advances in information and communications technology symbolize contemporary society. Applications such as telecommunications technology offer the opportunity to extend and improve the delivery of instruction. Linking postsecondary campuses, high schools, and businesses with interactive video capability can allow general or specialized instruction to be delivered to distant locations. Each system is separately and cooperatively researching new applications and technology options. The systems also vary in their capacity to offer instruction through telecommunications.

Minnesota Technical College System

The Minnesota Technical College System has made considerable progress in the phased development of fiber optic linkages among campuses. Fiscal resources are available pending the active participation of the technical colleges. Currently, three major networks link several technical college campuses including: MidTec whose members are St. Cloud, Willmar, Anoka, Pine City, Alexandria, Hutchinson, and St. Paul; Heartland consisting of Brainerd, Staples, Wadena, and Detroit Lakes; NEWL consisting of Thief River Falls, TRF Extension campuses and East Grand Forks campuses linking the University of Minnesota, Crookston Campus. The Austin campus can interface with a state university fiber link between Winona and Rochester by using a microwave carrier available to them.

The MidTec consortium is typical of the various networks since it is being constructed in phases. The St. Paul site is currently under construction and scheduled for completion in the fall of 1990, while the Hutchinson site is still in the developmental phase. Utilizing two fiber strands, two-way interactive audio, video, and/or data communications can be achieved with each participating site able to see, hear, and transmit data to each other. The current terminal equipment provides for up to 12 video channels, with potential expansion to 32 channels with additional equipment. Upon completion this fall, the St. Paul fiber optic link will be interfaced into the MnSAT satellite uplink facility.

The Minnesota State Board of Technical Colleges, in partnership with the Minnesota World Trade Center and St. Paul Technical College, operates a satellite uplink (transmission) facility called MnSAT or Minnesota Satellite and Technology. The satellite transmission capability enables the partners to disseminate information,training, and general communications to any point in the state, nation, or world that has the appropriate downlink (receive) capability. The satellite uplink capability enables the technical colleges to communicate with clients and students--nationally and internationally--without having to travel and with accompanying cost and time efficiencies. In order to ensure that the 34 technical colleges can receive information over the satellite communications vehicle, each site has in place downlink equipment for receiving the satellite signal transmitted from MnSAT. In addition to the technical support at each technical college site, telecommunications teams have been established to assist with the facilitation of a training/information session teleconferenced from the uplink facility.

Minnesota Community College System

The Community Colleges are interested in cooperating with other institutions in the use of this technology and future participation in network development. However, lagging fiscal resources during a period of tremendous enrollment growth have constrained the community colleges from taking full advantage of advances in technology. Networks established to date have generally resulted from the financial assistance of K-12 school districts, individual technical colleges, or private sources. Major attention should be placed on regionally connecting colleges to each other, to paired and cooperating technical colleges, and to high schools to allow programs

to be shared across distances. In the metro area, smaller classes in specialized areas might be more efficiently offered over links between colleges. Links to technical colleges and high schools would also allow joint degree program students and high school options students to participate in community college courses without leaving their own campuses.

Minnesota State University System

At present, the Minnesota State University System's capacity to deliver education by interactive television and other models of distance learning is very limited. The universities recognize the significance of this activity but find it difficult to explore this option considering the System's deficiency in per student funding to meet current operational needs. Without the state's investment in such resources, reallocation of internal funding for start up and production is not realistic.

University of Minnesota

The full cost of operating a distance learning system is significant; nevertheless, the University of Minnesota believes that the higher education systems of the state will be able to serve potential clients more effectively, at lower cost, if the state invests in two-way video transmission than if they are limited to direct face-to-face communication. The new technology will make it possible to meet the growing need for adult education and lifelong learning for placebound persons who are not within reach of existing higher education institutions. The implementation of this technology would make it possible to expand educational services to placebound persons across the state. The University supports its development as funding becomes available.

STARS

Over the past two years, the systems and HEAC have worked closely with Department of Administration on the planning of STARS (Statewide Telecommunications Access and Routing System), a statewide telecommunications network intended to link state and local agencies and educational institutions and provide voice, data, and interactive video capabilities. While the replacement of existing and projected voice and data networks with the new STARS network appear feasible and cost effective, the cost of adding a full broadcast quality video capacity remain less clear. HEAC will continue to participate actively in the planning of STARS and in seeking cost effective solutions to expanding telecommunications linkages and capacity.

APPENDIX A

MINNESOTA COMMUNITY COLLEGE SYSTEM

Response to MSPAN I

MEETING THE UNDERGRADUATE NEEDS IN THE TWIN CITIES METROPOLITAN AREA

INTRODUCTION

This report is submitted in response to the Minnesota Legislature's request for plans addressing the undergraduate education needs in the Twin Cities metropolitan area. It is intended to be integrated into a single, comprehensive report submitted jointly by the Community College System, State University System, Technical College System, University of Minnesota, and the Private College Council.

I. BASIC PLANNING PRINCIPLES

The original MSPAN I study was designed to identify postsecondary needs as Minnesota approaches the year 2000. Likewise, this document is not intended as a short-range plan. It takes a longer-term perspective, especially in light of current fiscal realities which may impede the ability to implement some of the proposed initiatives.

In light of these fiscal realities, three basic principles underlie the planning that should be done to meet the needs identified in the metro area:

- o New initiatives must build on existing programs, institutions, and infrastructure to be most cost-effective.
- o Plans must insist on maximum intersystem cooperation.
- o Plans must incorporate increased flexibility to face changing conditions in the future.

II. FRAMING THE ISSUES

At the heart of this Community College System plan is the idea that the basic infrastructure to improve undergraduate access and quality in the metro region already exists. The network of public and private colleges and universities provides a foundation on which to build the additional components necessary to make higher education stronger as Minnesota prepares for the 21st century.

In the early 1960s, state policymakers took a long-range view when they created six new community colleges and located them strategically throughout the Twin Cities metropolitan area. Their purpose was to meet the needs of the coming baby boom generation as it reached college age and to relieve pressure on the University of Minnesota.

After 26 years, the six metro community colleges are thriving, with over 36,000 students. Along with other postsecondary institutions, these colleges are serving the needs of freshman and sophomores. With their strong emphasis on the teaching mission and with nearly half their students over 25, they are demonstrating their ability to serve the increasingly diverse student population at the lower division level. Neither SRI nor any other source has noted any evidence of a lack of lower division opportunities. But as SRI concluded, undergraduate needs do exist at the upper division level.

This is a plan that recognizes that upper division planning must take into account lower division activities if students are to be served effectively.

Under this plan, the Community Colleges will continue to build upon their historical role as the major provider of lower division general education in the metro region. With its strong emphasis on quality, the Community Colleges will continue the implementation of the "Student Success Model" and the "Teaching Excellence Initiative." These initiatives will further emphasize the centrality of the teaching mission and will improve the success rates and retention of students through student assessment, improved counseling and developmental programs, and student outcomes measurement. They will continue as open admission institutions, offering access to the traditional and nontraditional students who must be educated to meet the demands of the workforce in the year 2000 and beyond.

But these students must have a place to go when they complete their community college experience. Planning in the metro area must insure maximum quality upper division opportunities into which students can transfer. This plan calls for increased intersystem cooperation and planning to ensure those opportunities, as well as a smooth transition for students who transfer from community colleges to upper division universities.

The University of Minnesota has historically played the dominant role as the major provider of undergraduate education in the metro area. That role will continue, even as the University reduces enrollments and moves to strengthen the quality of the undergraduate experience. Through continued cooperation between the University and the community colleges, more students will be encouraged to obtain lower division coursework at a community college, then transfer to the University to complete undergraduate work. The success of this approach will allow the University of Minnesota to further shift from lower to upper division within reduced enrollment targets.

In the early 1970s, the Legislature created Metropolitan State University as an upper division institution mandated to "serve the needs of the graduates of the state junior colleges and the area vocational-technical schools".

This report responds to the State University System's plan to establish Metro State as the major state university in the metro area. It welcomes Metro State's plans to build upon its traditional mission by expanding upper division and graduate offerings. These new offerings will provide community college students, many of whom are placebound, nontraditional students, greater opportunities for transfer. This pattern fits well with the Metro State tradition. At the same time, this plan does not support efforts by Metro State to establish lower division offerings or to over-invest in new sites and major capital outlays. Such efforts will dilute the limited resources necessary to satisfy the more critical upper

division and graduate needs which have been identified and will only duplicate services already available.

This plan assumes that Minnesota's technical colleges will, through restructuring to credit-based programs, accreditation, articulation and transfer efforts, become more integrated over time into the more traditional academic framework. With these changes, joint or cooperative programs between community and technical colleges can be more easily structured, coordinated and expanded. Students will be able to move more easily between community and technical colleges, as well as between two year and four year institutions.

Finally the metro area is served by many fine private colleges and universities. This plan recognizes the important role of these institutions in serving undergraduate needs. As with the public institutions, the community colleges hope to expand even further improved transfer opportunities for students.

III. STUDENTS, DEMOGRAPHICS AND WORKFORCE

Two important sets of factors drive the new challenges to planning for undergraduate education over the next decade.

The first factor is the change in the demographics. The number of high school graduates in the metro area has been declining since 1977 ... will continue to decline until the mid-1990s. There were 28,546 high school graduates in 1988 but only 23,710 are projected for 1995. This number is expected to rebound again to 28,452 by 2001. Another measure of potential "traditional" students -- those aged 20-24 -- shows a Twin Cities area total of 191,755 in 1985, dropping to 137,370 by 1995. Thus the traditional age student cohort will be significantly smaller for most of the next decade.

During the same period, however, the so-called "baby boom generation" -- will continue to make up one-third of the Twin Cities area population. This group has displayed a tremendous appetite for educational services. At the same time, these nontraditional students are often placebound and timebound by the responsibilities of family, work and home.

The aging of this group marks another significant related demographic trend -- the aging of the work force. The number of entry level workers will continue to decline and the number of older citizens will increase over the next two decades. If the State of Minnesota is to remain competitive, it will need to educate a larger share of the younger population for the jobs of the future, as well as "re-educate" those older workers to deal with changing job requirements.

The second factor is the changing trend in participation in hig... ...ation. During a period of projected enrollment decline (based on the demographic changes in the traditional age student group), enrollments in postsecondary education have increased. Over the last five years, the full-time equivalent enrollment in Minnesota's six metro community colleges has increased nearly 40 percent.

Two key groups account for a large share of this growth -- older students (over 24), and a larger proportion of the high school graduates going on to college. The increasing participation by these groups signals both a stronger commitment to the notion of "life-long learning" and the increasing awareness that a high school education is no longer sufficient for workforce requirements in today's world.

In light of these factors and trends, the real question is what are the educational needs? Whose needs are being met and whose are not? Which group or groups should be the target of planning and building for the future?

The typical 18-year old has the mobility to take advantage of numerous options both in the metro area and beyond. But the individuals who are placebound by family, work, or home or who face technological change in the workplace or who got by on a high school education in the past but now need to further their education -- these individuals should be an important focus of state planning for higher education into the next decade. The baby boom generation represents one-half of Minnesota's work force. This group has already begun to exhibit its desire and need for educational upgrading in a fast-changing, technology-oriented information age. Minnesota will desperately need this pool of workers, operating at their highest potential, if it is going to compete in an increasingly competitive global economy.

IV. DEVELOPING A "COMMON MARKET" FOR POSTSECONDARY EDUCATION IN THE METRO AREA

Today's college and university students are a diverse and mobile group who move among postsecondary institutions pursuing a wide variety of personal and professional goals. Plans to respond to their needs must recognize the dynamics of this marketplace.

Over the past decade, Minnesota's systems of higher education have achieved major results through intersystem cooperation. Transfer and articulation agreements, dual admissions agreements, joint degree programs, and intersystem planning are significant examples in which students are being better served in more cost-effective ways through cooperation.

Each of the systems are committed to further improving cooperative efforts and relationships designed to provide a smooth transition for students moving from system to system. Given the transfer nature of community college programs, this is a very high priority.

The Community College System is committed to the development of an educational "Common Market" in the Twin Cities metropolitan region. In a "Common Market", individual institutional identities are preserved in order to maximize student choice. At the same time, institutions cooperate to remove procedural obstacles to students. A "Common Market" recognizes the need for students to move among institutions as effortlessly as possible. It strives for a "user friendly" atmosphere that focuses on services to student customers. In a "Common Market" institutions and systems conduct enrollment and program planning in cooperation.

V. ESTABLISHING AN ENROLLMENT PLANNING PARTNERSHIP

The enrollment planning and management decisions made by each system and campus do not occur in a vacuum. As the University of Minnesota Twin Cities' campus reduces its undergraduate enrollment, more students are diverted to community colleges. As the State University System plans for an expanded role for Metro State, the impact on community colleges must be considered. As joint technical and community college programs are developed they impact enrollment patterns. In each of these cases, the interrelationships and the need for cooperation and planning have become increasingly evident.

In response, the public systems have very recently established a high-level administrative effort to improve the sharing and development of enrollment plans. This initiative should allow systems to communicate and coordinate enrollment goals, and to share a greater array of data on students, such as information on the number of students who transferred and how their performance compares with "native" students, i.e., those who begin their freshman year at the institution.

The Community College System has actively supported this initial commitment to intersystem cooperation and will work to further establish this important effort.

Six important elements which this cooperative enrollment planning must address are (a) continuing the open admissions policy for two year institutions; (b) affirming the Community Colleges role in lower divisions; (c) insuring options for transfer students; (d) focusing developmental education services; (e) coordinating cultural diversity programs; and (f) strengthening lower division access in St. Paul.

