

UNIVERSITY OF MINNESOTA

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TO: Professor Virginia Gray, Political Science
FROM: Darwin D. Hendel, Research Associate
SUBJECT: Self-Study Report



Enclosed is a copy of the recently completed report A Land-Grant University for the 21st Century prepared for the North Central site visit.

Our supply of reports dwindled quickly, so there are not enough remaining copies for all committee members. I sent two additional copies to Gary Engstrand.

DDH/lj

Enclosure

c: ✓ Gary Engstrand, Executive Assistant, University Senate

**REPORT OF A VISIT
TO THE
UNIVERSITY OF MINNESOTA -- TWIN CITIES**

Minneapolis, Minnesota

May 13-15, 1996

for the

**Commission on Institutions of Higher Education
of the North Central Association of Colleges and Schools**

EVALUATION TEAM

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I. Introduction

This is the report of a comprehensive evaluation for continued accreditation of the University of Minnesota--Twin Cities, conducted by an evaluation team organized by the Commission on Institutions of Higher Education of the North Central Association of Colleges and Schools.

The Team visited the University on May 13-15, 1996. During the visit, members of the Team met with and interviewed more than one hundred individuals, including senior administrators, members of the faculty, staff, and student body, both as individuals and as members of various groups, the North Central Advisory Committee, several members of the Board of Regents, Twin Cities community representatives, and two legislative leaders. The team also reviewed a broad array of documents and electronically-accessible data prepared by the North Central Advisory Committee with staff support provided by the Office of Planning and Analysis. The key document on which the Team based its review was of course the 1996 Accreditation Self-Study of the Twin Cities Campus, *A Land-Grant University for the 21st Century*, prepared by the North Central Advisory Committee. The Team believes that it was able to develop from these sources a comprehensive overview of the state of the University during its brief visit.

The University of Minnesota has been continuously accredited by the North Central Association since 1913. The University today comprises four campuses, located in the Twin Cities, Crookston, Duluth, and Morris. Each campus is separately accredited. This report and the process of which it is a part pertains only to the Twin Cities campus. That campus was last reviewed and its accreditation continued in 1986.

The Team found the University's Self-Study Report to be thorough, complete, comprehensive, and generally very well done. It presents an encyclopedic picture of the University which should be useful in many applications beyond the present accreditation evaluation process. The Team commends the North Central Advisory Committee, its Chairman, Professor Thomas Scott, and Dr. Darwin Hendel of the Office of Planning and Analysis for their excellent work in preparing the Self-Study Report.

The Team also thanks President Hasselmo, Dr. Hendel, and their many colleagues for their hospitality and cooperation, and for arranging an exceptionally well-organized Evaluation Team visit.

In Section II of this Report, the Team reports its findings concerning the University's satisfaction of the Commission's General Institutional Requirements and the Criteria for Accreditation. This section also includes summary descriptions of the Team's views of the University's strengths and of some concerns developed by the Team during its visit.

Section III of the Report presents observations and suggestions which the Team feels may be useful to the University.

Section IV of the Report contains the Team's formal recommendation concerning accreditation of the University of Minnesota--Twin Cities and its rationale for that recommendation.

II. Evaluation for Affiliation

A. General Institutional Requirements (GIRs)

The General Institutional Requirements are addressed in Chapter III of the Self-Study Report (SSR). The Team has reviewed each of the University's responses to the GIRs and finds that they are generally complete and satisfactory. Following are page references to the University's response to each GIR, accompanied in two cases by a Team comment.

1. *It has a mission statement, formally adopted by the governing board and made public, declaring that it is an institution of higher education.*

SSR, p. 41.

2. *It is a degree-granting institution.*

SSR, p. 42.

3. *It has legal authorization to grant its degrees, and it meets all the legal requirements to operate as an institution of higher education wherever it conducts its activities.*

SSR, p. 44.

4. *It has legal documents to confirm its status: not-for-profit, for-profit, or public.*

SSR, p. 44.

5. *It has a governing board that possesses and exercises necessary legal power to establish and review basic policies that govern the institution.*

SSR, p. 44.

6. *Its governing board includes public members and is sufficiently autonomous from the administration and ownership to assure the integrity of the institution.*

SSR, p. 44.

7. *It has an executive officer designated by the governing board to provide administrative leadership for the institution.*

SSR, p. 46.

8. *Its governing board authorizes the institution's affiliation with the Commission.*

SSR, p. 46.

9. *It employs a faculty that has earned from accredited institutions the degrees appropriate to the level of instruction offered by the institution.*

SSR, p. 50.

10. *A sufficient number of the faculty are full-time employees of the institution.*

SSR, p. 50.

11. *Its faculty has a significant role in developing and evaluating all of the institution's educational programs.*

SSR, p. 50.

12. *It confers degrees.*

SSR, p. 54.

13. *It has degree programs in operation, with students enrolled in them.*

SSR, p. 54.

14. *Its degree programs are compatible with the institution's mission and are based on recognized fields of study at the higher education level.*

SSR, p. 55.

15. *Its degree programs are appropriately named, following practices common to institutions of higher education in terms of both length and content of the programs.*

SSR, p. 56.

16. *Its undergraduate degree programs include a coherent general education requirement consistent with the institution's mission and designed to ensure breadth of knowledge and to promote intellectual inquiry.*

SSR, p. 57.

17. *It has admission policies and practices that are consistent with the institution's mission and appropriate to its educational programs.*

SSR, p. 60.

18. *It provides its students access to those learning resources and support services requisite for its degree programs.*

SSR, p. 67.

19. *It has an external financial audit by a certified public accountant or a public audit agency at least every two years.*

SSR, p. 69.

20. *Its financial documents demonstrate the appropriate allocation and use of resources to support its educational programs.*

SSR, p. 70.

21. *Its financial practices, records, and reports demonstrate fiscal viability.*

SSR, p. 70. The Team notes that the Self-Study Report candidly refers to “recent, highly publicized examples of arenas in which the institution’s financial practices need closer scrutiny and tighter financial accounting procedures to insure that public funds are allocated according to existing state and federal guidelines.” It describes as an example the August 1995 action of the National Institutes of Health (NIH) to place the University in the category of “exceptional organization” as a consequence of the agency’s “serious concerns about the University’s grants management.” During the Team visit, the Team Chairman discussed this matter at some length with the Senior Vice President for Academic Affairs and met with the Grants Management Team that is in the course of re-engineering the University’s grants management systems in response to the NIH action. Though this action is certainly unusual and serious, the University appears to be responding in a responsible and effective manner. There is no indication that this problem compromises the University’s financial viability.

22. *Its catalog or other official documents includes its mission statement along with accurate descriptions of*

- o its educational programs and degree requirements;*
- o its learning resources;*
- o its admissions policies and practices;*
- o its academic and non-academic policies and procedures directly affecting students;*
- o its charges and refund policies; and*
- o the academic credentials of its faculty and administrators.*

SSR, p. 73. The Self-Study Report indicates that the University may not be in strict technical compliance with this GIR in respect to the universal ready availability of its mission statement and the academic credentials of its faculty and administrators. However, it describes steps that are being taken to address these deficiencies, including making this information available on the World Wide Web.

23. *It accurately discloses its standing with accrediting bodies with which it is affiliated.*

SSR, p. 75.

24. *It makes available upon request information that accurately describes its financial condition.*

SSR, p. 78.

The Team finds that the University of Minnesota--Twin Cities meets the twenty-four General Institutional Requirements of the Commission on Institutions of Higher Education of the North Central Association of Colleges and Schools.

B. Criteria for Accreditation

This subsection of the Team Report begins with a discussion of "the most salient, distinguishing strengths and concerns" observed and developed by the Team in the course of its visit. These strengths and concerns are then used as the basis for the Team's evaluation of the University's satisfaction of the Criteria for Accreditation.

Strengths

Whatever may be its problems and challenges (and it has many), the University of Minnesota--Twin Cities is unarguably a great land-grant research university, one of the nation's best and most distinguished. By many measures, it ranks among the top ten American public universities and top twenty or twenty-five American universities, public or private.

The University has attained this distinction in large part because it has for a long time attracted exceptional people to its faculty, staff, and administrative leadership. This tradition evidently continues. The Team's members were generally very impressed with the quality of the people they met during their visit.

Another important contributing factor is the historical commitment of the citizens of Minnesota to education in general and the University in particular. The financial manifestation of this commitment remains relatively strong. All U.S. public colleges and universities have become subject to ever-tighter funding constraints in recent years, and the University of Minnesota--Twin Cities is no exception. There is a strong perception on the campus that the state's traditional generosity to the University has flagged and that the University has fallen on hard times. That perception and the reality it reflects should not be ignored. Nevertheless, in terms of state appropriations per full-time-equivalent student, the University remains very near the top of the nation's fifty-seven public Carnegie Research I universities (based on an analysis of national data from the NSF CASPAR Database System, 1995).