A. Continuing the Open Admissions Policy

Nothing is more essential to the development of a strong workforce in the coming decade than education. Workforce and population projections provide three points, critical to higher education planning: (1) the types of jobs that are expected to grow and create the greatest demand will generally require at least two years of postsecondary education; (2) the great majority of new entrants into the workforce will be women and minorities, groups traditionally under-represented in higher education; and (3) the combination of the aging of the workforce and rapid changes in technology and the economy will increase the need for continuing education and retraining.

Enrollment increases in the community colleges are in large part a recognition of these trends on the part of students. The ability of citizens of varying ages and backgrounds to gain access to postsecondary education is well-served by an open admissions policy for both the Community Colleges and Technical Colleges.

The Community Colleges plan will continue this policy and supports it strongly as both a philosophical and economic imperative.

B. Affirming the Lower Division Role

Lower division general education is the primary mission of the community colleges. Mission delineation efforts have further defined lower division general education as the appropriate role and the strength of the community colleges.

The Community Colleges will continue to affirm their role as the primary provider of lower division general education in the Twin Cities.

The Community College System questions the wisdom of Metro State expanding into lower division offerings. Given the extensive agenda which Metro State has outlined, expansion into lower division dilutes limited resources and diverts attention from the goal of strengthening upper division and graduate programs. The SRI report identified these as the major needs while acknowledging that the Community Colleges were adequately supplying lower division services to the region.

Metro State was established as an upper division institution and has established a unique reputation as such. The Community College System encourages the State University System to build upon this tradition.

C. Insuring Options for Transfer Students

Over the past five years, enrollment in the six metro Community Colleges has increased by nearly 40 percent. Given the primary mission of preparing students to transfer to four year universities and colleges, it is of critical importance that these students have access to quality upper division program opportunities.

The Community Colleges, therefore, welcome the expansion of upper division majors at Metro State University. Establishing additional upper division majors will make Metro State an even more attractive transfer option for community college students.

As part of its strategic planning, the University of Minnesota has reduced its undergraduate enrollment and is planning to shift more of its enrollment from lower to upper division.

Again, the Community Colleges support and welcome this decision. The University of Minnesota plan recognizes the distinct strengths of the two systems and the fiscal realities facing the state. It accepts the Community Colleges as cost-effective providers of quality lower division instruction and allows the University of Minnesota to concentrate its resources on more specialized upper division and graduate programs.

D. Coordinating Cultural Diversity Program Goals and Strategies

The Community Colleges have established goals and strategies to address the needs of a more culturally diverse student body and to increase the chances of success for traditionally underserved populations. So have each of the other postsecondary systems.

These are laudable goals but create the potential for unnecessary duplication of effort and competition. What is needed is a coordinated and cooperative intersystem plan to meet the needs of minority students. Such a plan would ensure that minority enrollment goals would not be mutually unachievable and that a variety of programs be coordinated and articulated.

This integrated effort has already been identified as a key component of the emerging "enrollment planning partnership" between the systems. Again, the Community College System applauds this direction and intends to support it vigorously.

An immediate focus of this effort should be development of a coordinated effort between metro community colleges and four year universities particularly Metro State University. Recruitment, joint admission, and coordinated support services would all be part of this cooperative effort to insure that minority and inner city residents make a smooth transition from high school to community colleges to upper division university programs.

E. Focusing Developmental Education Services

As the participation in postsecondary education has increased, the need for developmental assistance for many students has also increased. Developmental education requires specialized services and more individualized attention prior to or concurrent with lower division studies. The Community Colleges, as "open door" institutions, have developed as strong providers of developmental/remedial education. While many students entering community colleges exhibit a need for some level of remedial assistance, the available record shows that, after they transfer to upper division universities, community college students generally perform academically as strong or stronger than "native" university students.

The Community Colleges propose that they serve as the primary provider of developmental education in the metro area. As part of an intersystem agreement, Metro State and the U of M would divert students in need of developmental assistance to the community colleges prior to admission, or purchase developmental services for students already enrolled.

F. Improving Undergraduate Access in St. Paul

The City of St. Paul with its diverse neighborhoods has been served educationally by a number of entities at a variety of sites. The consolidation of Metro State.

University's operations at the Dayton's Bluff site provides a focus for upper division and graduate offerings in St. Paul. The cooperation between Metro State and Lakewood Community College at Dayton's Bluff has provided a baccalaureate path for students. Lower division offerings can be further improved to provide additional access for St. Paul residents. A targeted effort within cooperative enrollment planning should address this need.

The Community Colleges propose that representatives of the systems and of Lakewood and Inver Hills Community Colleges, St. Paul Technical College and Metro State University develop a coordinated approach to insuring access in St. Paul. This approach could address the possibility of a single higher education point of access for individuals seeking information and counseling on the various opportunities available. Similarly a common calendar could ease the organizational logistics and joint publications and catalog, perhaps in multiple languages, could make information gathering easier for both new immigrants and long-time residents.

VI. IMPROVING TRANSFER RELATIONSHIPS AND CURRICULUM ARTICULATION

A. Toward a "Comprehensive Transfer Model"

Great strides have been made in improving transfer relationships between the Community Colleges and four year universities. These arrangements ease the transition for community college students to upper division institutions. This trend should continue in the direction of a "Comprehensive Transfer Model."

While community college transfer students benefit from transfer agreements with some institutions, in other cases limited or no agreements are in place yet.

A comprehensive transfer model would extend arrangements currently available only with some institutions and systems to all. The new elements of this universal model, some of which are already under discussion, would include:

- Clear transfer policies within systems, as well as between systems.
- A transfer agreement between the University of Minnesota and the Community Colleges whereby the Associate of Arts degree would fulfill the lower division general education requirements in most colleges and the Associate of Science degree in other specialized colleges. A similar agreement currently exists with the State University System and with some colleges of the University of Minnesota.
- Transfer agreements with private colleges.
- Dual admissions agreements with all public four year universities under which community college students would be admitted to a selected university at the time of admission to the community college and, as community college students in good standing, be guaranteed a place in upper division at the time of transfer. Such an agreement is currently under consideration by the Community College and state university systems.
- Improved student support services for transfer students, e.g., transfer specialists on university and college campuses with responsibility for assisting students and maintaining effective transfer procedures and jointly published transfer and dual admission information for students.

Additional possible elements for further discussion:

- o Common distribution requirement for general education.
- o Faculty-to-faculty discipline meetings across systems.
- o A common transcript and electronic transcripting which would simplify credit transfer evaluation and provide valuable across-system data.

B. Joint Community College-Technical College Programs

In recent years, over 105 joint programs have been established between community and technical colleges, 35 of which are in the metro area. Under these agreements, students receive technical training from a technical college and general education instruction from a community college. Successful students emerge with an Associate in Applied Science (A.A.S.) degree.

Joint programs have developed in response to employer expectations of a broader general education beyond specific technical-occupational training. Since many community and technical colleges are in close proximity, the systems have been able to cooperate on delivering these programs in a cost effective manner rather than duplicating general education courses.

Given current governance structures, the Community Colleges will continue to cooperate with the Technical Colleges by providing general education for joint A.A.S. programs, refraining from any unilateral development of A.A.S. programs, and exploring additional means of cooperating.

C. Improving Linkages with High Schools

The tremendous increase in participation in postsecondary education in Minnesota has resulted largely for two reasons. One is the increase in older, nontraditional students. The other is the increase in the proportion of high school graduates going on to higher education. As HECB has reported, nearly 90 percent of high school graduates are entering some form of postsecondary education within 5 years of graduation.

This increase in the share of high school graduates has raised questions about the academic preparation of many of these students. While that segment of students in the top quartile academically of their high school classes has historically received "collegiate prep" instruction, more and more students in lower academic ranks are realizing that at least two years of college is increasingly necessary to compete in today's job market. Many of these students are entering community and technical colleges without some of the necessary prerequisites for college-level instruction.

The Technical Colleges are initiating with the cooperation of the Minnesota Department of Education and other institutions a statewide Tech Prep program. This effort will involve the technical colleges and secondary schools in the development of an additional secondary school educational focus which will improve student preparation and counseling directed toward technical education and possible subsequent baccalaureate degree completion.

The Community Colleges believe that a major effort must be initiated to increase the discussions between elementary-secondary and postsecondary educators. The goals of this exchange are an increased understanding of the issues on the part of both segments of education and the development of an on-going system for sharing information and developing policy.

There currently exists no formal state-level vehicle for such interaction. The creation of a "secondary - postsecondary commission" under the auspices of the Higher Education Advisory Council could bring state education leaders at both levels together to explore such issues as:

- o How to improve the curricular articulation between high schools and colleges and universities.
- o How to improve counseling and collegiate planning information for K-12 students to better prepare them academically and socially (and their families financially) for postsecondary education.
- o How to provide "feedback" information to high schools on the performance of their former students in postsecondary coursework.

This last issue has particular potential for the community colleges as they establish more comprehensive student assessment and outcomes programs. The assessment data derived from incoming students, as well as performance outcomes data over their collegiate life could be valuable tools for the high schools of former students. Some pilot efforts by community colleges are underway but will require resources beyond what currently exists to develop a comprehensive program.

VII. DELIVERING EDUCATION IN NEW WAYS

A. Enhancing the Student Success Model

A major quality initiative for the Community Colleges has been the implementation of the "Student Success Model." This program includes the following elements:

- o Mandatory Student Assessment
- o Recommended Academic Placement
- o Expanded Developmental Programs
- o Student Outcomes Tracking
- o Probation-Suspension Policy
- o Expanded Institutional Research

Within available resources, the Community College System has begun instituting this comprehensive model in the current academic year. The goals of the program are to improve the success of students and the ability of the colleges to serve them by providing increased feedback on the performance of students at different points in their college career. The expectation is that student retention, performance and satisfaction will increase as a result.

The Community Colleges will continue to build on this effort to strengthen the quality of the collegiate experience for their students.

B. Improving the Use of Instructional Technology

The rapid advances in information and communications technology symbolize contemporary society. Many of these technologies have significant implications for higher education classrooms, libraries and laboratories.

Computers have become both something to teach about and something to teach with. The increase in computers in workplaces of every type make computer literacy an essential academic requirement. Computers alone or in conjunction with other technologies such as video disk machines can also improve and individualize teaching.

Telecommunications technology also offers the opportunity to extend and improve instruction. Linking campuses, high schools and businesses with interactive video capability can allow general or specialized instruction to be delivered to distant locations.

Lagging fiscal resources during a period of tremendous enrollment growth have constrained the Community Colleges from taking full advantage of with advances in technology. Major attention should be placed on this issue.

C. Lifelong Learning for Faculty and Staff

"Lifelong Learning" is a concept that applies to the employees of community colleges just as it does to their students. Faculty must learn new teaching methods for a more diverse student body and remain abreast of new trends and developments in their fields to teach effectively. The same is true of deans and physical plant engineers.

The Community Colleges will look to the public and private providers of graduate education to explore new ways to address the changing educational needs of faculty and staff and to make advanced and specialized programs more accessible.

The Community College System is also developing plans for a Center for Teaching and Learning. For community colleges, teaching is the central mission. The opportunity for collegial interaction and information sharing, sabbaticals, and research into the teaching and learning process will enhance the continuing academic strength of the faculty and the quality of instruction.

D. Bringing Women and Minorities into Science and Technology Fields

Over the next decade, the growth in new entrants into the labor force will be predominantly women and minorities. Yet these segments of society have been under-represented historically in scientific engineering and other technological fields. Recruiting women and people of color into these fields will be critical to insuring a strong Minnesota workforce in the year 2000.

Community Colleges have a strong track record in reaching out to women, minorities, disabled and disadvantaged populations and providing them access to higher education. Community Colleges can be effective recruiters of traditional and non-traditional students in these groups and, in conjunction with upper division and graduate institutions, establish a pipeline for educating the scientists and engineers that will be needed in business and industry, academia and government in the twenty first century.

The Community Colleges will continue the discussions with other systems to develop improved paths by which traditionally under-represented and underserved populations can be prepared for scientific and technological careers.

E. Coordinating Science and Technology Resources

Scientific and technology-oriented programs and courses are often laboratory/equipment intensive and not conducive to large classes. Often they draw limited enrollment, making the cost per student of these programs relatively high.

To more efficiently target limited resources, the Community Colleges propose that the systems attempt to develop a central site used jointly for the teaching of specialized, science and technology programs, For example, the pre-engineering programs in the metro community colleges could be consolidated in a single site, allowing more efficient use of faculty and equipment. This site could also serve upper division programs.

CONCLUSION

These proposals and directions for improving undergraduate education in the metro area are student-focused. Many of them can be achieved through improved intersystem cooperation and without substantial increases in funding. But this is not to say that basic program funding issues can be ignored.

In the original MSPAN study, SRI noted a substantial shortfall in current public spending for higher education in Minnesota. Each of the systems has noted the serious threat to the quality of programs which this fiscal constraint represents. The challenge for Minnesota is how to expand access in the metro area without further eroding the ability of the existing institutions to provide quality education. The six strong metro community colleges with reputations for quality teaching at a low cost are an important resource in meeting this challenge.

MINNESOTA STATE BOARD OF TECHNICAL COLLEGES

PLAN FOR UNDERGRADUATE ACCESS IN THE METROPOLITAN AREA

MINNESOTA STATE BOARD OF TECHNICAL COLLEGES

Report on Undergraduate Access in the Metropolitan Area

I. INTRODUCTION

This report was prepared as a result of a legislative request for additional initiative clarification regarding undergraduate access in the metropolitan area. The technical college initiatives emphasize intersystem planning, minority and diversity, continued development of technical education, and improved student transfer arrangements between systems and cooperative institutions. Included within this report are the technical college priorities and implementation sequences which will serve to inform policy makers.

As the technical college system continues to serve thousands of first year college students, it ensures quality and enhances accountability in all of its educational programs through its redesigned course system. Each course is designed to provide students with an opportunity to develop talents through a value added approach wherein the instructors build upon the knowledge base the student brings to the college. Each course has an outcome assessment component which provides instructors and students with a measure of their progress. The curriculum restructuring process provided each program with determined entrance levels which are necessary for a student to succeed in the educational opportunity. Course and program prerequisites were determined in an effort to provide prospective students with opportunities to participate in developmental education and enhance their success potential. Perhaps the best measure of quality is the quality of instruction within a college. The updated curriculum of the technical colleges ensures the content of each course is current and designed to be presented in a manner which will enable each instructor to assess achievement.

The technical colleges continue to require additional revenues as indicated in previous legislative requests to fund staff development, laboratories and laboratory equipment which will enable the courses to be delivered in a quality manner. Updating staff, equipment and facilities continues to be an annual issue for the technical colleges. The necessity for instruction to take place in modern facilities with technically up to date staff and current equipment is a continuing issue. The 1990 legislative request will continue to reflect and document the equipment, facility, and staff development needs of the Minnesota Technical College System.

II. COOPERATIVE PLANNING

A. Enrollment Cooperation and Joint Admissions

Minnesota higher education institutions have aggressively worked together on intersystem issues during the 1980s. The result has been numerous cooperative programs, activities, and services. The community colleges and technical

colleges have developed 105 joint associate of applied science degree programs. In this particular relationship, the community colleges provide the general education courses and the technical colleges provide the technical education component. The Technical Colleges have also initiated approximately 50 A.A.S programs in cooperation with the Minnesota State Universities.

The systems have also explored a joint admissions concept for postsecondary education in the metro area. This activity would emphasize the removal of barriers to student access and would emphasize cooperative scheduling. It is suggested that meetings be held to bring together urban institutions that serve similar populations to discuss coordination needs. Preliminary meetings involving Metropolitan State University, Lakewood Community College, Northeast Metro Technical College, St. Paul Technical College, and system staff are scheduled to discuss the issues. Part of the anticipated outcome would be projects to make counseling and educational information more accessible; which address the special needs of our growing diverse population; and improved linkages between secondary and higher education.

B. Minority and Diversity

The Minnesota Technical Colleges, together with the other higher education systems, are committed to a comprehensive minority and diversity program. Continued efforts to improve access and retain students will be a significant focus. The system is currently developing a new policy initiative to encourage colleges in this effort. Included in this system policy activity will be a college equity plan and continued growth towards diversity goals.

1. Students of Color

Significant additional undergraduate access can be provided by the credit transfer strategy outlined under part three of this report. In 1988, the technical colleges enrolled 2,601 minority students, or 7.9% of their total enrollment. These figures represent the second largest number of minority students in the state and the highest system percent. The following enrollment data pertains to the technical colleges with very significant minority enrollment in the metropolitan area.

Minneapolis Technical College	659	30.9%
St. Paul Technical College	478	28.2%
Hennepin Technical College	156	5.2%
Anoka Technical College	104	6.9%
Northeast Metro Technical College	97	8.1%

2. Disadvantaged Students

The Minnesota Technical College System is dedicated to accommodating students with basic skill needs or disabilities in the more than 600 career programs that are available at the 34 technical college campuses

statewide. Public and private institutions of higher education within Minnesota have federal and state laws requiring such adjustments, called reasonable accommodations, be afforded to each student on an individual basis. Reasonable accommodations may include alternative teaching approaches, alternative learning adaptations, or use of specialized technology.

Each campus within the Minnesota Technical College System has a licensed professional to coordinate and supervise all supplemental services for students with disabilities and recognized disadvantages. This person serves as an advocate for students within the technical college staff and with other agencies to ensure physical and programmatic access to all services and programs. The following are recent enrollment figures for the system.

Handicapped	Disadvantaged
1985-86 - 1,651	1985-86 - 14,201
1986-87 - 1,730	1986-87 - 18,446
1987-88 - 2,258	1987-88 - 19,671

3. **Placebound Timebound Students**

The technical colleges, through their major restructuring program, have transformed their educational offerings to increase alternative delivery systems, locations, and times of instruction. The result has been a remarkable increase in part-time student growth. Part-time students increased from 1,384 in 1985 to 14,111 in 1990.

Through its extension division, the colleges intend to continue to expand their available course offerings. Because of the location of the 34 technical college campuses and eleven colleges in the metropolitan corridor, nearly every resident is within a reasonable commute distance to an existing technical college. The offering of credit courses during the evening and on weekends will increase opportunities for placebound and timebound students. The enrollment of 641,000 extension students demonstrates the effectiveness of the extension method of delivering education.

4. **Success for All Students**

Support services, such as counseling, advising and program support services, are important to all students throughout the metropolitan area. The Technical College System is committed to accommodating older students who are first time students in higher education. With their lower class size and wide variety of support services, the technical colleges are frequent choices for persons who are in transition or between career changes.

a. Assessment

In an effort to maintain its open door policy yet provide both students and faculty with indicators of student needs, the Minnesota Technical College System implemented, in 1988, a policy to make assessment opportunities available to any and all students. Most American colleges and universities, including community colleges, now require entry-level assessment of academic skills of all students who have not been successful in a previous college setting.

The assessment program implemented by the Minnesota technical colleges assists the counseling office and faculty in effectively advising students. Support services are designed for [illegible] se scores indicate a need or who otherwise indicate need for services. The open entry to the college is maintained and program requirements are established along with some course prerequisites. We view the assessment program as a key policy necessary to enable students to persist and achieve. Statistics describing relationships between successful completion of developmental courses and persistence and graduation revealed that chances of graduation were nine times better if students followed an individually described basic skills development plan than if they did not.

b. Developmental Courses

Across the nation, developmental courses have also been increasing in number and in enrollment since the 1960's. The most frequent student deficiencies are in basic reading, math, and study skills. A recent national survey found that half of any freshman class was found to be deficient in essential academic skills. A recent study at the University of Texas at Austin also documents that virtually all American colleges and universities, even the most elite, offer remedial work to enrolling freshman; many require it. Within the Minnesota Technical College System, as previously indicated, developmental and special needs enrollment has increased each year. The Minnesota Technical Colleges and the Community Colleges serve most of Minnesota's college students who have developmental needs.

c. Student Advisee System

To increase the opportunities for success of non-traditional students, the technical colleges have implemented an advisor-advisee system. Each student is assigned a faculty advisor who dedicates time to assisting the student with course selection and other college choices. The specific advisor model selected by each college depends upon institution size, population characteristics and available staff.

Regardless of the model selected, the main ingredient is that it be student centered.

d. Project Discover

Project Discover courses are an educational experience designed to assist in the transition students experience in career or lifestyle changes. Nearly every technical college offers the 12 credit series of courses which were developed through the project. The courses include career enhancement focusing on career development; basic skills; personal development; introduction to trade, industrial, and technical occupations; and applied issues. This successful project has assisted women interested in investigating nontraditional careers, and in coping with self confidence, goal establishment and interpersonal communications. Implementing Discover courses are part of the continuing efforts of the technical colleges designed to increase success for all students.

The thousands of new technical college students who are non-traditional by virtue of their age or other attributes are being provided their first opportunity to participate in higher education. In many cases, these students are uncertain of their abilities, their direction and in many cases, their self-worth. Often their positive experience in higher education ignites their imagination and motivates them to consider a four year degree. It is because of these individuals and others, the Minnesota Technical College System proposes the student path opportunities presented in this report to the legislature. Successful articulation and transfer agreements will open doors to thousands of Minnesota students who currently face numerous barriers to continuing their higher education.

5. Use of Technology

The use of technology offers increased opportunities for undergraduate access. Currently, numerous regional networks exist that utilize some form of telecommunications technology to deliver educational programs and information. The most common transport technologies include fiber optic cable and microwave systems. The Minnesota Technical College System has initiated the development of fiber optic linkages among campuses. Currently, three major networks link several technical college campuses including: MidTec whose members are St. Cloud, Willmar, Anoka, Pine City, Alexandria, Hutchinson, and St. Paul; Heartland consisting of Brainerd, Staples, Wadena, and Detroit Lakes; NWEL consisting of Thief River Falls and TRF Extension campuses and East Grand Forks campuses linking with the University of Minnesota, Crookston campus. The Austin campus can interface with a state

university fiber link between Winona and Rochester by using a microwave carrier available to them.

The MidTec consortium is typical of the various networks since it is being constructed in phases. The St. Paul site is currently under construction and scheduled for completion in the fall of 1990, while the Hutchinson site is still in the developmental phase. Utilizing two fiber strands, two-way interactive audio, video, and/or data communications can be achieved with each participating site able to see, hear, and transmit data to each other. The current terminal equipment provides up to 12 video channels, with potential expansion to 32 channels with additional equipment. Upon completion this fall, the St. Paul fiber optic link will be interfaced into the MnSAT satellite uplink facility.

In addition to the continued expansion of the technical college networks, work is being carried out with the Department of Administration and the higher education systems through the STARS (State Telecommunications Access and Routing System) project to develop a statewide network which will link into regional/local educational video networks as well as provide additional data and voice links throughout Minnesota. Also, additional technical college links will be developed with existing or planned K-12 networks when desired and appropriate. The telecommunications links will permit the technical colleges to provide increased logistical access to students, and effectively serve consumers at a point nearer their residence or place of employment. This will help to resolve the educational needs of the place-bound and/or time-bound learner.

The Minnesota State Board of Technical Colleges, in partnership with the Minnesota World Trade Center and St. Paul Technical College, operates a satellite uplink (transmission) facility called MnSAT or Minnesota Satellite and Technology. The satellite transmission capability enables the partners to disseminate information, training, and general communications to any point in the state, nation, or world that has the appropriate downlink (receive) capability. The satellite uplink capability enables the technical colleges to communicate with clients and students--nationally and internationally--without having to travel and with accompanying cost and time efficiencies. In order to ensure that the 34 technical colleges can receive information over the satellite communications vehicle, each site has in place downlink equipment for receiving the satellite signal transmitted from MnSAT. In addition to the technical support at each technical college site, telecommunications teams have been established to assist with the facilitation of a training/information session teleconferenced from the uplink facility.

6. Secondary and Postsecondary Cooperative Relationships

An additional area of intersystem cooperation is the emphasis on developing improved secondary and postsecondary relationships. In their 1989 Legislative Report on Preparation Requirements, the systems indicated their interest in:

- o improving articulation
- o communicating more effectively
- o preserving access, and
- o replicating successful programs

The Technical College System and the Minnesota Department of Education have signed a joint understanding to cooperatively develop tech prep programs in Minnesota high schools, technical colleges, and community colleges. Tech prep programs are designed to create articulated programs which result in relationships that are successful for students, secondary and postsecondary institutions, and employers. The articulated efforts take a great deal of planning and communication among the institutions involved. In an attempt to initiate developmental projects, the Department of Education funded three demonstration projects for the 1990-91 school year. The following is a summary of the projects:

Pine City Schools and Technical College

These institutions will pilot an individualized approach to student career planning using computer based technology which tracks learning objectives and course and career data. The project will develop and implement a comprehensive student learning outcome based career system for 45 students in grades 9-11. Effort will also focus on the development of an articulated Tech Prep curriculum between secondary schools and the technical college.

Northeast Metropolitan Intermediate District 916

Currently the Northeast Metro Secondary Technical Center has a totally articulated program with the Technical College. High school students receive both high school and college credit while attending this institution. This project expands the concept to the cooperating area high schools by selecting one or more programs and offering classes at one or more high schools. Surveys of students, teachers, and the business community will determine the program, course selection and development.

Rochester Schools, Community Colleges and Technical Colleges

Develop a coordinated system to improve communications between the three educational institutions and a design and develop a tech prep

program which includes two years of high school and two years of college experience. It will be flexible and outcome based focusing on exit results and competency based learning. This model will also involve representatives of the community and the business and industry sector.

III. UNDERGRADUATE ACCESS

In 1984, the Minnesota Technical College System began to strengthen technical education as an integral part of Minnesota's higher education community. The SPAN I Report recommended the further development of technical education in the technical colleges as part of the science and technology needs in the urban corridor. Since technical colleges focus their programs at the undergraduate science and technology level, they contribute to undergraduate access. For technical colleges to be effective in this mission, they must continue to develop technical education and to complete transfer relationships.

A. Strengthen Technical Education

1. Associate Degree Program Development

The technical colleges have developed and initiated over 150 associate of applied science degree programs which emphasize a general education combined with technical education. These new programs are developed in direct response to the needs of Minnesota business, industry, agriculture, and labor. All technical colleges have also been encouraged to review their existing programs to determine which programs could more effectively meet business, industry and student needs as redesigned associate degree programs. This effort will continue through the early part of the 1990's.

2. General Studies

In addition to the new associate degree programs, the colleges have actively moved ahead to redesign their occupational diploma program curriculum. The colleges and system are well aware of the needs for expanded applied general studies courses such as math, science, communications, and human relations. It is expected that all occupational students should be required to experience a blend of occupational skill development and general studies to prepare them for a career. The expanded curriculum focus will enable students to more effectively adapt to their changing work environment. The system and its colleges will develop policy to provide specific direction relative to expectations for applied courses in each major program. It is anticipated that this effort will be accomplished by 1993.

3. North Central Accreditation

The system is also aggressively encouraging North Central Association college level accreditation for all of its colleges. The accreditation level will be that of college degree and diploma-granting institutions. This major initiative will encourage all of the system's colleges to be actively involved in the accreditation process over the next five years. The accreditation experience will be an additional opportunity for the colleges to focus on improving their level of quality and to provide public confirmation regarding their progress in achieving their mission.