The University has another set of locational advantages. Not only is it located in a relatively education-friendly state, it is located in that state's only major metropolitan area in the midst of a business community characterized by economic diversity, growth, and a disproportionate number of *Fortune 500* company headquarters. It is the only major research university, public or private, in the state. And it has a very large number of alumni, a high proportion of whom live in the Twin Cities metropolitan area, i.e., very near the University. The University is thus ideally situated to enhance its already strong private giving performance and to exploit a huge market for continuing education of adult professionals. These opportunities endow the University with unusual potential to substitute new revenue streams for faltering state support while maintaining relatively low tuition.

Another kind of diversity warrants characterization as a strength. One member of the Team observed that when he was a youngster in the hinterlands of the Upper Midwest ethnic diversity meant you had both Swedes and Norwegians living in your town. That is changing, at least in the Twin Cities. There, officially defined minorities "now constitute roughly 20 percent of the total population and in the K-12 systems they are the majority." The Team recognizes the social problems that often accompany such demographic changes, but for the University they portend a more cosmopolitan and academically richer academic environment.

Another strength is that the University has been thinking about the future and planning for it. That is not new. When this Team's predecessor team visited the University in 1986, it found a proposal for its future by President Keller called *A*

Commitment to Focus. This document was, *inter alia*, an announcement that an era of relatively unfettered growth and programmatic expansion at the University was ending, and that it would henceforth be necessary for the University to define its mission more clearly and focus its activities more precisely. Despite the disruption attendant upon President Keller's resignation the following year, the confrontation with the new realities signaled by *A Commitment to Focus* has continued under President Hasselmo, and has culminated in the development of a comprehensive strategic plan embodied in *University 2000: Mission, Vision and Strategic Directions*, approved by the Board of Regents in January, 1994. In the view of the Team, *University 2000* represents an exemplary academic strategic planning effort and provides an excellent foundation for the continued evolutionary transformation of the University. A particularly notable feature of the plan is the development of institutional-level critical measures that will be used to assess the University's progress toward the objectives of the plan.

The University has confronted the problem presented by a University hospital and an academic health center attempting to continue clinical operations in a radically changed health care environment dominated by HMOs (to an extent unequalled in any other state of the Union). It has altered its clinical practice plans and integrated its hospital and medical practice operations. It now proposes to divest itself of its hospital, an action that appears optimal given the circumstances in which the University finds itself. Its successful implementation of this plan is crucial to both the academic health center and the university as a whole.

President Hasselmo's *Initiative for the Improvement of Undergraduate Education* has led to numerous improvements in the undergraduate education environment at the University, including student financial aid, the Residential College program, improved enrollment management, outcomes assessment, and diversity programs. Results are becoming apparent in the form of improved quality and diversity of undergraduate students, increases in graduation rates, etc.

Among other strengths noted by various members of the Team are:

- o The University has "constitutional autonomy" as a result of its founding before Minnesota passed from territorial status to statehood. This confers upon the University greater freedom from political interference than is enjoyed by many other state universities.
- o The development and alumni relations arms of the University both appear to be strong and effective. In 1994 the University ranked fourth among U.S. public universities (and twelfth among all U.S. universities) in voluntary support. However, alumni participation in private giving seems relatively low. This presents an opportunity for both the development and alumni offices.
- o The University's fund balances -- both current funds and endowment funds -- are very healthy, and the Treasurer's Office appears to be managing them exceptionally well.
- o The Bush Faculty Development Program on Excellence and Diversity in Teaching is seen by members of the Team as an outstanding innovative program and a national model.

- o The men's and women's athletic programs appear to be financially sound.

Those are but a few of the strengths of a great, distinguished, and robust university. Like all such institutions, however, it gives some causes for concern, and those are our next subjects.

Concerns

Many of the concerns developed by the Team are related to the strengths described above. That is, they are in many cases the obverse of corresponding strengths.

- o Organization/Administration/Personnel/Communication

The presence of strong high-quality faculty, staff, and administrative leadership has been accompanied by the development of an institutional culture that features a great deal of local independence at departmental and school levels accompanied by relatively weak functional coupling and communication among organizational units. It can be argued that this relatively high level of local autonomy has contributed materially to the University's strengths by fostering academic and administrative entrepreneurship. However, together with the University's very large size it has also fostered the development of an organizational structure that appears extremely complex and fragmented. This clearly has contributed to some of the University's current difficulties by making it difficult to detect problems early and by impeding the development of coherent and effective responses at the institutional level.

Further, the administrative structure and the individual leaders that populate it seem to have been rather consistently in a state of flux. Appendix B of the Self-Study

contains a list of the persons occupying thirty senior administrative positions from President to Deans during the period 1985-1996, essentially the decade between our Team's visit and that of the immediate previous team. The average number of incumbents of these thirty important positions during the decade is 3.3! At the time of the Team's visit the Senior Vice President for Academic Affairs was within a few weeks of leaving his position, the President's announcement of his intention to retire in June, 1997 and the impending departure of the Provost for the Academic Health Center (to become President of Johns Hopkins University) were still relatively recent news, and during the visit the resignation of the Associate Vice President for Facilities Management was announced.

The University has recently changed its top-level academic organizational structure to a "provostal system," i.e., one in which line responsibility for the University's academic programs is divided among three senior executives called "provosts." The benefits of this change remain to be seen. Whatever they may turn out to be, the Team did frequently encounter faculty and staff concerns about administrative and organizational instability. Many of the University's people report feeling uneasy and insecure about "not being able to count on" University decisions because of frequent changes in administrative leadership, and there is not a little skepticism, cynicism, and confusion about the University's goals and directions in evidence below the senior levels of administration.

Another concern is that commitment to and engagement in the University's strategic planning efforts seems relatively weak at levels below the University's central administration. Despite the fact that these efforts have been continuously in course for more than a decade and are comprehensive and of high quality, many faculty seem not to

have received and understood "the message." Accustomed to pursuing their own professional goals with a great deal of independence and relatively little institutional oversight, they seem bewildered by what they perceive as multiplying problems and massive changes that are being addressed and instituted without much warning or opportunity for input by them. The aforementioned administrative and organizational instabilities and the difficulties of intrainstitutional communication in such a large and complex institution (also noted by the 1986 evaluation team) have surely contributed to this situation. Nevertheless, it exists and is of concern to many within the University and thus to the Team as well.

- o The Academic Health Center

The continued viability of the University's Academic Health Center (AHC) in today's rapidly changing health care environment is of course a major concern. The importance of the successful and expeditious conclusion of negotiations for the transfer of the University Hospital and Clinic to a private entity (Fairview) was impressed upon Team members from many quarters. It is essential that this agreement assure continuing control by the University and the AHC of research and curriculum and education in the health professions. It is also important that there be a feasible contingency plan for the Hospital and Clinic in the event that the Fairview deal does not come to a successful fruition. The financial and functional health of the AHC is essential to that of the University as a whole.

Whatever the outcome of these plans for the AHC, it is clear that substantial "re-engineering" of the AHC will be necessary. Indeed, this has already been initiated by the soon-to-depart Provost, who retained the services of a consulting firm to advise on re-

engineering. Some members of the AHC faculty impressed on the Team in the strongest possible terms their dissatisfaction with the findings and recommendations of the consultant. Team members have studied some of the products of the consultant and generally agree that they are a threat to professional identity and accreditation in the AHC schools and have severely eroded the morale of the AHC faculty and staff.

- o Governance

Though the University's constitutional autonomy gives it an unusual degree of freedom from political influences, it does not render it immune from such influences. The Team encountered various indications that the Governor and the Legislature sometimes fail to resist the temptation to inject themselves into University policy matters. This is of course not unique to Minnesota, nor is it inappropriate in some circumstances, but many on the campus are seriously concerned about recent examples of what they view as political meddling.

One feature of the University's governance that does appear to be unique to Minnesota is that the members of the University's governing board, the Board of Regents, are elected by the Legislature without formal involvement of the Governor. One Regent is elected from each of Minnesota's eight congressional districts and there are four additional at-large Regents (one a student or recent graduate), for a total of twelve. Regents are elected from a pool of candidates recommended by a Regent Candidate Advisory Council which acts as a search and screening committee. This procedure has won Minnesota a merit award from the Association of Governing Boards of Colleges and Universities. All members of the Team met with three of the twelve Regents at a meeting that also included

Twin Cities community leaders. The circumstances were not conducive to the kind of substantive discussion that would have permitted the Team to explore with the Regents present certain concerns Team members encountered in their campus interviews about Regents' understanding of and attitudes toward the many academic and administrative challenges the University faces and about alleged intrusions into non-policy operational matters, i.e., "micromanagement."