B. Credit Transfer Discussions

1. General Transfer Agreements

The Minnesota Technical Colleges and the Minnesota State University System have continued their transfer discussion with reason for optimism regarding a positive conclusion. When the State University credit transfer policy is concluded, new opportunities for students will be available. The Minnesota higher education community should move aggressively ahead in further discussion of credit equivalency which will positively affect students in higher education who have initially enrolled in a technical college. The Minnesota Technical College System recognizes its focus to be on occupational education at the less than baccalaureate level; however, it also recognizes that students enroll in courses for one purpose and later may become interested in higher level degree attainment. Many students, once employed, choose to move on to the B.A. level career paths that for a variety of reasons appeared unattainable or initially undesirable. Initial system to system transfer agreements will be completed in the 1990-91 school year.

2. Program Articulation

The redesigned course delivery system of the technical colleges retains its major program focus and purpose. The new curriculum does provide an excellent opportunity for systems to meet, discuss and develop articulated programs. It is recognized that credit transfer and development of articulated programs is most likely to occur with universities which have major programs similar to technical college programming. Programs such as electronics, air traffic control, aviation administration, occupational therapy, medical records, automated management, bio-medical, graphics communications, physical therapy, computer programming, chem-lab, plastics technology, automated systems, and accounting are excellent beginning points for university/technical college discussions. The potential articulated programs would provide the student with the best that each system could provide.

The technical college would continue to focus on occupational education with the universities providing the liberal arts curriculum. The university would also offer the necessary upper division courses to meet the baccalaureate degree requirements. Since the technical college system is in the process of designing with the department of education high school/technical college "tech prep" programs, the opportunity is being created to enable students to begin their college experience in additional high schools across Minnesota. This type of arrangement would enable students to move from high school through the technical college program and continue with the university while attaining new career knowledge skills and goals. This model also allows students great flexibility as they move into the labor market and back to college.

The state university, community college, and technical college systems have held preliminary level discussions to consider implementation of occupational program articulation. Further discussions need to be held which will result in site selection and consideration of occupational majors. This partnership would use the resources of each system to meet undergraduate needs. Discussions will continue with anticipated initial cooperative program arrangements agreed upon in 1991.

APPENDIX C

UNIVERSITY OF MINNESOTA

REPORT ON UNDERGRADUATE AND PRACTITIONER-ORIENTED GRADUATE PROGRAMS IN THE TWIN CITIES METROPOLITAN AREA

I. INTRODUCTION

This report is submitted in response to the Minnesota Legislature's request for plans that address undergraduate and graduate needs in the Twin Cities region. The report draws upon a year-long University review of its educational programs, strengths and resources as well as those of the state's other postsecondary systems. Presented here is a summary of programmatic areas that the University currently emphasizes and expects to emphasize in the future along with an overview of new activities that the University will undertake.

This report differs from the progress report submitted in January, 1990, in three major regards: In response to questions raised by the State Legislature and the Minnesota Higher Education Coordinating Board, the University has concluded that it should not at present participate in further "two-plus-two" experiments with community colleges. It has provided commentary on matters of priority, timing, and measures of success, as requested by MHECB. And it has clarified its ability to serve the needs of working adults with an interest in doctoral study. It has also attempted to respond to a request for a more specific plan with respect to undergraduate enrollment on the Twin Cities campus. ***These changes to the report are indicated in italics.***

II. UNIVERSITY OF MINNESOTA PRIORITIES

In the late 1970's, the University initiated a planning process designed to define more clearly its multiple responsibilities and to target more efficiently its limited resources. That effort resulted in a comprehensive set of plans and priorities which emphasized, among other things, the following:

> "The most important priorities are to strengthen those research, graduate and professional education programs judged to have the largest impact on the University and the state (both its quality of life and its economy), and to offer undergraduate education of the highest quality in the context of a major research institution".[1]

Just as those priorities serve as the basis of the University's overall plans, so, too, do they underlie this response to the educational needs of the Twin Cities region.

[1]Academic Priorities, 1988-93, p.6.

III. UNDERGRADUATE EDUCATION IN THE METROPOLITAN AREA

Undergraduate education has been a primary responsibility of the University of Minnesota since 1851. Over the years, that responsibility has been subject to any number of changes and today must be understood in a context which recognizes:

- o the development of other systems of higher education in the state;
- o the differentiation of educational missions and responsibilities among Minnesota's postsecondary systems; and
- o the implementation of enrollment targets and funding agreements for the period 1987 - 1993.

Within that context, the University's plans for addressing undergraduate needs in the metropolitan area include the following.

1. **The University's Twin Cities campus will continue to serve as the major provider of undergraduate education in the region.**

   The University's Twin Cities campus has long been one of the leading centers of undergraduate education in the United States. It is Minnesota's largest four-year campus, attracting some 28,000 undergraduates and serving an additional 22,000 continuing education and extension students, most of them enrolled in undergraduate courses. While the University's undergraduate population will be reduced over the next few years, the Twin Cities campus will still enroll some 25,000 undergraduates (not counting CEE students) in 1993 and will remain the state's largest undergraduate campus.

   Given the University's current understanding of future metropolitan area demand, the role that the University's Duluth campus will continue to play in meeting that demand, and the ability of other systems to meet it, we expect that undergraduate enrollment will not increase above its projected 1993 level of 25,000 for the next several years. As we succeed in encouraging more students to take advantage of the opportunity to transfer from community colleges to the University, and as student retention improves in response to current efforts, we hope to see a modest shift from lower to upper division education within that total.

2. **The University will further implement undergraduate goals and strategies that reflect its special nature and strengths.**

   Improving the quality of the student experience is one of the University's foremost priorities. Broadly stated, this means ensuring that undergraduate programs reflect the unique strengths of a research-based, international, metropolitan and land-grant institution. More specifically, it means promoting the preparation, retention, graduation, and diversity of undergraduates and providing them the highest quality education possible. Initiatives to meet those goals have been and will continue to be taken, including improved

communication with high schools, the setting of preparation standards, the development of transfer arrangements with community colleges, the coordination of pre-major requirements, the expansion of faculty advising, the fostering of minority participation and cultural diversity, and the implementation of comprehensive strategies to enrich the undergraduate environment.

Priority and timing: ***These initiatives to improve quality are at the top of the University's priority list, and are already being undertaken through reallocation efforts.***

Measures of success: ***The University's success will best be measured through improvement in retention and graduation rates of its students. Improvements should be expected to be reflected in these statistics within five years, but not in a significantly shorter time. In the interim, measures of change in the educational process can be used (e.g. student per adviser, measures of improved course availability).***

3. ***The University will not continue its exploration of 2+2 arrangements with the Community College System.***

There may well be a legitimate need for community-based upper division educational programs in the expanding suburban ring, and future circumstances may demonstrate that the University can responsibly help to meet that need through 2+2 programs without sacrificing more pressing priorities. However, for the present, the University has concluded that it should invest its energies into assuring the smoothest possible transfer for students who obtain their lower division programs on the Twin Cities Campus, for reasons of cost-effectiveness, breadth of choice and educational quality.

IV. GRADUATE EDUCATION IN THE METROPOLITAN AREA

In many ways, graduate and professional education and their important corollary, scholarly research, are what the University of Minnesota does best. The University's annual record distinguishes the institution as a national leader.

Ph.D's awarded	500	9th ranking
Masters' awarded	1,700	20th ranking
Graduate program quality	Public/private	17th ranking
Graduate program quality	Public	7th ranking
Research grants	$250 million	6th ranking

In maintaining and enhancing that record as well as addressing regional needs, the University intends to pursue the following:

1. **The University will continue to assert its role as the state's major provider of graduate education *and the sole public provider of the research doctorate.***
Nowhere is the case for mission differentiation among higher education systems more persuasive than it is for graduate, and especially research doctoral programs. They are the most expensive, and require the most specialized resources. The commitment of funds to build the faculty, the library resources, the research facilities, and the active research base required for a research doctoral program of high quality dictate the limitation of such programs. The conclusion is strengthened by the increasing need for doctoral education to draw on a broad disciplinary range, requiring doctoral level facilities and faculties in a number of areas in order to offer a single degree.

   With respect to access to doctoral programs for working adults through part-time and evening programs, the University is aware of significant demand in only two areas: The Ed.D., and Psy.D. (Dr. of Psychology).

   The University already maintains an active part-time and evening program to serve the needs of the K-12 educational community, at both the master's and the doctoral (Ed.D. and Ph.D.) level; this program is provided most actively on the Twin Cities campus, but also in Rochester, and at Morris. We believe that the basic needs of employers for doctoral education are provided by these programs; however we acknowledge that more students may wish to enroll in such programs than can be accommodated by the University's program.

   Demand for the Psy.D., as distinguished from the Ph.D. in psychology, appears to come primarily from independent clinicians. The University does not now provide a program suitable for the needs of that clientele.

   The University cannot at present justify providing the significant resources that would be required to expand the Ed.D. program, or to undertake a Psy.D. program. We believe that society's needs for other areas of graduate education are more pressing.

   If the MHECB exploration of demand for postsecondary education identifies other needs for doctoral education tailored to the needs of working adults, the University will be pleased to evaluate its ability to meet that need within its present resources,or if necessary, with the help of expanded resources.

2. **The University will explore the expansion of graduate education programs that serve Minnesota's other systems of postsecondary education.**
Providing graduate and continuing professional education programs to faculty in Minnesota's various higher educational systems has long been a responsibility of the University of Minnesota. This contribution is likely to be more important as the number of applicants for faculty jobs declines in the years ahead. The University is prepared to review with the other higher

education systems the changing educational needs of their faculties and new ways of making advanced programs more accessible.

Priority and timing: ***Because the necessary discussion with other systems has not yet taken place, the University has no immediate plans to modify its present program offering. These discussions should take place during the next year, so that appropriate program changes can be implemented by Fall, 1992 or before.***

3. **The University is willing to expand master's programs in engineering and computer science on the Twin Cities campus by offering additional courses at flexible times.**

The Institute of Technology has developed a proposal designed to expand its masters' level degree production in engineering and computer science by offerings programs at more flexible times and targeted at the "practitioner" student. The proposal would increase the number of such degrees significantly, with the goal of bringing Minnesota's degree production up to the national average in those fields. It must be understood, however, that any expansion would require additional state funding, as well as research and office space.

Meanwhile, the Graduate School has already begun a master's degree program in the management of technology for working engineers, with a first class of 40 students[2]; and the Institute of Technology is taking steps to expand its UNITE network and to solidify its outreach program in Rochester, which will provide more graduate educational opportunities in science and engineering to working engineers and scientists.

Priority and timing: ***The needs of current and especially of the recently initiated programs in engineering and computer science are too pressing to be able to begin offering new courses immediately; moreover, office and laboratory needs would prevent hiring the faculty immediately. This part of the initiative will have to be deferred for action until space can be made available.***

Measures of success: ***The change in the number of masters' degrees in engineering and computer science.***

4. **The University will explore the demand, opportunities, and alternative delivery systems for expanded masters programs in architecture, technical communications, health care and nursing, and psychology-related fields.**

The University current offers 180 masters' programs of which 128 are "practitioner oriented" in the sense that they prepare students for immediate employment rather than for advanced study. The possibility of adding new "practitioner" programs as well as providing different delivery systems is

[2]This new program would not have been possible without a most significant private gift.

currently being explored. The fields under study include architecture, technical communication, health care and nursing and psychology-related disciplines. In each case, the cost of the expanded program will be balanced against available state funding so as not to diminish the quality of existing programs.

V. INTERSYSTEM PLANNING LINKAGES

This document addresses educational needs of the metropolitan area. However the fact that students from all over the state enroll in each of the University's campuses, and in each of the State Universities, is one indication that educational needs of the metropolitan area cannot be addressed independently of those of Greater Minnesota. The University's final plans for addressing the postsecondary needs of the state will be rendered only after the completion of a comprehensive review of the MSPAN II study, and a cooperative assessment with the state's other higher educational systems as to the relative costs and capacities of each system to meet those needs. Of particular importance in this cooperative assessment are three principles:

1. **The maintenance and enhancement of existing higher educational quality must be recognized as the foremost postsecondary priority for the HEAC members.**

   Some 87 percent of all high school students enroll in postsecondary training in Minnesota within five years of graduation. While such access is enviable, it has also placed a strain on college programs, prompting members of the Higher Education Advisory Council to assert quality as the foremost postsecondary priority. The University strongly endorses that priority.

2. **New and expanded initiatives are provided most cost-effectively when they build on existing programs.**

   The ability to meet new educational needs is best addressed through existing institutions rather than the creation of new ones. To establish additional institutions would spread scarce resources even thinner, requiring new library collections, physical facilities, administrative structures, as well as faculty and staff. Costs per student can be mitigated by expanding existing programs rather than starting new ones.

3. **The implementation of interactive video transmission technology would allow Minnesota's higher education systems to serve their clients more effectively and efficiently.**

   The full cost of operating a distance learning system is significant; nevertheless, we believe that the higher education systems of the state will be able to serve potential clients more effectively, at lower cost, if the state invests in two-way video transmission than if they are limited to direct face-to-face communication. The new technology will make it possible to meet the growing need for adult education and lifelong learning for placebound persons

who are not within reach of existing higher education institutions. The implementation of this technology would make it possible to expand educational services to place-bound persons across the state. The University supports its development as funding becomes available.

MINNESOTA PRIVATE COLLEGE COUNCIL

RESPONSE OF THE STATE'S PRIVATE LIBERAL ARTS COLLEGES TO THE FINDINGS OF MSPAN I

INTRODUCTION

One of the State's most pressing challenges is to produce quality undergraduates able to compete with the most talented people other nations will produce in the world market. Providing that caliber of education is central to the private colleges' mission.

The primary role of the private colleges is -- and will remain -- the baccalaureate liberal arts education of traditional students. Currently, more than 70% of the State's private college enrollment is under the age of 23. In some parts of the metropolitan community the growing share of the non-traditional enrollment is evidence of the positive role private colleges can play in meeting special needs. More than 79% of these students are enrolled full-time, 90% of them are dependent and 91% are undergraduates. The private colleges have demonstrated an exceptional return on investment and represent the highest possible return on taxpayer resources. Receiving less than 3% of Minnesota's higher education appropriations. The private colleges enroll 26% of Minnesota's baccalaureate students, award 31% of B.A. degrees and, in the past decade, have been the State's largest source of students educated in Minnesota to earn Ph.D.'s. Almost half of those enrolled are first generation college students and a large majority receive need-based financial aid.

Minnesota's private colleges are concerned about two important policy considerations: 1) higher education that provides the best value for Minnesota students; and 2) the efficient and available delivery of this value for Minnesota taxpayers. These considerations ought to inform any statewide plan for higher education.

Underlying the private colleges' approach to Statewide policy and planning is the belief that the marketplace is the most efficient distributor of resources and reliable arbiter of quality. Rather than constrain or distort market forces and student choice, State policy should encourage appropriate competition among systems and institutions at the undergraduate and graduate levels. Effective competition between systems can also ensure more efficient use of public resources. This has become especially critical given fiscal constraints. For this reason the private colleges' response to MSPAN focuses on the structure of public subsidies and their impact on choice to a greater extent than is found in the public systems' responses.

To maximize the use of public resources, the private colleges are prepared to expand undergraduate enrollments to compensate for planned reductions in State system enrollments or unexpected increases in demand. There is increasing evidence that over-enrollment in several State systems, driven in part by a high level of subsidization, provides access by penalizing the quality of education available to those enrolled. The State could partially offset the high cost of planned expansion by funding, at lower cost, financial aid programs providing more students with realistic choices for undergraduate education in Minnesota's privately financed sector. This would further both equity and efficiency objectives of State policy. Although the private colleges already operate at a high level of utilization, these institutions remain flexible and are able to efficiently accommodate significant additional numbers of traditional and non-traditional students. This has been clearly demonstrated over the past decade. A marginal increase in public expenditures for improving choice would offer a sufficient savings to the state. A survey of the member colleges indicates that certain of the 16 colleges could serve as many as 8,000-10,000

additional students if need-based state financial aid improved realistic choice for students. This additional capacity could be achieved by maximum utilization of existing facilities as well as expansion and adjustment of schedules.

FUTURE PLANS

1. Academic Quality

The private colleges will continue to emphasize educational quality. A rigorous liberal arts education will remain both a goal in itself and the basis of further graduate and professional study. For example, Minnesota's private colleges award more than 50% of degrees awarded in Minnesota annually in international studies, science and mathematics. Our graduates are the primary source of enrollment for the University of Minnesota's outstanding graduate and professional programs. They are also a critical source of college faculty for all of Minnesota's higher education systems.

Institutional quality is clearly evidenced through the private college completion rates. With more than 95% of freshman from all four-year systems seeking at least a baccalaureate, yet fewer than 40% finishing in five years, there is clearly an unmet need among the existing student population which has major quality and cost implications. The needs of Minnesota's existing student population must be considered side-by-side with potential unmet needs of those who currently are not participating.

The implications for MSPAN of the private college position are two-fold. First, the colleges are unlikely to compromise in real dollars the current level of expenditure per student. This comparatively higher investment more than pays for itself through higher completion rates. Second, for most institutions, it is not practical or desirable to significantly expand capacity if current standards of academic performance are to be met or improved.

2. Quality Through Diversity

A critical element of a high-quality academic experience is the cultural, social, racial and ethnic diversity available to students on campus. The representation of non-white students at the private colleges matches or exceeds their representation for the general population. Since 1980, non-white enrollment at the private colleges has increased at nearly three and one half times the rate of white enrollment with approximately 95% of this growth coming from Minnesota residents. Several of the campuses are among the most racially diverse in the state and academically successful in the nation. Minnesota's private colleges intend to become increasingly diverse. Although several campuses are among the most racially diverse in the State and academically successful in the nation. Despite this progress the colleges intend to further increase their diversity. The colleges believe that the same qualities that have permitted them to successfully educate so many first-generation Minnesota students will enable them to offer opportunities for academic success to new generations of American students. In part, diversity will be achieved with the

assurance of financial aid. This is, in the past, dependent upon the State meeting its financial aid commitments. A second approach, however, is early intervention between the colleges and elementary and secondary students. The colleges will continue to expand programs which provide direct contact and support for K-12 students who should be planning for postsecondary education.

3. A Relevant Curriculum

In addition to providing for a pluralistic campus community, the private colleges will continue to strive for a global education which prepares students for life in the world community and economy. More private college students participate in academic and study abroad programs than in the State's other systems combined. To compete in an internationalized economy, Minnesota business and agriculture will need managers, employees and leaders as capable as their counterparts from other nations--people who can build Minnesota companies and communities, yet live and work comfortably with foreign cultures and peoples. In both curricular and co-curricular experience, the private colleges intend to be a primary source for educating these future employees and leaders through expanded offerings for international preparation and by critically evaluating and maintaining high academic standards to meet the demands of international competition.

4. Expanded offerings at the Graduate Level

Most of the private colleges will continue to serve undergraduates exclusively. Consistent with recent trends, however, some of Minnesota's private colleges and universities will selectively expand graduate offerings, both in terms of location and curricula. Graduate and practitioner-oriented programs in applied health science, social services, teacher education, law and public administration, and applied management and engineering will be developed to serve niche markets. The private colleges anticipate graduate enrollments to increase at a faster rate than undergraduate enrollments. All levels of education benefit primarily the individual but this is especially true at the graduate level. The private colleges, therefore, believe that graduate education should be more highly market driven in all sectors with fewer public subsidies. The private colleges oppose via subsidy or through the program review process the granting of exclusive franchises for specific graduate programs by region or area of study. The State should provide for a more competitive market at the graduate level through better targeting of public subsidies.

A. Reduce State subsidies for graduate education where costs are or potentially are covered through other funding sources such as corporate underwriting.

B. Where the State has identified specific graduate program needs but is unable to fund those programs, institutions should provide those programs without a public subsidy.

C. Explore the development of a program policy which awards funds on a degree conferred basis at the graduate level.

5. Promoting Access, Choice and Efficiency

The tuition gap between the public and private sectors, in both absolute and relative terms, has never been larger. This price differential, coupled with peak levels of State support for public education and projected declines in the number of traditional students entering higher education in the next five to ten years, present a difficult challenge to the private colleges and fail to serve State objectives.

Given the higher education environment described above, the questions of access and quality take on added importance. In addition to their individual efforts to serve students, the private colleges are committed to institutional financial aid and to State policies designed to ensure student choice and access to the most appropriate education to meet their needs. There is increasing evidence that total higher education expenditures may be insufficient yet public resources may be unable to meet this gap. A state policy of fully funded need-based student aid combined with a more equitable distribution of direct public subsidies for tuition can provide much needed revenue for improving instructional quality while maintaining access and increasing opportunities for students to attend the institution which best meets their needs. Specific recommendations which can further these objectives in order of importance are as follows:

A. Maintain the objectives of shared responsibility and fully fund the program.

   1. Ensure that the cost burden is still reasonable under current costs and that the State's share of that responsibility is fully met.

   2. Increase living and miscellaneous allowance to at least the 50th percentile.

   3. Increase the private college cap to the "true" avoided cost of a comparable public sector education including: debt service, special appropriations and financial aid.

B. Utilize the existing excess capacity of private institutions before expanding capacity in the public sector.

   1. Re-activate the private college contract program with a minimum compensation of $3,300 per student for all students, or for selected programs of special State need at the marginal cost of their delivery.

C. Develop a funding framework which recognizes institutions for their performance and provides direct incentives to improve efficiency.

   1. Explore the development of a program policy which awards funds on a degree conferred basis at the undergraduate level such as the Bundy Program in New York.

6. **Regional and National Marketing**

The private colleges currently import talent to the State: 30% of out-of-state students choose to remain in Minnesota after graduation. In keeping with efforts to increase selectivity and enhance diversity in the face of a declining pool of traditional students, the private colleges will further expand their reach into regional and national markets.

EXECUTIVE SUMMARY

- Dedication to quality
- Commitment of diversity
- Emphasis on critical fields of study
- Expansion of graduate offerings in : applied health science, social services, teacher education, law and public administration, and applied management and engineering.
- Insistence on balanced State financing policies to ensure student choice and to reap the benefits of the marketplace for both students and taxpayers
- Service to Minnesota, regional and national markets

MINNESOTA STATE UNIVERSITY SYSTEM

COMMITMENT TO MEET THE HIGHER EDUCATION NEEDS IN THE SEVEN-COUNTY METROPOLITAN AREA

INTRODUCTION

In November, 1989, the Minnesota State University Board submitted a progress report in the Minnesota State University System's response tot he findings of the first phase of the study of Minnesota Postsecondary Needs and Access conducted by SRI International. In the following pages the Minnesota State University Board outlines further development of its plan to meet on the need for expanded access both to undergraduate education and practice-oriented graduate education for working adults in the seven-county metropolitan area.

Considerable progress has been made by the Minnesota State University System in clarifying plans to meet needs for upper-division and practice-oriented masters programs in the seven-county metropolitan area. The centerpiece of the System's plan remains immediate expansion of Metropolitan State University to establish: (1) additional structured upper-division majors in high demand fields, and (2) practice-oriented master's degrees designed to meet the needs of working adults. Consistent with the principles of maintenance of both quality of academic programs and services to students is the Minnesota State University System's plan to (1) coordinate program offerings between Metropolitan State University. Mankato State University, and St. Cloud State University during the development phase of Metropolitan State University, as well as with the University of Minnesota, Twin Cities, and (2) to collaborate activity with institutions of postsecondary education in other systems in the seven-county metropolitan area. Especially promising is the commitment of Metropolitan State to establish systematic enrollment relationships between it and the community and technical colleges in the metropolitan area.

UNDERGRADUATE EDUCATION IN THE SEVEN-COUNTY METROPOLITAN AREA

While the Minnesota State University System welcomes further information about the needs of residents of the seven-county metro area that will be available from SRI Gallup later this year, all currently available information suggests the need both for expansion of offerings that include structured majors at Metropolitan State and additional practice-oriented master's programs. The enrollment at Metropolitan State has increased by 50% in the last four years, a growth rate that surely exceeds those of most universities in the nation. Further, Metropolitan State's experience of offering both a Bachelor of arts in accounting and a Bachelor of Individualized Studies in Accounting from 1988 to 1990 reveals that students, especially younger ones, increasingly choose the structured major. Given these realities and attention to student need and demand, Metropolitan State is developing plans to introduce majors in business administration and human services in 1991-92 and additional majors, including Information/Communications Science, in 1992 and beyond.

Illustrative of the spirit of active collaboration is the agreement of the chief academic officers and deputy chancellors of public postsecondary systems to study access to upper-division education both at the Minnesota State Universities and the University of Minnesota by Minnesota Community College transfers throughout the state. The initial phase of the study will focus on the seven-county metro area. Unfortunately, it will be limited to existing data sources. But in 1991, expansion of the Minnesota State University

System data capacity and uniform definition of a transfer student will permit more accurate projections of demand. Supply of upper-division education will be expressed in terms of 1989-90 enrollments. This study will not focus on access for high school graduates to both two- and four-year institutions because increasingly traditional age students are beginning their postsecondary educations in two-year colleges. (Appendix A: HECB Enrollment Outlook Report, March 20, 1990, pgs. 24, 38, and 66; and Appendix B: Minnesota's Community College, Research Report Number 7, pgs. 23, 37, 42, and 46). In addition, the deputy chancellors and chief academic officers will sponsor a study of minority access and postsecondary education with emphasis on the population in the seven-county metropolitan area.

2 + 2

Earlier discussions of response to the needs of the seven-county area identified the 2+2 model as a potential solution. The Minnesota State University Board defined 2+2 programs in Board Regulations on March 30, 1989 as "one in which a university agrees to provide at an external site courses in the major and other upper-division requirements consistent with institution's mission that enable a student making normal progress to complete a degree. The degree options are usually limited. Normally, 2+2 Programs are the result of formal agreements with community colleges or other regionally accredited institutions." The 2+2 programs are not to be confused with joint admissions programs, transfer/articulation agreements, off-campus extension programs, or off-campus degree programs. "Extension programs are those in which courses are offered but do not presume to constitute full-scale degree programs. Off-campus degree programs provide only courses in a major(s)."

Fiscal and programmatic analyses of the true costs of the state's first and best developed 2+2 program, Winona State University/Rochester Community College, suggest that adaptation of the model may not be the best means of serving the needs of the seven county metropolitan area residents. Unlike residents in the Rochester area, persons in the Twin Cities currently have access to two public senior institutions--the University of Minnesota-Twin Cities and Metropolitan State University. A study of actual mileage and driving time from the areas six community colleges to one of the Twin Cities' public senior university sites--University of Minnesota, Minneapolis and St. Paul, and Metropolitan State, Minneapolis and Dayton's Bluff--reveals an average driving distance of 15 miles to a senior institution. The average driving time at peak hours is 20 minutes by freeway and 39 minutes by surface streets. At non-peak hours, driving time is 17 minutes on freeways and 30 minutes on surface streets. (Appendix C: MSUS Transportation Study).

We believe that the two-year and four-year systems must first explore systematic relationships for transfer before 2+2 programs are tried. For example, public transportation or even university-sponsored transportation could enable community college graduates to reach a public university with upper-division programs. We believe that students will receive a higher quality education if they study on any of the four campus sites in the Twin Cities.