- o Academic Tenure

In the months preceding the Team's visit a controversy over academic tenure arose within the University. This controversy appears to have had origins both in the Board of Regents and in the Academic Health Center, where it initially centered on clinical faculty in the School of Medicine. It quickly became a major issue for the whole University and also, thanks to the World Wide Web, something of a national issue. While the Team agrees that a reexamination of the University's tenure system is entirely appropriate, it believes that the initial stages of the discussion were made unnecessarily contentious by the same poor communication and administratively dominated early discussion mentioned above. By the time of the Team's visit the debate appeared to have been guided back into proper channels of shared governance, but the Team nevertheless encountered considerable faculty suspicion and distrust about the current discussions of tenure. This issue must remain a carefully managed concern of the University.

- o Other Faculty Concerns

Members of the Team encountered other concerns among the faculty. Among them were the perception that the financial problems of the Academic Health Center have

contributed to retrenchments in other units of the University, particularly (but not exclusively) in the humanities departments. Also, references were made to a recent report that allegedly shows that faculty salaries at the senior level are the lowest among the nation's thirty top research universities. The Team did not explore the validity of this report, but does suspect that relatively low faculty salaries may be contributing to an erosion of faculty morale.

- o Assessment of Student Academic Achievement

In 1995, the University submitted to the Commission an *Assessment Plan* (see SSR, Appendix F) in response to the 1993 *Commission Statement on Assessment of Student Academic Achievement*. Subsequently, it was informed that the plan meets the Commission's current expectations for an evaluation plan. This plan forms an important part of the University's extensive efforts to improve undergraduate education and relates to several of the institutional-level critical measures being developed as part of the *University 2000* strategic plan. While the assessment plan thus appears to be well integrated into the University's larger planning environment, members of the Team found it very difficult to discover whether the plan is actually well understood and whether its implementation is in process across the relevant schools of the University. In general, individual faculty members questioned about outcomes assessment were extremely vague about the meaning of the term. Most faculty and even some administrators seemed to have little knowledge of assessment processes already in use. What we appear to have encountered here is another example of the internal communication problems that seem to

be endemic in the University. A suggestion for dealing with this situation is made in the next section.

- o General College

Founded in 1932, the University's General College has facilitated the transition from high school to the University of generations of students not fully prepared for immediate entry into other University programs. Recently the University considered a plan to close General College and to find other ways to provide educational opportunities for under-prepared students now served by the College. Alternative options considered were the development of a partnership with the Minnesota State Colleges and Universities (MnSCU) system which would better meet the needs of under-prepared students throughout the state, and a small increase in the number of special freshman admissions into the University's College of Liberal Arts. The University was unsuccessful in achieving Regents' approval of this plan, partly because it became entangled with concerns about a possible erosion of the University's commitment to providing developmental instruction to economically disadvantaged and minority students (despite the fact that more than two thirds of the General College's students now come from households that are non-minority and have annual incomes above \$30,000).

The Team feels that this outcome is unfortunate and hopes that the University will find it possible to revisit this issue, within the broader context of the need to define more precisely the respective roles of the University and of the MnSCU institutions in Minnesota higher education, and to clarify, focus, articulate, and integrate the University's own developmental education and support programs in order to maximize the

effectiveness of its use of scarce resources. The Team does not doubt the University's commitment to providing access and opportunity to a racially, ethnically, and economically diverse student body. It does share the concern expressed by some faculty about the willingness of the University's governance structure to support the tough decisions that are necessary to pursue that and other important goals in an environment of severely constrained resources.

- o Priority Setting

Perhaps the overriding concern of the Team is the overwhelming array of issues and problems with which the University is currently contending. They have many origins. Some have arisen from internal imperatives, some of them shared with most major American public research universities and others peculiar to this University. Some are driven by external agencies and events, both good and not-so-good. The Self-Study includes a figure that attempts to summarize on a single page all of these issues and their interrelationships. President Hasselmo has noted that this figure may be misleading because it lacks the time dimension and thus omits the wide range of timetables that govern the various projects illustrated. Nevertheless, the Team found the complex of issues and projects represented by the figure a bit dizzying, and we collectively wondered, "Has not the University of Minnesota--Twin Cities perhaps bitten off more than even it can chew?" The Team fears that it has. Each of the issues and projects currently being addressed is a major undertaking. Three or four together would constitute a very full agenda for any university. We estimate that the University is currently trying to address about two dozen! The Team understands that some of these are on the University's

agenda because they **ought** to be addressed, and some are there because someone or something important (e.g., the Legislature, a Regent, or the National Institutes of Health) says they **must** be addressed -- **immediately**. The Team also understands that each of these issues is coupled to practically every other issue at hand. Nevertheless, the Team feels strongly that unless the University can prioritize and schedule these issues so that they can be addressed a few at a time, it runs the risk of failing to resolve any of them successfully. This is especially true at a time when transitions in major University leadership positions (including the presidency) are imminent or on the horizon, and when there is some disaffection and low morale within parts of the University community over issues such as AHC re-engineering and the tenure controversy, and over what is perceived by some as a veritable avalanche of ill-examined change.

The Criteria

We turn now to the Criteria for Accreditation.

I. The institution has clear and publicly stated purposes consistent with its mission and appropriate to an institution of higher education.

The University clearly meets this criterion.

II. The institution has effectively organized the human, financial, and physical resources necessary to accomplish its purpose.

The University is, as noted above, very well endowed with human, financial, and physical resources. The Team has noted some concerns about aspects of the organization

of these resources. Nevertheless, it is clear from the stellar overall performance of the University that it adequately meets this criterion.

III. The institution is accomplishing its educational and other purposes.

The University clearly meets this criterion at a very high level of performance.

IV. The institution can continue to accomplish its purposes and strengthen its educational effectiveness.

The University can certainly continue to accomplish its purposes and has amply demonstrated through, for example, its strategic planning process, its intention and ability to strengthen its educational effectiveness. It clearly meets this criterion.

V. The institution demonstrates integrity in its practices and relationships.

The University clearly meets this criterion.

The Team finds that the University of Minnesota--Twin Cities meets the five Criteria for Accreditation of the Commission on Institutions of Higher Education of the North Central Association of Colleges and Schools.

III. Observations and Suggestions for Institutional Improvement

The observations and suggestions presented in this section are advisory and intended only to be helpful to the University. Implementation of these suggestions is not a requirement of the University's accreditation.

In the previous section the Team noted the desirability of prioritizing and time-ordering the University's efforts to deal with the many issues before it. In the Team's view, three candidates for placement near the top of the priority list are:

1. Resolving the future of the University Hospital and Clinic. This is obviously the key to the success or failure of the University's Academic Health Center in today's health care environment, and that in turn is critical to the University's future. On a related matter, while agreeing that the AHC will require substantial (but careful and deliberate) re-engineering, the Team suggests that the University write off the consultant's report on re-engineering of the AHC as a bad investment and turn to its own internal resources to complete this task.
2. Beginning to address the University's near-billion-dollar backlog in deferred renewal of its physical facilities. This is such a breathtakingly large problem that a natural response for the University would be to stick its head in the sand and try to ignore it. It is obvious that it cannot afford to do so. Nor can the State of Minnesota. Noting that Connecticut has recently established a special program of capital investment for higher education at a level of about \$2 billion, we suggest that the Regents make a special effort to join with the elected leadership of the state in embarking on a long-term effort to deal with the University's deferred renewal needs.
3. Aggressive development of the University's information infrastructure. Few of the University's strategic goals can be achieved without an effective information infrastructure. The University recognizes this and has recently created an Office of Information Technology by merging its academic and administrative computing and

communications services organizations. This organization is basically strong and is led by capable and creative people. They face daunting challenges, however. Internally, the new organization must successfully meld three very different organizational cultures -- academic computing, administrative computing, and telecommunications. It must contend with limited financial resources, like its counterparts in comparable institutions. And it must respond to circumstances that are peculiar (if not unique) to the University of Minnesota--Twin Cities. The impending transformation of the Academic Health Center will have substantial effects on the revenues of and the services expected of the Office. The *University 2000* strategic plan will place unprecedented demands on the Office. Finally, the Office seems not to have been given a clear mandate, firm direction, and strong support. For example, the management and planning structure for re-engineering administrative computing systems (e.g., the student information system, the human resources system, and the financial management system) lacks clarity; well defined ownership and planning authority appear to be absent. The Team suggests that expeditious clarification of the authorities and responsibilities of the Office of Information Technology, coupled with manifestations of strong support from the senior leadership of the University, should be undertaken as preconditions for the effective support of the University's strategic initiatives by this Office.