To assure transfer between two- and four-year institutions, Metropolitan State University proposes a systematic relationship by which students, upon matriculation at a metropolitan

area community college, would be jointly admitted to Metropolitan State. Consideration of the introduction of lower-division instruction at Metropolitan State will be delayed until 1992. Any implementation will depend on data from an enrollment planning study and a study of minority access. The president of Metropolitan State University has already met with the presidents of Minneapolis and Lakewood Community Colleges to affirm the need for systematic transfer relationships given the expansion of upper-division education in the form of structured majors. In response to the Minnesota State University Board's call for cultural diversity in its institutions, Metropolitan State University will also continue to develop close relationships with those community and technical colleges that serve the minority populations of Minneapolis and St. Paul.

Consistent with this educational concern and the planned expansion of Metropolitan State University into structured upper-division majors, the Minnesota State University Board will consider maintaining program offerings by Mankato and St. Cloud State Universities at 1989-90 levels. Mankato State University offers 72 courses at the Edina site jointly leased with Normandale Community College and approximately 130 other courses in the metropolitan area, 13 are offered at Anoka-Ramsey Community College. After Metropolitan State has established full service programs in both St. Paul at Dayton's Bluff and Minneapolis, the needs of students currently enrolled in Mankato's off-campus courses in the southwest quadrant and those served by St. Cloud in the northwest quadrant will be assessed. Evaluation of need and cost analysis will help provide a basis for decisions about further program development at Metropolitan State. A Council of Minnesota State Universities Serving the Metropolitan State will constitute a forum for exchange of information about program offerings, student demand, planning and scheduling.

GRADUATE EDUCATION

Master's Degrees

Consistent with the principles of both quality of academic programs and service to students delivery of existing and proposed practice-oriented master's degree programs serving the needs of working adults will be coordinated between and among Metropolitan State University, Mankato State University, and St. Cloud State University. Plans are to introduce one additional master's degree program in FY 1991, FY 1992, FY 1993 at Metropolitan State. Currently under consideration are master's degrees in nursing, accounting and at present, liberal arts. Mankato State University offers courses in the seven-county metropolitan area courses leading to the M.S. degree programs in Curriculum and Instruction, Elementary Education, Health Science, Corrections, Continuing Studies, Library Media Education, and Industrial/Organizational Psychology as well as those leading to an M.A. in Public Administration and an master's in business education program. St. Cloud State University offers courses leading to an M.S. in Information Media. All are scheduled so as to be available to working adults. The Council of Minnesota State Universities Serving the Metropolitan Area will serve as a vehicle for planning future programs. The Minnesota State University System plans to establish a Graduate/Professional Development Center to include all Minnesota State University System institutions, the University of Minnesota, and private colleges. The Center will be coordinated by Metropolitan State University.

Applied Doctoral Programs

Only doctoral programs in applied areas such as education and psychology will be considered by Minnesota State Universities. These will only be developed if the following are demonstrated:

(1) need is carefully demonstrated;
(2) the University of Minnesota does not serve adult students who must attend part-time; and
(3) the Minnesota State University Board believes that the proposing university is prepared to devote the resources required to offer a program of high quality.

The Minnesota State University System does not plan to offer traditional research-oriented doctorates such as those in the basic sciences or liberal arts that would duplicate those established at the University of Minnesota.

The cost of new doctoral programs is estimated to be $1 million per year per program. As an example of the cost of doctoral programs, the Association of College and Research Libraries (ARCL) standards for doctoral programs require 25,000 volumes as a minimum collection to support a doctoral program as compared to 350 volumes to support a four-year undergraduate program. This figure does not include additional resource needs as such increasingly costly subscriptions to national and international research periodicals. The serious problems already apparent in the collections of Minnesota's state universities resulting from a decade of decline in funding per student makes it unlikely that any Minnesota State University will be able to mount applied doctoral programs in the immediate future--even if need is demonstrated.

COST INFORMATION

In recognition of Metro's expanded mission, the Board approved a change in the procedure for allocating operating funds to the university which provides for a phased change to the same formula used for the other six state universities. Over a four-year period beginning in 1990, the provision of these resources will permit hiring of additional full-time faculty and will support the operation of facilities at Dayton's Bluff in St. Paul and downtown Minneapolis.

Continuing expansion of Metropolitan State University in St. Paul and Minneapolis will require support for an information dissemination center for students. Heretofore Metropolitan State University has relied on the public and private college libraries to meet the needs of its students. While such an approach may have been feasible when Metro was a small institution serving a special clientele, it is not appropriate for an institution of 4,500 FYE (projected Metro enrollment by 1996). Careful planning and cost estimates will begin once the Minnesota State University System Task Force Report on the Library of the Future is complete (November, 1991).

NEW INITIATIVES FUND

The proposed establishment of an Initiative Fund for new programs by the Minnesota Higher Education Coordinating Board is an attractive option. However, if such funds were to be provided at the expense of increased per student funding, the Minnesota State University Board could support such a proposal only if structured, identifiable reductions were made in systems within the current funding level for postsecondary education (% of the state budget).

USE OF TECHNOLOGY

At present the Minnesota State University System's capacity to deliver education by interactive television and other models of distance learning is very limited. Metropolitan State University reports no voice or video transmission capabilities. St. Cloud State University has voice, data and video capability to the cities of Brainerd, Alexandria, Willmar, and Anoka through LITESPAN and MIDTEC. The Central Minnesota Technical Colleges (MIDTEC) have just completed a link to St. Paul Technical College. This link is also available to St. Cloud State University. Campus classrooms can be interconnected with the MIDTEC sites and to a satellite uplink in St. Paul. Business schools and government sites can be added in both Minneapolis and St. Paul at a relatively small cost. Mankato State University's interactive television linkage does not reach to the Twin City metropolitan area but plans are being developed to do so.

Discussions surrounding Statewide Telecommunications Access and Routing System (STARS) have not resolved the issue of whether to include two-way interactive video capacity in a state-funded network. While we recognize the high cost of this time, we believe STARS will do little to meet the needs of postsecondary education without this capacity. Without the state's investment in such resources, it is difficult to imagine how the Minnesota State University System, presently so seriously deficient in per student funding, would be able to reallocate internal resources for start-up, let along production costs.

PROVISION OF QUALITY

In January of 1990, the Minnesota State University System launched its Q-7 Initiative, "Building on Quality." The initiative was in response to a 35% enrollment growth in the last five years and the effects of that growth on the quality of the educational experience in the universities. It was designed to assist the Board in striking a balance between its historic commitment to access and the necessity of improving quality.

In order to begin the quality effort the Minnesota State University Board appointed a 17-member Blue Ribbon Commission comprised of distinguished Minnesotans from all regions of the state and representing public education, business, agriculture, health care, public affairs, the media, and labor. Their charge was both to study these issues and to develop standards or indicators of high quality education to be incorporated at the seven universities. The Commission was also asked to develop strategies for achieving the levels of excellence necessary for effective education in the 21st century and help to identify resources necessary to achieve those quality levels.

In September the Blue Ribbon Commission presented its report, "Q-7: Quality on the Line." The report recommends seven indicators of quality, representing what students graduating from Minnesota's state universities should know and be able to do in order to serve themselves, their families, their employers, their communities and the state into the next century. The "future-oriented" and "student-centered" quality indicators call for:

- o Students who come prepared for college
- o Graduates who can think critically and solve problems
- o Graduates who have a global vision
- o Graduates who have a multicultural perspective
- o Graduates who are scientifically and mathematically literate
- o Graduates who are prepared to work
- o Graduates who exhibit citizenship through community participation and ethical behavior

The Commission's recommendations are expected to drive the internal agenda of the Minnesota State University System for next ten years and will also impact K-12 education, the business community, and the other higher education systems in the state.

STUDENTS OF COLOR, PLACEBOUND AND TIMEBOUND STUDENTS, DISABLED STUDENTS AND SUCCESS FOR ALL STUDENTS

In 1987, the Minnesota State University Board adopted a policy to encourage recruitment and retention of more racial and ethnic minorities into the universities. All universities are expected to increase the number of minority students enrolled. Metropolitan State has a particular responsibility to serve minority students who are placebound in the seven-county metropolitan area.

Metropolitan State University will build on its experience with innovation and service to complement the University of Minnesota both by providing education in the Twin Cities metropolitan area and by contributing to the quality of life and economic growth of the metropolitan region. As the university moves towards its goals, it will do so within the context of an educational philosophy which emphasizes lifelong learning, community service and talent development. The organizational structure of the university will be one that supports growth in student services and new programs and which fosters experiential learning, disciplinary integration and interdisciplinary thinking. Metropolitan State University has a reputation for quality programs which recognize the unique characteristics and needs of individual students. It remains committed to continuing to provide quality individualized educational services to a growing student population.

Metropolitan State University will expand its capacity to prepare students for the work force by serving the culturally diverse populations of the urban area, and will emphasize cultural pluralism and scientific as well as verbal literacy in the curricula. It will also incorporate the technical infrastructure needed to serve students throughout the metropolitan area by means of telephone registration and interactive linkages to classrooms and local area networks.

One of Metropolitan State University's goals is to increase the number of people of color who participate in higher education. It will cooperate with other institutions, especially community colleges, to recruit students of color and to ensure that the services and resources needed to foster their success in college are readily available. Because good high school preparation is essential to success in college, Metropolitan State plans to begin working with students at the secondary level, assisting especially in the development of critical thinking and communication skills.

Metropolitan State University plans to offer educational programming and services in Minneapolis and St. Paul, including the development of new programs for police officers, fire fighters, urban teachers, and after school providers. It will encourage and reward faculty for community service. Further, as it establishes major sites in the metropolitan area, the university will contribute to neighboring communities by participating in and supporting neighborhood activities, providing preventive health care and wellness programs and offering other initiatives.

New academic initiatives are designed to meet unmet educational needs and to prepare students for ever changing multicultural community and work environments. These initiatives will include: educational planning beginning with assessment upon admission, ongoing discussions to identify an appropriate education plan and a senior seminar to integrate previous and future learning; identifying and assessing educational outcomes; experiential learning and assessment of prior learning, and faculty development related to cultural pluralism and service to a culturally diverse student population.

To address the needs of placebound students, Metropolitan State University is committed to cooperative agreements and other arrangements with community and technical colleges.

The Office of Advising and Student Services will continue to work closely with each of the colleges to provide instructional support services, including academic advising and developmental services and programs in ESL, math, reading and writing. Co-curricular services include enriched academic advising for at risk students, peer and alumni mentoring, psychological counseling, and support for physically and learning disabled students. Career planning and placement will be greatly strengthened, and programs for students for whom English is a second language, international students and women will be improved.

Metropolitan State University plans to implement a telephone registration system to meet the needs of placebound students. Other plans which will meet the needs of placebound students include continuation of delivery of the introductory Perspective Course at thirty locations throughout the metropolitan area and the establishment of instructional sites at four locations: Minneapolis, St. Paul, the northwest quadrant of the metro area, and the southwest metro quadrant. Distance learning techniques and curricula will be used and developed as interactive television capacity expands.

APPENDIX A

HECB Enrollment Outlook Report

March 20, 1990

Pages 24, 38, and 66

and 9,478, or 19 percent, age 35 and older. Ages of the remaining 1,307 students were unknown.

- Between fall 1983 and fall 1988, enrollment of all students increased by 29 percent from 38,381 to 49,589. Increases occurred among students in every age group. In absolute and percentage terms, the greatest increase occurred among students age 35 and older, from 4,771 to 9,478, or 99 percent.

- Most of the increases occurred in fall 1987 and fall 1988.

Full-Time Students

- In fall 1988, enrollment of full-time students in the community colleges was 21,828, of which 9,848, or 45 percent, were age 19 and younger; 7,043, or 32 percent, age 20 to 24; 3,164, or 15 percent, age 25 to 34; and 1,475, or 7 percent, age 35 and older. Ages of the remaining 298 students were unknown.

- Between fall 1983 and fall 1988, enrollment of full-time students increased by 13 percent from 19,290 to 21,828. Increases occurred among students in every age group. In absolute numbers, the greatest increase occurred among students age 19 and younger. In percentage terms, the greatest increase occurred among students age 35 and older, 98 percent.

- Most of the increases occurred in fall 1987 and fall 1988.

Part-Time Students

- In fall 1988, total enrollment of part-time students in the community colleges was 27,761, of which 3,462, or 13 percent were age 19 and younger; 6,074, or 22 percent, age 20 to 24; 9,213, or 33 percent, age 25 to 34; and 8,003, or 20 percent, age 35 and older. Ages of the remaining 1,009 students were unknown.

- Between fall 1983 and fall 1988, enrollment of part-time students increased by 45 percent from 19,091 to 27,761. Increases occurred among students in every age group. In absolute numbers, the greatest increase occurred among students age 35 and older, from 4,025 to 8,003. In percentage terms, the greatest increase occurred among students age 19 and younger, 113 percent, from 1,624 to 3,462.

- Most of the increases occurred in fall 1987 and fall 1988.

categories of enrollments, full-time and part-time, younger students and older students. Increases in persistence and participation have contributed to this.

Increases among younger, full-time new entering students at community colleges, in view of stable numbers of annual high school graduates, suggest that changes have occurred in attendance patterns. One possibility is a shift in attendance from the technical colleges among students seeking broader, general education rather than more focused occupational education. Another possibility is a shift from the University of Minnesota, particularly in the Minneapolis-St. Paul area. Recent increases in persistence at community colleges might be attributable in part to attendance by academically well-prepared students who earlier might have attended the University.

Outlook

In the immediate future, enrollments at community colleges appear likely to stabilize or decrease slightly. Smaller high school graduating classes will reduce the pool of traditional college age persons that has accounted for some of the significant increases in enrollments. Further, high persistence rates suggest that students will attain their educational goals more quickly and, therefore, engage in other pursuits, such as entering the labor force or transferring to four-year colleges. Enrollments of older adults hold the balance. The key question is whether the number of older adults attending community colleges will continue to increase as basic post-secondary needs of this age group are satisfied and, if so, whether the increase will be sufficient to overcome likely decreases in younger students.