The Team also suggests the following:

4. Assessment of student academic achievement. The University is planning to change its academic calendar from quarters to semesters. This provides an opportunity for a thorough bottom-up review and revision of the undergraduate curriculum. Among the

potential benefits of this process are the elimination of a large amount of curricular redundancy, fostered by the present rather loosely coupled collegiate confederation, and the imbedding in the new curriculum of a fully integrated student academic achievement assessment system. The University has already made a good start, and the Team believes that with proper attention to internal communication, it can make good use of the opportunity presented by the quarter-to-semester transition to implement its assessment plan.

5. Cooperation and articulation with MnSCU. The Self-Study notes that Minnesota now supports 66 public institutions of higher education. (By comparison, Maryland, with a somewhat larger population, supports about half that number.) The Team was told that this situation results in part from a politically popular goal of the 1960s that called for the availability of a higher education institution within 35 miles of the home of every citizen of Minnesota. Recently, the 62 public institutions that are not part of the University of Minnesota were consolidated into a single system called the Minnesota State Colleges and Universities (MnSCU). It is obvious that in an era of limited financial resources consideration must be given to streamlining and consolidation of the State's higher education institutions, accompanied by a sharper focussing and differentiation of missions among those institutions. The Team is aware that the University is already exploring with MnSCU a variety of possibilities for accomplishing this, including some that are relevant to the General College issue noted above as a Team concern. The Team applauds this exploration and suggests that the University make enhancing cooperation and articulation with MnSCU a continuing objective.

6. Distance Learning. The Team suspects that what Minnesota probably really intended by its 1960s goal of a college within 35 miles of every Minnesotan was that higher education ought to be readily accessible to all Minnesotans. In the sixties it was hard to imagine how to do this without creating a campus within easy reach of everybody. Today, in the nineties, modern information technology is capable of providing access to higher education **within** the home or workplace of every Minnesotan, thus achieving the sixties goal to a degree then unanticipated. The Team did not get the impression that the University has a clear sense of where it intends to go with distributed or distance education. Its suggestion is that the University ought to develop such a clear sense, again in close cooperation and collaboration with MnSCU, and then move toward providing universal access to its programs for all Minnesotans.

7. Administrative and governance structures. The Team suggests that continuing attention be paid to enhancing the operational effectiveness of the University's administrative and governance structures. If the University is to deal successfully with all the many challenges it faces, it will need the capability to plan and act with coherence and expedition, and that capability will require a relatively simple and stable organizational structure. Specifically, the Team suggests that the University commit to maintaining the new provostal system for a few years and that it strive for greater continuity in administrative leadership at all levels. The Team also suggests that the Board of Regents might undertake a careful study of its own role and functions, perhaps with the help of the Association of Governing Boards.

IV. Team Recommendations and Rationale

The Team's recommendations for action, including its recommendation to continue the accreditation of the University of Minnesota--Twin Cities, are shown on the attached Worksheet for the Statement of Affiliation Status.

The Team's reasons for recommending the continuation of the University's accreditation until 2005-06 are as follows: The University of Minnesota--Twin Cities is one of the nation's finest land-grant research universities. It has a long history of academic distinction based on an outstanding faculty supported by dedicated and skilled administrative leaders, strong alumni and citizen communities, and a state with high expectations and regard for its University. Like all institutions of higher education today, the University faces difficult challenges and strong internal and external motivations toward substantial -- even radical -- change. The University is responding vigorously to these challenges and motivations and is understandably encountering various difficulties. Contrary to the feeling of some within the University community that it has become a fragile institution, the Team believes that it is fundamentally robust and will surely surmount its difficulties if it receives the continued support of its internal and external communities.

The Team's reasons for recommending a focussed visit in 1999-2000 are: Among the most salient features of the University's current situation are: 1) its urgent efforts to ensure a viable future for its Academic Health Center; 2) recent changes in its administrative structure; 3) imminent changes in its senior leadership; and 4) its planned comprehensive re-engineering of its management systems. If successful, these efforts

RECOMMENDED ENTRIES

for

STATEMENT OF AFFILIATION STATUS

Other Visits Required:

Focused visit in 1999-2000 on: (1) Status of Academic Health Center; (2) Status of management and governance structure and relationships, including the Board of Regents; (3) Progress of re-engineering of major management systems.

Next Comprehensive Evaluation:

2005-06

seem likely to lead to dramatic changes in the University. If they are unsuccessful, the changes are likely to be even more dramatic -- and less desirable. The Team feels that a focussed visit to review the status of these important changes is warranted and that such a visit should occur several years after a new president assumes office. We suggest the 1999-2000 academic year.

The University of Minnesota--Twin Cities is a great university in a state of flux. Peter Vail has described the present environment for American higher education as one of "permanent white water." To extend the metaphor, there are still some who believe that if higher education simply declines to paddle its kayak, it need not and will not move. But that is not an option in white water. What is required is that everyone responsible for a university paddle hard as a smoothly coordinated team. Only that can ensure its successful negotiation of today's white water. The University of Minnesota--Twin Cities is struggling to do that. Most (but not all) members of the Evaluation Team are confident that it will succeed and continue its progression to even greater distinction. All members of the Team sincerely hope it will.

WORKSHEET FOR STATEMENT OF AFFILIATION STATUS

INSTITUTION: UNIVERSITY OF MINNESOTA-TWIN CITIES
202 Morrill Hall, 100 Church Street SE
Minneapolis, MN 55455

TYPE OF REVIEW: Continued Accreditation

DATE OF THIS REVIEW: May 13 -15, 1996

COMMISSION ACTION:

STATUS: *Accredited (1913-)*

Institution *Recommended Wording:* RETAIN ORIGINAL WORDING

Team *Recommended Wording:* RETAIN ORIGINAL WORDING

HIGHEST DEGREE AWARDED: *Doctor's.*

Institution *Recommended Wording:* RETAIN ORIGINAL WORDING

Team *Recommended Wording:* RETAIN ORIGINAL WORDING

MOST RECENT ACTION: *August 22, 1986.*

TO BE CHANGED BY THE COMMISSION OFFICE

STIPULATIONS ON AFFILIATION STATUS: *International offerings are limited to courses at the Jose Ortega y Gasset Foundation in Toledo, Spain.*

Institution *Recommended Wording:* NONE.

Team *Recommended Wording:* Same as institution's recommended wording.

NEW DEGREE
SITES:*Prior Commission approval required.*

<u>Institution</u>	<i>Recommended Wording:</i>	No prior Commission approval required for courses or programs offered throughout Minnesota.
<u>Team</u>	<i>Recommended Wording:</i>	Same as institution's recommended wording.

PROGRESS REPORTS
REQUIRED:*None.*

<u>Team</u>	<i>Recommended Wording:</i>	NONE.
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MONITORING REPORTS
REQUIRED:*None.*

<u>Team</u>	<i>Recommended Wording:</i>	NONE.
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CONTINGENCY REPORTS
REQUIRED:*None.*

<u>Team</u>	<i>Recommended Wording:</i>	NONE.
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OTHER VISITS
REQUIRED:*None.*

<u>Team</u>	<i>Recommended Wording:</i>	1999-2000; A visit focused on Academic Health Center; governance; management systems.
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LAST COMPREHENSIVE
EVALUATION:*1985-86.*TO BE CHANGED BY THE COMMISSION OFFICENEXT COMPREHENSIVE
EVALUATION:*1995-96.*

<u>Team</u>	<i>Recommended Wording:</i>	2005-06.
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UNIVERSITY
OF MINNESOTA

1996 Accreditation Self-Study
of the Twin Cities Campus

*A Land-Grant University
for the 21st Century*

Prepared for the North Central Association of Colleges and
Schools, Commission on Institutions of Higher Education

Office of Planning and Analysis
Office of the Senior Vice President for Academic Affairs

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April 1996

Office of Planning and Analysis

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INDEX OF WORLD WIDE WEB URLS

Collegiate Units:

Biological Sciences:
<http://molbio.umn.edu/cbs.html>

Carlson School of Management:
<http://www.csom.umn.edu/>

College of Agricultural, Food, and Environmental Sciences:
<http://beauty.agoff.umn.edu/~coafes/>

College of Architecture and Landscape Architecture:
<http://gumby.arch.umn.edu/>

College of Education and Human Development:
<http://www.coled.umn.edu/>

College of Human Ecology:
<http://www.che.umn.edu/>

College of Liberal Arts:
<http://cla-net.cla.umn.edu/clahome.html>

College of Natural Resources:
<http://www.gis.umn.edu/cnr/>

College of Veterinary Medicine:
<http://www.cvm.umn.edu/>

Continuing Education & Extension:
<http://www.cee.umn.edu/>

General College:
<http://www.gen.umn.edu/>

Graduate School:
<http://www.grad.umn.edu/>

Hubert H. Humphrey Institute of Public Affairs:
<http://www.hhh.umn.edu/>

Institute of Technology:
<http://www.itdean.umn.edu/>

Law School:
<http://www.umn.edu/law/>

Medical School:
<http://www.med.umn.edu/>

School of Nursing:
<http://www.nursing.umn.edu/>

School of Public Health:
<http://www.sph.umn.edu/>

Other Offices:

Administrative Information Services:
<http://notes.ais.umn.edu/>

Admissions:
<http://admissions.tc.umn.edu/>

Bookstores/Computer Store:
<http://www.bookstore.micro.umn.edu/>

Disability Services:
<http://www.disserv.stu.umn.edu/>

Emergency Management:
<http://www.tc.umn.edu/nlhome/m435/freed004/.html>

Environmental Health and Safety:
<http://134.84.147.72/>

Food Services:
[gopher://spinaltap.micro.umn.edu:70/11/providers/urel/Campus%20Services/Food %20Service](gopher://spinaltap.micro.umn.edu:70/11/providers/urel/Campus%20Services/Food%20Service)

Gay, Lesbian, Bisexual, Transgender Program Ofc:
<http://www.umn.edu/glb/>

Graduate Admissions:
<http://www.grad.umn.edu/grad/admis.html>

Housing Services:
<gopher://spinaltap.micro.umn.edu:70/00/providers/urel/Campus%20Services/Housing%20Services>

Institute for International Studies and Programs:
<http://www.isp.acad.umn.edu/>

Men's Intercollegiate Athletics:
<http://www.umn.edu/mica/>

Minneapolis Student Unions:
<http://www.umn.edu/msu/>

Minnesota Women's Center:
<http://www.umn.edu/mnwomen/>

Office of Budget and Finance:
<http://budoff.umn.edu/>

Office of Planning and Analysis:
<http://www.opa.pres.umn.edu/>

Office of the Registrar:
<http://www.umn.edu/registrar/>

Parking Services:
<gopher://spinaltap.micro.umn.edu:70/00/providers/urel/Campus%20Services/Parking>

Police Department:
<http://www.umn.edu/umpolice/>

Printing Services:
<http://www.umn.edu/printing/>

Program for Individualized Learning:
<http://www.pil.umn.edu/>

Security Monitor Program:
<http://www.tc.umn.edu/nlhome/g127/escort/>

Telecommunications:
<http://www.umn.edu/telecomm/telcom.html>

University Counseling & Consulting Services:
<http://www.uccs.umn.edu/uccswww/uccs.html>

University Networking Services:
<http://www.unet.umn.edu/>

Research Centers:

Biomedical Engineering Center:
<http://pro.med.umn.edu/bmec/bmec.html>

Charles Babbage Institute:
<http://www.itdean.umn.edu/cbi/welcome.htm>

Computer Science Research Projects:
<http://www.cs.umn.edu/Research/>

The Geometry Center:
<http://www.geom.umn.edu/>

Human Factors Research Laboratory:
<http://hawk.psych.umn.edu/>

Immigration History Research Center:
<http://www.umn.edu/ihr/>

Center for Interfacial Engineering:
<http://www.cie.umn.edu/>

Center for Magnetic Resonance Research:
<http://www.cmrr.drad.umn.edu/>

Institute for Mathematics and its Applications:
<http://www.ima.umn.edu/>

Center for Micromagnetics and Information Technologies:
<http://dec2.cems.umn.edu/mint.htm>

Minnesota Dental Research Center for Biomaterials and Biomechanics:
<http://web.dent.umn.edu>

Minnesota Microtechnology Laboratory:
<http://ee.ee.umn.edu:80/groups/mtl/>

MIS Research Center:
<http://www.misq.org/misrc/misrc.htm>

Natural Resources Research Institute:
<http://gp1.nrri.umn.edu/nrri.html>

Research Review:
<http://orta.umn.edu/>

Solar Vehicle Project:
<http://www.tc.umn.edu/nlhome/g259/umnsvp/>

Supercomputer Institute:
<http://www.msi.umn.edu/>

Vision Research Labs in the Department of Psychology:
<http://vision.psych.umn.edu>

Student Data and Information:

Student headcount (1980-1995 by registration unit):
http://www.opa.pres.umn.edu/studata/headcnt/hc80_95.htm

Full year equivalent students (1971-1995 by registration unit):
http://www.opa.pres.umn.edu/studata/fyestu/fye71_95.htm

Summary profiles of entering students:
<http://www.opa.pres.umn.edu/studata/profiles/profiles.htm>

Miscellaneous:

Graduate Degree Program List:
<http://www.grad.umn.edu/grad/gradprog.html>

PREFACE

This self-study report represents a transition from the era of printed self-study reports to the not-too-distant future in which information may only be available electronically. This report can be accessed through the World Wide Web and can be found until June 30, 1997 on the Home Page for the Office of Planning and Analysis (OPA). Reviewers may wish to begin by taking a quick trip to campus via the World Wide Web.

- University of Minnesota's Home Page: <http://www.umn.edu>
- OPA Home Page: <http://www.opa.pres.umn.edu>
- Accreditation Documents: <http://www.opa.pres.umn.edu/accred/accred.html>

Conducting a comprehensive self study for a complex institution presents many challenges, not the least of which is deciding which aspects of the institution to highlight. Undoubtedly, some important aspects of the institution were not included in this self-study report, and may become the focus for discussions during the site visit. We welcome the opportunity to provide additional "evidence in support of continuing accreditation" for additional topics that emerge during the site visit.

Just as the self-study process itself has been one of several major activities on the Twin Cities campus during the 1995-96 academic year, so too other events relative to the institution's mission will occur on the Twin Cities campus during the three-day site visit.

Undergraduate Education

- The President will host a reception at Eastcliff for approximately 50 student leaders at the University of Minnesota.

Research

- The Whitaker Foundation will be conducting a site visit in response to the September 1995 funding proposal entitled *Interactive Materials and Devices for Medical and Biological Engineering*, submitted by the Department of Chemical Engineering and Material Sciences.

Outreach

- A lecture in the Carlson Lecture Series will be given by Toni Morrison on May 13, 1996 in Northrop Auditorium, which will bring in thousands of students and residents, predominantly from the Twin Cities metropolitan area.

The role of the University of Minnesota in the State of Minnesota was captured in a speech entitled "The Culture of Minnesota" by Garrison Keillor, an alumnus of the University of Minnesota. A portion of which is reprinted here:

“The University is always the people’s university, and no matter that it is grumbled about in the legislature and scoffed at in every town tavern, it is a cornerstone of the culture of Minnesota, and it’s worth our support.

To speak up for the University of Minnesota is like writing an ode in praise of the sun -- you assume it’s been done before by smarter people -- but let’s say it anyway: the University is one of the glories of this state and has been since territorial days. More than any other single institution, it represents the great intellectual aspirations of the people of this state, and it stands a testament to the happy fact that a democratic society can encourage and enjoy excellence.

The University is a permanent beautiful place like the Boundary Waters or northeast Minneapolis or Al’s Breakfast Nook, and to us alumni, especially as we make the far turn in life, it is indescribably beautiful. How lucky we were to come here. And now, in our University’s hour of great danger and need, we should do the right thing and stand by her.”^a

^aPortions of the text of a speech given by Garrison Keillor at the University of Minnesota Alumni Annual Meeting, April 29, 1992, Bierman Athletic Field Building, University of Minnesota, Minneapolis, Minnesota

North Central Advisory Committee

The North Central Advisory Committee was appointed by President Hasselmo to guide the self-study process and the preparation of this self-study report. One special characteristic of the Advisory Committee was that it included two members from outside the University of Minnesota who contributed their time and perspective to assist in looking at the connections between the Twin Cities campus and the broader community in which it operates. Although it was a separately appointed and differently constituted committee with a different purpose, the perspectives of the Advisory Committee were an outgrowth of the work of the Twin Cities Campus Strategic Planning Advisory Committee, appointed on November 1993 by the Senior Vice President for Academic Affairs and Provost.

Professor Carole Bland, Family Practice and Community Health
Mr. Chris Boik, Minnesota Student Association
Mr. Joseph Branin, Collections Development and Preservation, University Libraries
Professor Frank Busta, Food Science and Nutrition
Professor Edward Cushing, Ecology, Evolution and Behavior
Professor Marilyn DeLong, Design, Housing and Apparel
Ms. Laura Dulan, Graduate and Professional Student Assembly
Dr. Linda Ellinger, Office of the Provost for Arts, Sciences, and Engineering
Dr. David Grossman, Continuing Education and Extension/University College
Professor Lauri Hayes, Department of Rhetoric
Dr. Harriett Haynes, University Counseling and Consulting Services
Dr. Darwin D. Hendel, Office of Planning and Analysis, Academic Affairs
Professor Karen Karni, Laboratory Medicine and Pathology
Professor Thomas M. Scott, Department of Political Science
Edson W. Spencer, Spencer Associates
Professor Craig Swan, Department of Economics
Marvin Trammel, Senior Vice President, Minneapolis YMCA
Professor Catherine Wambach, General College
Professor Frank Wilderson, Department of Educational Psychology

In addition to contributions made by members of the Advisory Committee, individuals from across the campus assisted in preparing this self-study report in the following ways: conducting special data analyses; contributing evaluative and descriptive information to be summarized in the report; suggesting important internal and external changes in the last decade; and reviewing drafts for accuracy and emphasis. The resulting report represents the collective contributions of faculty, staff, and students on the Twin Cities campus of the University of Minnesota.