In the longer term, individuals with two years of post-secondary education still might seek opportunities for continuing education at community colleges, but other institutions and organizations also will be available to serve them. Decreases in enrollments of older students would make the community colleges more dependent on younger students. Transition to this situation by the year 2000

TABLE 11. HEADCOUNT ENROLLMENTS BY AGE, COMMUNITY COLLEGE SYSTEM, FALL 1985 THROUGH FALL 1988

FULL-TIME UNDERGRADUATE STUDENTS:

Fall	Age 19 and Younger	Age 20 to 24	Age 25 to 34	Age 35 and Older	Unknown	Total
1983	8,650	6,653	2,291	746	950	19,290
1984	7,596	6,148	2,202	797	852	17,595
1985	7,408	5,946	2,507	957	793	17,611
1986	7,464	6,231	2,843	1,277	555	18,370
1987	8,510	6,425	2,956	1,442	414	19,747
1988	9,848	7,043	3,164	1,475	298	21,828
% Change 1983-88	13.9%	5.9%	38.1%	97.7%	-68.6%	13.2%

PART-TIME UNDERGRADUATE STUDENTS:

Fall	Age 19 and Younger	Age 20 to 24	Age 25 to 34	Age 35 and Older	Unknown	Total
1983	1,624	5,024	5,529	4,025	2,889	19,091
1984	1,458	5,069	6,205	4,426	2,335	19,493
1985	1,910	4,931	7,061	5,475	2,276	21,653
1986	2,383	5,183	7,861	6,261	1,484	23,172
1987	2,811	5,690	8,735	7,431	1,375	26,042
1988	3,462	6,074	9,213	8,003	1,009	27,761
% Change 1983-88	113.2%	20.9%	66.6%	98.8%	-65.1%	45.4%

TOTAL:

Fall	Age 19 and Younger	Age 20 to 24	Age 25 to 34	Age 35 and Older	Unknown	Total
1983	10,274	11,677	7,820	4,771	3,839	38,381
1984	9,054	11,217	8,047	5,223	3,187	37,088
1985	9,318	10,877	9,568	6,432	3,069	39,264
1986	9,847	11,414	10,704	7,538	2,039	41,542
1987	11,321	12,115	11,691	8,873	1,789	45,789
1988	13,310	13,117	12,377	9,478	1,307	49,589
% Change 1983-88	29.6%	12.3%	58.3%	98.7%	-66.0%	29.2%

SOURCE: Minnesota Higher Education Coordinating Board

APPENDIX B

Minnesota's Community College, Research Report Number 7

Pages 23, 37, and 42

TABLE 5

FTE ENROLLMENT RATE PER 1,000 POPULATION: FALL 77-87

Age	Fall 77	Fall 78	Fall 79	Fall 80	Fall 81	Fall 82	Fall 83	Fall 84	Fall 85	Fall 86	Fall 87	CHANGE 1977-87
	MEN	MEN	MEN	MEN	MEN	MEN	MEN	MEN	MEN	MEN	MEN	
17-19	42.00	41.94	40.98	41.36	43.49	44.24	44.39	42.77	42.06	44.21	49.55	18%
20-24	14.58	13.78	14.64	16.29	17.43	18.38	19.26	17.47	18.07	19.37	21.09	45%
25+	2.48	2.20	2.21	2.46	2.68	2.70	2.89	2.72	2.92	2.96	3.04	22%
	WOMEN	WOMEN	WOMEN	WOMEN	WOMEN	WOMEN	WOMEN	WOMEN	WOMEN	WOMEN	WOMEN	
17-19	44.61	42.97	43.61	44.76	46.10	48.23	49.90	45.22	45.13	48.14	55.27	24%
20-24	12.94	13.16	14.14	14.71	15.88	16.21	17.36	16.34	17.85	19.20	20.86	61%
25+	3.35	3.55	3.89	4.40	4.89	4.63	4.92	5.03	5.67	6.13	6.49	93%
	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
17-19	43.32	42.46	42.31	43.06	44.78	46.19	47.08	43.97	43.58	46.14	52.35	21%
20-24	13.77	13.47	14.39	15.50	16.65	17.28	18.30	16.91	17.96	19.29	20.98	52%
25+	2.93	2.88	3.06	3.44	3.79	3.67	3.92	3.89	4.30	4.56	4.78	63%

In all cases, the overall increase in FTE enrollment rates per 1,000 population (Table 5) has been less than the increase in headcount participation rates (Table 2) due to the decreasing credit loads for all groups of students. The FTE enrollment rate for males 17-19 has increased by 18% vs. the 30% increase in their headcount participation rate. For women age 17-19 the comparable increases are 24% in FTE rate and 36% in headcount rate.

For those 20-24 years of age, women show an increase of 61% in FTE rate vs. a 70% increase in headcount rate. Men age 20-24 show a 45% increase in FTE rate vs. a 54% increase in headcount rate.

For those 25 and older, women more than doubled their headcount participation rate (106%) but their FTE enrollment rate went up only 93%. For men 25 and over the headcount rate increased by 36% while the FTE enrollment rate increased by only 22%.

Figure 12 shows the FTE enrollment rate per 1,000 population for persons age 17-19 for the eleven year period. Women show a higher FTE enrollment rate per 1,000 population than men indicating that their higher participation rate outweighs the lower average credit load. The FTE enrollment rate per 1,000 population for 17-19 year old women increased consistently from fall 1978 to fall 1983, then dropped dramatically in fall 1984. After remaining level in fall 1985, it has increased dramatically for the last two years. The increase through fall 1983 is most easily attributed to the higher unemployment rates of that time period. The drop in fall 1984 may be due to the improved general employment situation combined with the lack of nursing jobs at that time. The increasing rates for the last two years may be attributed to the increasing emphasis on college, changes in admissions policies at four year institutions, and greater efforts to recruit this group by the Community Colleges.

is that the trends are most consistent for the 25 and older group, while the 17-19 age group shows much greater variation.

These figures also serve to illustrate that the model is currently lagging behind actual headcount and FTE enrollments. The reason for the lag is that the two younger age groups have shown substantial enrollment increases for the last two years, following substantial decreases the previous two years. Figure 20 is representative, in that the lag is not occurring for the 25 and older age group. Consequently, the results presented below have been adjusted for the two younger age groups so that the participation rates and the FTE enrollment rates per 1,000 population are at least as high in fall 1988 and fall 1989 as they were in fall 1987. By fall 1990 the enrollment rates are clearly above the fall 1987 rates in all cases.

HEADCOUNT PROJECTIONS

Table 6 shows the projected participation rate per 1,000 population through fall of 1984. The fall 1987 rates are included as well as the percentage change from 1987 to 1994.

The participation rates shown for the two younger age groups are adjusted from the actual model for fall 1988, as the model shows the enrollment rates for fall of 1988 slightly below those for fall of 1987 for these age groups. This is due to the rapid rise in the participation rates for these groups for the last two years.

TABLE 6

PROJECTED ENROLLMENT RATE PER 1,000 POPULATION: FALL 87 - FALL 94

	Fall 87*	Fall 88	Fall 89	Fall 90	Fall 91	Fall 92	Fall 93	Fall 94	CHANGE
	MEN	MEN	MEN	MEN	MEN	MEN	MEN	MEN	1987-94
17-19	58.10	58.10	59.25	61.14	63.03	64.92	66.80	68.69	18%
20-24	29.61	29.61	30.29	31.23	32.16	33.10	34.03	34.97	18%
25+	6.30	6.40	6.57	6.74	6.91	7.08	7.25	7.42	18%
	WOMEN	WOMEN	WOMEN	WOMEN	WOMEN	WOMEN	WOMEN	WOMEN	
17-19	65.94	65.94	67.31	69.78	72.26	74.73	77.21	79.68	21%
20-24	33.11	33.11	33.93	35.16	36.38	37.60	38.82	40.05	21%
25+	14.72	15.64	16.62	17.61	18.59	19.58	20.56	21.54	46%
	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	
17-19	61.95	61.94	63.21	65.39	67.58	69.77	71.93	74.10	20%
20-24	31.33	31.33	32.08	33.17	34.24	35.31	36.39	37.47	20%
25+	10.55	11.05	11.63	12.20	12.78	13.35	13.93	14.50	37%

* Fall 1987 figures are actual.

All age/sex groups are projected to show participation rate per 1,000 population increases of 18% to 21% through 1994, with the exception of women 25 and older, who are projected to increase 46%. Women are projected to increase their participation rates

TABLE 7

PROJECTED FALL QUARTER HEADCOUNT ENROLLMENT FALL 1987-1994

	Fall 87*	Fall 88	Fall 89	Fall 90	Fall 91	Fall 92	Fall 93	Fall 94
MEN								
17-19	5770	5895	5843	5722	5462	5520	5728	6038
20-24	5498	5239	5146	5169	5312	5376	5401	5361
25+	6612	6834	7137	7434	7705	7970	8239	8525
TOTAL	17880	17967	18126	18326	18479	18866	19368	19925
WOMEN								
17-19	6309	6436	6403	6314	6090	6205	6440	6780
20-24	5921	5645	5579	5663	5814	5894	5964	5964
25+	15706	16949	18275	19597	20913	22219	23525	24871
TOTAL	27936	29030	30257	31575	32817	34318	35929	37615
BOTH SEXES								
17-19	12079	12331	12246	12036	11551	11724	12168	12819
20-24	11419	10884	10725	10833	11126	11270	11365	11326
25+	22318	23783	25413	27032	28618	30189	31764	33396
TOTAL	45816	46997	48383	49901	51295	53183	55298	57540
				PERCENT OF TOTAL				
MEN								
17-19	32%	33%	32%	31%	30%	29%	30%	30%
20-24	31%	29%	28%	28%	29%	28%	28%	27%
25+	37%	38%	39%	41%	42%	42%	43%	43%
WOMEN								
17-19	23%	22%	21%	20%	19%	18%	18%	18%
20-24	21%	19%	18%	18%	18%	17%	17%	16%
25+	56%	58%	60%	62%	64%	65%	65%	66%
BOTH SEXES								
17-19	26%	26%	25%	24%	23%	22%	22%	22%
20-24	25%	23%	22%	22%	22%	21%	21%	20%
25+	49%	51%	53%	54%	56%	57%	57%	58%
				PERCENT OF 1987				
					MEN			
17-19	100%	102%	101%	99%	95%	96%	99%	105%
20-24	100%	95%	94%	94%	97%	98%	98%	98%
25+	100%	103%	108%	112%	117%	121%	125%	129%
TOTAL	100%	100%	101%	102%	103%	106%	108%	111%
					WOMEN			
17-19	100%	102%	101%	100%	97%	98%	102%	107%
20-24	100%	95%	94%	96%	98%	100%	101%	101%
25+	100%	108%	116%	125%	133%	141%	150%	158%
TOTAL	100%	104%	108%	113%	117%	123%	129%	135%
					BOTH SEXES			
17-19	100%	102%	101%	100%	96%	97%	101%	106%
20-24	100%	95%	94%	95%	97%	99%	100%	99%
25+	100%	107%	114%	121%	128%	135%	142%	150%
TOTAL	100%	103%	106%	109%	112%	116%	121%	126%

* Fall 1987 figures are actual

APPENDIX C

Minnesota State University System's Transportation Study

Access to the Baccalaureate in the Seven County Metropolitan Area

A study of mileage and travel time between two year and four year public, post-secondary institutions

Teresa M. Coen, Consultant
Minnesota State University System

September, 1990

Access to the Baccalaureate

MISSION: Investigate theory that within the seven county metropolitan area, one can travel from either a community college or a technical college to one of the four year, public, post-secondary universities within approximately 30 minutes.

METHOD: Create map of metropolitan area public, post-secondary institutions; calculate mileage and travel time.

INSTITUTIONS:

Four Year Universities:

University of Minnesota- Minneapolis
University of Minnesota- St. Paul
Metropolitan State University- Minneapolis
Metropolitan State University- Dayton's Bluff, St. Paul

Community Colleges:

Anoka-Ramsey Community College
Inver Hills Community College
Lakewood Community College
Minneapolis Community College
Normandale Community College
North Hennepin Community College

Technical Colleges:

Dakota County Technical College
Hennepin-Brooklyn Park Technical College
Hennepin-Eden Prairie Technical College
Minneapolis Technical College
Northeast Metro Technical College
St. Paul Technical College

FORMAT: Matrix which shows mileage and travel time between each of the four year, public, post-secondary universities with each of the community colleges and each of the technical colleges.

PROCEDURE:

Mr. Richard Lau, Traffic Systems Engineer at the Traffic Management Center, Minnesota Department of Transportation (MNDOT) calculated figures both in freeway miles and surface streets (any road that is not a designated freeway) between each of the four year, public, post-secondary universities with each of the community colleges and each of the technical colleges. These were put into the matrix formats that I had designed (Appendix 1). With this information I was able to determine such things as longest and shortest distances between two year and four year institutions, the average distances between each of the community colleges and each of the four year universities, and the average distance between each of the technical colleges and each of the four year universities.

The next step was to give this information to Mr. Bob Paddock, Transportation Planner at the Metropolitan Council. Through the Council's system of zones, he was able to calculate travel time between each of the institutions in the matrix format. There are discrepancies between the mileage he arrived at and the mileage supplied by Mr. Lau. Mr. Paddock used miles that are reflective of the Metropolitan Council zone system --the mileage taken from the center of one zone and arriving at the center of the next zone. Mr. Lau's figures are directly from one institution to the next, and are therefore more accurate.