The Office of Planning and Analysis in the Office of the Senior Vice President for Academic Affairs collected and assembled the materials included in this self-study report.

EXECUTIVE SUMMARY

This self-study report is an integral part of the decennial accreditation review of the Twin Cities campus of the University of Minnesota by the North Central Association of Colleges and Schools, Commission on Institutions of Higher Education. The 1986 self-study was a focused site visit that placed special emphasis on planning, faculty research, and graduate education. The University of Minnesota has been accredited by the North Central Association continuously since 1913. President Nils H. Hasselmo appointed the North Central Advisory Committee to prepare for the comprehensive self-study report to be used as background for the site visit in May 1996.

Shortly before the 1986 site visit, Kenneth H. Keller assumed the presidency of the institution and proposed an overall framework for the University's future called *A Commitment to Focus*, which was subsequently endorsed by the Board of Regents. The 1986 self-study report *A University at the Crossroads: Self-Study Report*, complemented *A Commitment to Focus*, and outlined the current status of programs, faculty, services and facilities, and suggested enhancements necessary if the goals articulated in *A Commitment to Focus* were to be realized.

The institution has undergone considerable changes in the last decade, some of which emerged from a particularly difficult time period following President Keller's resignation in 1987. The most significant of those changes are chronicled in this self-study report as background for understanding challenges currently faced by the University of Minnesota. With the appointment of Nils H. Hasselmo as president in 1988, the institution embarked on a new voyage that complemented the directions outlined in *A Commitment to Focus*. All aspects of the institution's mission have been integrated into a comprehensive planning strategy, *University 2000: Mission, Vision and Strategic Directions*, approved by the Board of Regents on January 14, 1994. No aspect of the institution has changed more in the last decade than the role and importance of the institution's undergraduate education mission, as was most recently outlined in the President's *Initiative for the Improvement of Undergraduate Education*.

When the 14-member Review Team from the North Central Association visits the Twin Cities campus May 13-15, 1996, they will find an institution in the midst of even more significant change than was the case in 1986: planning for the transition from a quarter to the semester system; possible changes in the faculty tenure system; continuing implementation of a Responsibility Center Management approach to budgeting; possible changes in the approach used by the State of Minnesota in its funding to the University of Minnesota; the continuing unfolding of a three-provostal administrative model for the Twin Cities campus; increased emphasis on accountability and on measures of institutional performance; new components in the continuing effort to improve the quality of undergraduate education; and concerns about the quality of the institution's graduate and professional programs.

At a time when the University of Minnesota is again looking forward, this self study provides an overview of the institution's present status, the changes that have taken place since the last review, and future challenges and opportunities. The title of the 1986 self-study report suggested that the University of Minnesota, like other institutions of higher education in 1986, found itself at "the crossroads". The University of Minnesota had

grown dramatically in the 1960s and early 1970s, reflecting a national trend in increased enrollments in higher education. New programs also were added in response to pressures to resolve societal problems. Large numbers of new faculty were hired to meet the instructional needs and to develop these new programs of study. In 1986, faced with the prospect of decreasing enrollments and shrinking financial support, the University of Minnesota proposed becoming a more clearly focused institution, engaging in activities for which, as the only comprehensive Ph.D. granting institution in the State, it was more clearly fitted, and to leave other activities to the other two- and four-year postsecondary institutions in the state. The Minnesota Legislature facilitated those changes by imposing undergraduate enrollment limits on the institution, the effects of which are clearly reflected in the institution's enrollments during the past decade. The three other separate public systems have now been merged into one system, the Minnesota System of Colleges and Universities, which has campuses throughout the state.

Advisory Committee

The Advisory Committee reviewed materials provided by North Central as a starting point in its design of the self-study process. The process began with a discussion of how to structure information collection procedures, and how the self-study report should be organized. The conclusion was to begin the self-study report with an overview of how the Twin Cities campus and the context in which it operates has changed since the time of the last self-study. Considerable attention was given to the institution's financial history during the last decade, and implications of additional possible changes in the future. The Advisory Committee also concluded that it was appropriate to devote a separate chapter to how the institution meets the General Institutional Requirements (GIRs), and to present an overview of the Advisory Committee's perspective on "the patterns of evidence" in support of the five criteria for accreditation. Given the complexity of the academic programs on the Twin Cities campus, the Advisory Committee further concluded that overviews of each of the collegiate units and other selected units provided an essential context.

The Advisory Committee began its conversations within the context of the institution's overall strategic planning process as articulated in the January 1994 *University 2000 Mission, Vision, Strategic Directions, and Performance*. That planning statement emphasized six strategic areas (research, graduate and professional education, undergraduate education, access and outreach, user friendliness, and diversity) and called for the development of "critical measures" for assessing institutional, campus, and unit performance in realizing the goals of U2000. Appendix A is a copy of the document that served as the framework in which this self-study was conducted.

The Advisory Committee has based the self-study report on the following sources: internal task force reports prepared in recent years; collegiate strategic plans submitted in recent years; national and local trends in the funding of university research; information collected as part of the development of institutional-level critical measures; the compilation of assessment efforts on various topics (e.g., program support and expenditures at the University of Minnesota versus other Big Ten public universities); analysis of program review documents; summaries of academic personnel records of relevant faculty characteristics (e.g., institutions from which faculty received their doctorates); characteristics of undergraduate, professional, and graduate faculty (e.g., sabbatical and single-quarter leave experiences) and students (e.g., student instruction, baccalaureate candidates degree survey, currently enrolled student surveys); and the experience and opinions of University students, faculty and administrators.

Structure and Content of the Self-Study Report

The report begins with an overview of the framework in which self-study process was conceptualized. The next chapter is an institutional overview of the context of the University of Minnesota and postsecondary education in the State of Minnesota. It also includes a brief summary of the University's response to the last accreditation review, and a description of significant changes since the 1986 review. The third chapter provides the University's response to the General Institutional Requirements (GIRs) and the five criteria for accreditation. The next chapter is an overview of the institution's strategic planning and performance assessment. The fifth chapter is an overview of the collegiate units on the Twin Cities campus. The remaining nine chapters describe and comment on the institution's current activities and initiatives within each of the six strategic areas and three related resource and infrastructure issues related to accomplishing the institution's mission (faculty, finances and infrastructure).

Significant Accomplishments in the Last Decade

During the past decade, the University's obligation to provide high quality undergraduate education received significant new attention, in part as a result of the 1983 report of the Task Force on the Student Experience and the appointment of a new central officer responsible for undergraduate education. The final report of the Task Force contained over 250 specific action steps to improve the quality of undergraduate education, approximately 15 percent of which had been implemented by the 1986 Accreditation Review and many more of which have been implemented in the last decade.

The starting point for significant change was the President's *Initiative for the Improvement of Undergraduate Education*, which framed an agenda for change based on the following seven key questions:

- Who should our students be -- and why? How do we attract students and make it possible for them to attend and graduate?
- What should the undergraduate curriculum be like?
- How do we provide advising and counseling?
- How do we assure quality teaching?
- How do we provide a good learning environment?
- How do we create a sense of community?
- How do we know that we are improving undergraduate education at the University of Minnesota?

Changes in the last decade were made through an internal reallocation of over \$100 million. The changes have made the Twin Cities campus a more vital, better institution. The many new buildings on the Minneapolis and St. Paul campuses are the most visible changes, but other less obvious improvements have reshaped the institution. Figure 2 is a statistical overview of how the institution has changed in the last decade.

The past decade also included numerous University initiatives to remove barriers to faculty research and to develop new programs to facilitate faculty research efforts. Among the accomplishments during the past decade are the following: the continuing use of special retention funds to prevent the loss of the University's best faculty; selected initiatives taken to increase all faculty salaries to compensate for gradual inflation losses; actions taken to enable the University to use the permanent endowment fund, together with funds from the Minnesota Capital Campaign, to increase the number of endowed chairs; the increased use of indirect cost-recovery funds from sponsored research to facilitate faculty research (e.g., more funds to help with equipment needs); several new research institutes and centers; and improvements in services that support faculty research, including University Libraries (e.g., the completion of automation, and the change to the Library of Congress classification system).

The University of Minnesota, and the Twin Cities campus in particular, is facing a number of major issues that, if resolved in a timely and effective fashion, can insure its place as a leading research university for the 21st Century. There is significant external pressure on the institution to change, but less clarity about exactly which changes are necessary and how they will result in improvements in institutional performance. One of the most significant issues for the institution concerns how we communicate to external constituencies about the many valuable contributions the institution makes.

Collection and reporting of information relative to the General Institutional Requirements (GIRs) suggested that we had been attending to those changing concerns considered as essential in accrediting an institution of higher education. Chapter III is an overview and discussion of supporting evidence included in the nine chapters. The institution is now entering a period of unparalleled change in the history of the University of Minnesota, that brings with it challenges and risks to the institution's continuing success in accomplishing its mission of teaching and learning, research and scholarship, and outreach and service.

Issues and Concerns

Planning activities during the last decade underscore the importance of formal planning processes in establishing clearly articulated institutional goals and in developing strategies for achieving those goals. The success of that effort relies on University leadership that presents a vision for the University, such as that articulated in University 2000. That institutional vision must be translated, however, by provosts, deans, and department heads/chairs into strategies and initiatives that improve quality relative to all aspects of the institution's mission. As the detailed analysis of the recently released National Research Council ratings and rankings suggest, the University's competitive position has slipped in the last decade. One critical issue that continues to present challenges for the institution is the linkage among planning, budgeting, and performance evaluating cycles, both within the institution and in the biennial budgeting request to the Minnesota Legislature, as well as the possible changes in how the State of Minnesota allocates funding to postsecondary institutions. Of central concern as well is the need for continuing initiatives to raise the quality of the undergraduate student experience on the Twin Cities campus to the same level of quality found in most of the institution's graduate and professional programs.

A second issue is the institution's success in addressing access and diversity. The tendency for the University of Minnesota to be less diverse in its student and faculty populations than other large research universities was noted in two previous North Central Reviews. The 1966 Review Team stated that students would benefit from

association with more high quality outsiders. At the time of the 1986 Accreditation Review, 88 percent of the undergraduates and 50 percent of graduate students were from the State of Minnesota. Of the doctorates awarded from 1978 to 1984, 20 percent were awarded to students born in Minnesota. A similar tendency was evident in statistics on institutions from which faculty received their doctorates: 29 percent of the Ph.D. holders on the Twin Cities campus received their doctorates from the University of Minnesota; the most recent figure is 21 percent. Current information on the characteristics of faculty and currently enrolled students suggests that the institution's diversity efforts in the last decade have yielded results in the composition of the institution's faculty and student populations.

Another theme revolves around the process through which the institution establishes future directions, identifies performance measures and associated performance goals, and mobilizes internal resources to achieve identifiable institutional goals. Especially important in this regard is the need for careful monitoring of how the proposed implementation of Responsibility Center Management (RCM) affects the institution's quality goals in its teaching, research and service missions. The coordination of efforts relative to RCM with other large-scale change efforts in the next several years is particularly critical.

A related issue centers on setting standards which will enable the University to improve educational quality in its many facets: strengthening the process of evaluating tenure-track faculty and providing them a range of development activities and financial support to enable them to be productive researchers, effective teachers and representatives of the University; recruiting the very best students and increasing the pool of financial aid resources available to students; implementing a more comprehensive periodic review of the institution's academic programs that places more emphasis on the assessment of undergraduate learning and performance outcomes; moving to being more effective in retaining the best and most productive faculty; and using budgetary mechanisms to increase the quality of instruction in those areas of the curriculum where improvement is needed. As the discussion in several of the chapters suggests, efforts in the last decade (e.g., large class improvement funding process, Bush Faculty Development Program for Excellence and Diversity in Teaching, and the Graduate School's Grant-in-Aid program) all have made a positive contribution at the University of Minnesota.

A particularly critical issue is the continuing erosion of the institution's funding, and the delicate balance among tuition revenues, support from the State of Minnesota, federal funding for research and development, and income generated through various other activities. This, too, was an issue noted a decade ago, when the University of Minnesota had experienced financial constraints as a direct result of the state's financial status. The University has attempted to protect academic programs as much as possible from serious long-term damage, but there is the belief that some erosion has occurred in the last decade, as a result of focused competition from both private and public research institutions.

Central to the institution's continuing vitality are the linkages between research and teaching and research and outreach. Oftentimes, those three aspects of the institution's mission are viewed as separate, whereas in reality they are mutually reinforcing and overlapping. Initiatives that link aspects of the institution's mission, such as the Undergraduate Research Opportunity Program which began a decade ago, provide undergraduates with educational experiences unlike those available in public higher education institutions elsewhere in the State of Minnesota.

A continuing topic of discussion is the role of the Twin Cities campus in providing access to baccalaureate education for residents of the seven-county metropolitan area. Significant changes have occurred in the last decade, including the undergraduate enrollment limits established by the Minnesota Legislature; the merger of the three other public systems into the Minnesota System of Colleges and Universities (MnSCU) and the expansion of Metropolitan State University and its offering of traditional baccalaureate degree programs; the initiation of the Twin Cities Higher Partnership; and the advent of numerous distance education mechanisms. In 1986, the Twin Cities campus was the only public institution that offered traditional baccalaureate degrees in this metropolitan area with a population of slightly over 2 million. As outlined in the planning strategy at that time, the University of Minnesota articulated the goal to become a more highly ranked graduate institution and to lower somewhat the ratio of undergraduate to graduate students. Those enrollment reductions have occurred, and the ratio of undergraduate to graduate students has been reduced.

Another issue that has emerged in the development of institutional-level critical measures is the condition of the institution's physical infrastructure: deferred maintenance needs, classroom renovation, and building accessibility requirements. This, too, was noted a decade ago in the statement, "The general condition of physical facilities on the Twin Cities campus is a serious concern, in spite of recent additions to the Minneapolis and St. Paul campuses." The University has excellent facilities in some areas, but is decades behind in modern classrooms and laboratories for both undergraduate and graduate students. Considerable change in the institution's physical structures have occurred in the last decade, but focused attention is now being placed on classrooms and laboratories. The results of a comprehensive recent study on classroom facilities and utilization has outlined a strategy that establishes a process to bring more classrooms in conformance with the capabilities needed for instruction in the 21st Century.

The connections between education and employment is another issue of concern to the institution. Statistics contained in the respective chapters discuss the campus employment opportunities for undergraduate as well as for graduate and professional school students. For undergraduate students, the primary concern is the high percentage of undergraduates who work many hours, out of necessity, in jobs that often have little direct educational value. For some students, work comes first and school comes second. For other students, the high pay rates for campus jobs may delay their graduation. These phenomena, among others, contribute to low retention and graduation rates on the Twin Cities campus. The concern for graduate students involves the allowable level of financial support for graduate students, which forces many to seek non-University employment that is detrimental to their graduate study.

Continuing attention to the various personnel and human resource issues that affect faculty and staff is essential. In 1986, the institution's efforts were somewhat fragmented, parallel personnel offices sometimes duplicated efforts, and there was little sense that there was an overall strategy guiding the various components in place across the campus. The institution has made significant progress in the last decade, by incorporating diverse services into a single operation in the Office of Human Resources. The need to monitor how the institution's human resources policies and procedures affect faculty and staff has been recognized in the development of an institutional-level critical measure to address three core issues: campus climate, development opportunities, and compensation.

The challenge today in an era of discussions of accountability, outcomes, and performance, is to demonstrate the "value added" by the University of Minnesota. We are a complex and multi-faceted institution, and as our experience in developing institutional-level critical measures has demonstrated, some of the institution's outcomes

are not describable in a comprehensive fashion, much less easily quantifiable. As this self-study report, and undoubtedly the site visit itself will suggest, there are alternative viewpoints about appropriate directions for the future. The concerns are significant, in part because some of the initiatives and discussions already underway suggest changes in how faculty and staff engage in activities in support of the tripartite mission of teaching, research and service. The challenges and opportunities are numerous, but the potential benefits to society and the extensions of the frontiers of knowledge are even greater.

CHAPTER I

FRAMEWORK FOR INSTITUTIONAL SELF STUDY

The Advisory Committee, after reviewing materials provided by North Central, decided to begin the self-study report with an overview of how the Twin Cities campus, including the context in which it operates, has changed since the time of the last self study. This broad contextual overview is especially appropriate since the 1986 Accreditation Review was a focused review that examined research, graduate education, and planning. The Advisory Committee decided to devote a separate chapter to how the institution meets the General Institutional Requirements and how the institution has addressed the five criteria for accreditation. Given the size and complexity of the academic programs on the Twin Cities campus, the Advisory Committee decided to include an evaluative and descriptive overview of each of the collegiate units and some other selected units.