Travel time was calculated in two ways. The first set of times was supplied by Mr. Paddock and was figured according to the mileage system by zones. Because this gave inaccurate measurements to institutions, Mr. Lau at the Traffic Management Center was again contacted and he supplied the following figures:

Non Peak travel times:	1.1 minutes per freeway mile
(55 miles per hour)	2.0 minutes per surface street
Peak travel times:	1.3 minutes per freeway mile
(45 mph)	2.6 minutes per surface street

Peak morning hours are from 6:30 A.M. to 8:30 A.M.
Peak afternoon hours are from 3:30 P.M. to 6:30 P.M.

The mileage supplied by Mr. Lau was then calculated using these figures and the results show travel time by car in minutes (rounded to the nearest whole minute) at both peak hours and non peak hours. With this information I was able to determine such things as greatest travel time between any two institutions and the average travel time between two year and four year institutions (Appendix 2).

The travel times can be cross referenced by the figures Mr. Paddock supplied, but for the purposes of this study, Mr. Lau's figures for both mileage and travel time are used.

The final stage of the study was to determine travel time between institutions when using public transportation-- the MTC bus. Mr. Steve Wilson, Transportation Forecast Analyst at the Metropolitan Council supplied tables for each zone in which an institution is located. The three tables per institution offer the following information:

1) Average walk time to bus stop
2) Average wait time for bus
3) Average amount of time in bus

In the matrix of bus times (Appendix 3), these figures are given and totalled. There is a high degree of discrepancy between bus travel times and car travel times for a number of reasons. First, buses travel at only ten or eleven miles per hour; cars travel at 45 mph or 55 mph. Secondly, the bus travel times supplied by Mr. Wilson are figured from one bus leaving the center of one institution's zone and arriving at the center of the next institution's zone. Thirdly, the Metropolitan Council does not keep track of where each bus stop is located within a zone. A given walking distance may be considerably shorter than the one supplied because there may be a stop closer to the institution.

A final consideration for bus travel time is that there are more buses running at peak hours. The average wait time for a bus is fifteen minutes during peak hours, 25 to 30 minutes at non peak hours.

The information supplied by Mr. Wilson allowed me to figure the greatest travel time by bus between any two year and four year institution and the average travel time by bus between two year and four year institutions.

FINDINGS:

Greatest number of miles: 24.5 miles from Anoka-Ramsey Community College to Metro U- Dayton's Bluff
26.5 miles from Dakota County Technical College to U of M- Minneapolis

Average number of miles: 15 miles between a community college and a four year university
15 miles between a technical college and a four year university

Greatest travel time by car: 51 minutes at peak hours, 41 minutes at non peak hours from Anoka-Ramsey Community College to Metropolitan State University, Dayton's Bluff, St. Paul

Alternative: 33 minutes at peak hours, 26 minutes at non peak hours from Anoka-Ramsey Community College to Metro U- Minneapolis

52 minutes at peak hours, 41 minutes at non peak hours from Dakota County Technical College to U of M, St. Paul

Alternative: 39 minutes at peak hours, 31 minutes at non peak hours from Dakota County Technical College to Metro U-Dayton's Bluff

Average travel time by car:	25 minutes	at peak hours from a community college to a four year university
	21 minutes	at non peak hours from a community college to a four year university
	23 minutes	at peak hours from a technical college to a four year university
	20 minutes	at non peak hours from a technical college to a four year university
Greatest travel time by bus:	125 minutes	from Anoka-Ramsey Community College to Metro State University- St. Paul
Alternative:	83 minutes	from Anoka-Ramsey Community College to Metro State University- Mpls.
	149 minutes	from Hennepin-Eden Prairie Technical College to U of M- St. Paul
Alternative:	95 minutes	from Hennepin-Eden Prairie Technical College to Metro State U-Mpls.
Average travel time by bus:	85 minutes	from a community college to a four year university
	89 minutes	from a technical college to a four year university

Closest four year university to all community colleges is either Metro U- St. Paul or Metro U- Minneapolis

Closest four year university to all technical colleges is either Metro U- St.Paul or Metro U- Minneapolis

Appendix 1.1

MILEAGE
Community Colleges to Four Year Universities

	Anoka-Ramsey CC	Inver Hills CC	Lakewood CC	Mpls. CC	Normandale CC	North Hennepin CC	
University of Minnesota-St. Paul	15.0 ss 7.5 fwy 22.5 mi	6.5 ss 9.5 fwy 16.0 mi	3.0 ss 10.5 fwy 13.5 mi	1.5 ss 5.5 fwy 7.0 mi	3.0 ss 14.5 fwy 17.5 mi	4.0 ss 16.0 fwy 20.0 mi	
University of Minnesota-Mpls.	9.5 ss 9.0 fwy 18.5 mi	3.5 ss 12.5 fwy 16.0 mi	1.0 ss 16.0 fwy 17.0 mi	2.0 ss -- 2.0 mi	2.5 ss 11.5 fwy 14.0 mi	2.0 ss 17.5 fwy 19.5 mi	
Metro State University-St. Paul	14.5 ss 10.0 fwy 24.5 mi	3.0 ss 6.0 fwy 9.0 mi	1.0 ss 11.0 fwy 12.0 mi	1.0 ss 10.0 fwy 11.0 mi	2.5 ss 17.0 fwy 19.5 mi	2.0 ss 21.5 fwy 23.5 mi	
Metro State University-Mpls.	9.5 ss 6.5 fwy 16.0 mi	4.0 ss 13.5 fwy 17.5 mi	1.5 ss 17.0 fwy 18.5 mi	0.5 ss -- 0.5 mi	3.0 ss 10.0 fwy 13.0 mi	2.0 ss 14.5 fwy 16.5 mi	
AVERAGE NUMBER OF MILES	20 mi	15 mi	15 mi	5 mi	16 mi	20 mi	= 15 mi

"ss" = miles of surface streets (any road that is not a designated freeway)

"fwy" = miles of freeway

"mi" = total miles rounded to the nearest half mile

Appendix 1.2

MILEAGE

Technical Colleges to Four Year Universities

	Dakota County Tech	Hennepin Brklyn Park Tech	Hennepin Eden Prairie Tech	Mpls. Tech	North-east Metro Tech	St. Paul Tech	
University of Minnesota-St.Paul	15.0 ss 10.0 fwy 25.0 mi	3.0 ss 15.5 fwy 18.5 mi	3.5 ss 19.5 ss 22.0 mi	1.5 ss 5.5 fwy 7.0 mi	3.0 ss 10.5 fwy 13.5 mi	3.0 ss 3.0 fwy 6.0 mi	
University of Minnesota-St. Paul	9.0 ss 17.5 fwy 26.5 mi	1.0 ss 17.0 fwy 18.0 mi	3.0 ss 17.0 fwy 20.0 mi	0.5 ss 2.0 fwy 2.5 mi	1.0 ss 16.0 fwy 17.0 mi	0.5 ss 6.0 fwy 6.5 mi	
Metro State University-St. Paul	12.0 ss 6.0 fwy 18.0 mi	1.0 ss 21.0 fwy 22.0 mi	2.5 ss 22.5 fwy 25.0 mi	0.5 ss 10.5 fwy 11.0 mi	1.0 ss 11.0 fwy 12.0 mi	1.0 ss -- 1.0 mi	
Metro State University-Mpls.	9.0 ss 17.0 fwy 26.0 mi	1.0 ss 14.0 fwy 15.0 mi	3.5 ss 13.0 fwy 16.5 mi	0.5 ss -- 0.5 mi	1.5 ss 17.0 fwy 18.5 mi	1.0 ss 9.0 fwy 10.0 mi	
AVERAGE NUMBER OF MILES	24 mi	24 mi	21 mi	5 mi	15 mi	6 mi	= 15 mi

"ss" = miles of surface streets (any road that is not a designated freeway)

"fwy"= miles of freeway

"mi" = total miles rounded to the nearest half mile

Appendix 2.1

CAR TRAVEL TIME
Community Colleges to Four Year Universities

	Anoka-Ramsey CC	Inver Hills CC	Lakewood CC	Mpls. CC	Norman-dale CC	North Hennepin CC	
University of Minnesota-St. Paul	49 min 38 min	29 min 23 min	21 min 18 min	11 min 9 min	27 min 22 min	31 min 26 min	
University of Minnesota-Mpls.	36 min 29 min	25 min 21 min	23 min 20 min	5 min 4 min	21 min 18 min	28 min 23 min	
Metro State University-St. Paul	51 min 41 min	16 min 13 min	17 min 14 min	16 min 13 min	29 min 24 min	33 min 28 min	
Metro State University-Mpls.	33 min 26 min	28 min 23 min	26 min 22 min	1 min 1 min	21 min 17 min	24 min 20 min	
AVERAGE TRAVEL TIME	42 min 34 min	25 min 20 min	22 min 19 min	8 min 7 min	25 min 20 min	29 min 24 min	≈25 min ≈21 min

Minutes given first are at peak travel times (6:30 A.M. to 8:30 A.M. and 3:30 P.M. to 6:30 P.M.), then at non peak travel times.

Appendix 2.2

CAR TRAVEL TIME

Technical Colleges to Four Year Universities

	Dakota County Tech	Hennepin Brklyn Park Tech	Hennepin Eden Prairie Tech	Mpls. Tech	North-east Metro Tech	St. Paul Tech	
University of Minnesota-St. Paul	52 min 41 min	28 min 23 min	34 min 28 min	11 min 9 min	21 min 18 min	12 min 9 min	
University of Minnesota-Mpls.	46 min 37 min	26 min 21 min	30 min 25 min	4 min 3 min	23 min 20 min	9 min 8 min	
Metro State University-St. Paul	39 min 31 min	30 min 25 min	36 min 30 min	15 min 13 min	17 min 14 min	3 min 2 min	
Metro State University-Mpls.	46 min 37 min	21 min 17 min	26 min 21 min	1 min 1 min	26 min 22 min	14 min 12 min	
AVERAGE TRAVEL TIME	46 min 37 min	26 min 21 min	32 min 26 min	8 min 7 min	22 min 19 min	10 min 8 min	= 24 min = 20 min

Minutes given first are at peak travel times (6:30 A.M. to 8:30 A.M and 3:30 P.M. to 6:30 P.M.) then at non peak travel times.

Appendix 3.1

BUS TRAVEL TIME
Community Colleges to Four Year Universities

	Anoka-Ramsey CC	Inver Hills CC	Lakewood CC	Mpls. CC	Norman-dale CC	North Hennepin CC	
University of Minnesota-St. Paul	20 walk 18 wait 76 bus 114 min	12 walk 29 wait 64 bus 105 min	24 walk 42 wait 43 bus 109 min	8 walk 19 wait 38 bus 65 min	22 walk 32 wait 68 bus 122 min	22 walk 20 wait 58 bus 100 min	
University of Minnesota-Mpls.	18 walk 8 wait 57 bus 83 min	12 walk 11 wait 79 bus 102 min	20 walk 34 wait 60 bus 114 min	6 walk 5 wait 13 bus 24 min	16 walk 29 wait 35 bus 80 min	16 walk 10 wait 38 bus 64 min	
Metro State University-St. Paul	18 walk 37 wait 70 bus 125 min	10 walk 11 wait 49 bus 70 min	18 walk 33 wait 30 bus 81 min	6 walk 9 wait 45 bus 60 min	16 walk 26 wait 74 bus 116 min	16 walk 14 wait 65 bus 95 min	
Metro State University-Mpls.	18 walk 30 wait 35 bus 83 min	22 walk 12 wait 71 bus 105 min	22 walk 46 wait 44 bus 112 min	8 walk 1 wait 3 bus 12 min	16 walk 19 wait 37 bus 72 min	18 walk 7 wait 26 bus 51 min	
AVERAGE BUS TRAVEL TIME	99 min	95 min	104 min	39 min	97 min	78 min	= 85 min

Minutes rounded to the nearest whole minute

"walk" = average number of minutes one would need to walk to a bus stop

"wait" = average number of minutes one would wait for a bus

"bus" = average number of minutes spent riding the bus

Appendix 3.2

BUS TRAVEL TIME
Technical Colleges to Four Year Universities

	Dakota County Tech	Hennepin Brklyn Park Tech	Hennepin Eden Prairie Tech	Mpls. Tech	North-east Metro Tech	St. Paul Tech	
University of Minnesota-St. Paul	20 walk 33 wait 90 bus 143 min	14 walk 37 wait 66 bus 117 min	24 walk 51 wait 74 bus 149 min	10 walk 19 wait 38 bus 67 min	24 walk 42 wait 43 bus 109 min	10 walk 30 wait 35 bus 75 min	
University of Minnesota-Mpls.	18 walk 11 wait 96 bus 125 min	12 walk 24 wait 46 bus 82 min	18 walk 48 wait 42 bus 108 min	8 walk 5 wait 13 bus 26 min	20 walk 34 wait 60 bus 114 min	13 walk 9 wait 37 bus 59 min	
Metro State University-St. Paul	18 walk 11 wait 68 bus 97 min	12 walk 27 wait 73 bus 112 min	18 walk 45 wait 79 bus 142 min	8 walk 9 wait 45 bus 62 min	18 walk 34 wait 30 bus 82 min	8 walk 8 wait 14 bus 30 min	
Metro State University-Mpls.	18 walk 23 wait 62 bus 103 min	18 walk 20 wait 34 bus 72 min	18 walk 38 wait 39 bus 95 min	10 walk 1 wait 3 bus 14 min	22 walk 12 wait 71 bus 105 min	23 walk 9 wait 29 bus 61 min	
AVERAGE BUS TRAVEL TIME	117 min	95 min	123 min	42 min	101 min	56 min	= 89 min

Minutes rounded to the nearest whole minute

"walk" = average number of minutes one would need to walk to a bus stop

"wait" = average number of minutes one would wait for a bus

"bus" = average number of minutes spent riding the bus