The Advisory Committee began its conversations within the context of the institution's overall strategic planning process as articulated in the January 1994 *University 2000 Mission, Vision, Strategic Directions, and Performance*. That planning statement emphasized six strategic areas (research, graduate and professional education, undergraduate education, access and outreach, user friendliness, and diversity) and called for the development of "critical measures" for assessing institutional, campus, and unit performance in realizing the goals of U2000. Appendix A is a copy of the document that served as the framework in which this self study was conducted.

Early in its discussions, the Advisory Committee considered how it might proceed in organizing and evaluating information and in structuring the self-study report. Although it considered using the five criteria for accreditation outlined by North Central as the organizational framework for the body of the report, the Advisory Committee chose to use a different framework. The six strategic areas outlined in *University 2000* were chosen as the framework for the self-study report, but supplemented by additional themes, some identified by the Advisory Committee and some identified in the *University 2000 1995 Supplement*, submitted in October 1995 by the U2000 Strategic Planning Group. This committee also chose to devote more discussion on the four strategic areas that reflect institutional outcomes, than on the two other strategic areas and supplementary topics that enable the institution to achieve its desired outcomes. Each of the nine topic areas listed below is covered in a subsequent chapter of this self-study report. Chapter V characterizes the academic programs of each of the collegiate units on the Twin Cities campus.

Outcome Areas

- Undergraduate education
- Graduate and professional education
- Research
- Outreach

Enabling Areas

- Diversity
- User-friendliness
- Finances
- Faculty
- Infrastructure

Within each of the outcome and enabling areas identified above, the Advisory Committee discussed and identified the particular types and sources of information that would be useful in its discussions. Each of those nine chapters contains considerable evaluative and descriptive information about each of the outcome and enabling areas. Those chapters were then used in formulating overall evaluative commentary and conclusions included in the section of Chapter III that addressed the criteria for accreditation.

In contrast to that which sometimes occurs in smaller institutions where the self-study process is the most significant process on campus, the self-study process was one of the several major discussions occurring during the 1995-96 academic year. Figure 1 illustrates the scope of the changes currently underway at the University of Minnesota, and suggests that the 1995-96 academic year was one with even more major discussions being considered than is typical in large, complex educational institutions. Several of the changes are described in greater detail in an appropriate subsequent chapter of this self-study report. What follows are brief descriptions of selected major activities that might be particularly salient on campus during the site visit in May 1996.

Transition to the Semester System

On October 13, 1995, the Board of Regents formally approved the recommendation from President Hasselmo that all campuses of the University of Minnesota change from a quarter to a semester calendar, effective fall quarter 1999. Central administrators in the Office of the Senior Vice President for Academic Affairs, together with the leadership of the Senate Committee on Educational Policy and the University Senate, are guiding the most significant curriculum transformation process in the history of the University of Minnesota.

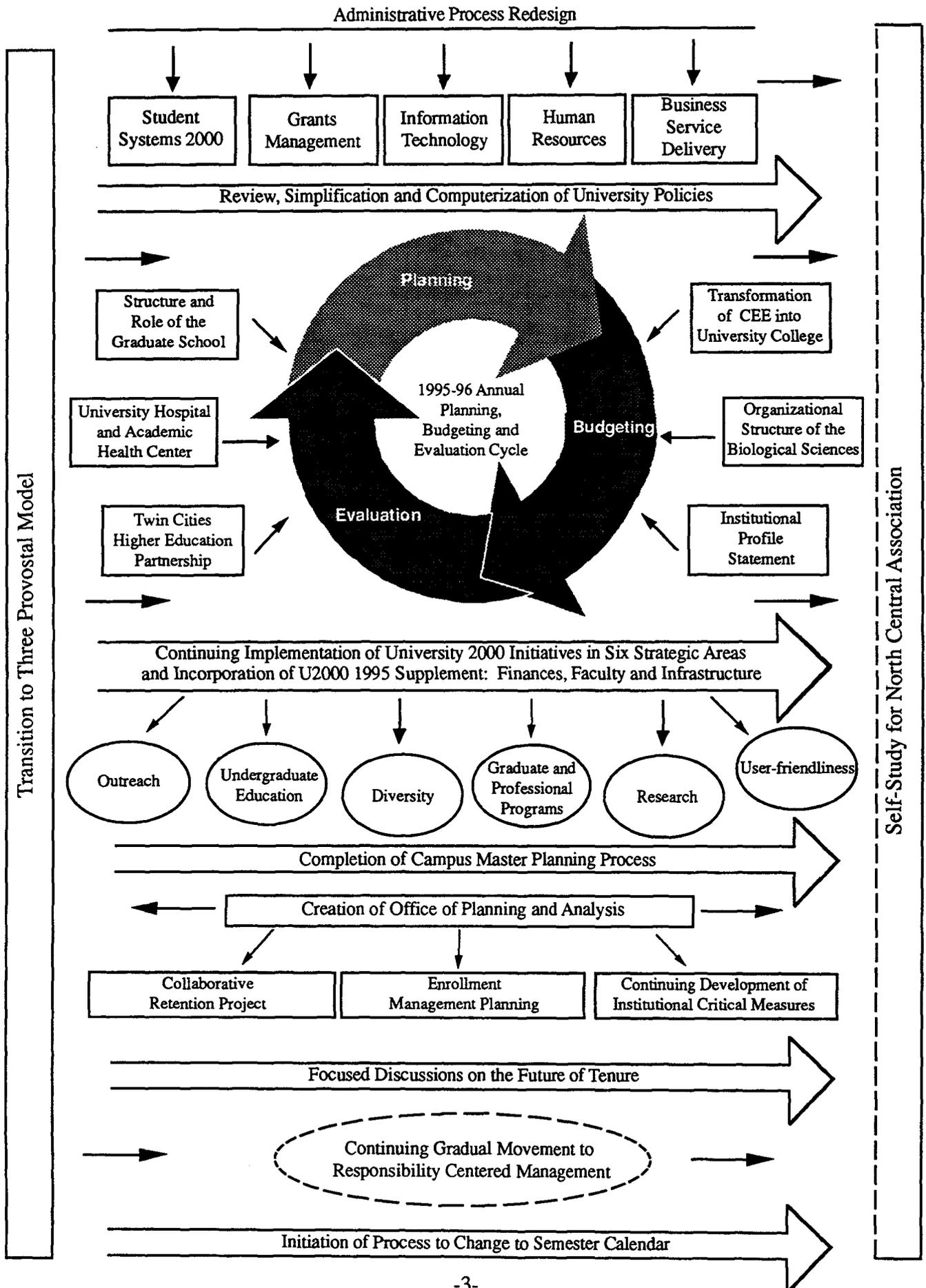
Responsibility Center Management

In May 1995, in response to the increased administrative interest in the generic concept of Responsibility Center Management (RCM), President Hasselmo appointed a steering committee to evaluate the merits of different versions of this particular approach to planning and budgeting.

Over the summer of 1995, the committee, supported by the Office of Planning and Analysis, prepared a report to guide the evaluation by the steering committee of the merits and design of RCM for the University of Minnesota. Members of the steering committee have studied the options, and have submitted their findings in a draft report that served as the basis for continuing discussions about the gradual implementation of RCM.

The first part of the report answered a series of questions about the nature and purpose of RCM and its appropriateness and applicability to the University of Minnesota. The second part provided information on four key areas of the budgeting process (tuition, facilities, indirect cost recovery (ICR), and state funds) in need of review whether or not the RCM concept is formally adopted. A major finding of the committee was that many

Figure 1
Major Transformations Occurring Simultaneously with the North Central Self-Study Process



elements of RCM already existed at the University, and some have been in place for several years. RCM, if implemented further at the University, would hardly be a radical change or a totally new approach to planning and budgeting, but rather a continuation of an evolutionary process that has reached a stage where the four key elements of the budgeting process need systematic review. The committee's recommendation was to proceed to review each of the four items and to assess over the course of the 1995-96 academic year the institutional impact of changes proposed for the future and changes made to date. The committee believed that some changes can be phased in during fiscal year 1996-97, and that full implementation could begin with the 1997-98 fiscal year.

Transition to the Provostal Model

A significant organizational change became effective on July 1, 1995 that separated the Twin Cities campus into three provostal areas (Academic Health Center; Arts, Sciences, and Engineering; and Professional Studies), whereas previously the position of Provost and Senior Vice President for Academic Affairs were held by the same individual. Concerns about the previous structure included the need for arts and sciences leadership to parallel leadership in the agricultural and health sciences areas, and the wide span of control that the previous model required. The purposes of the reorganization were as follows: (a) to create a clearer organizational structure, to provide more effective institutional management and to ensure the successful implementation of the strategic objectives of University 2000; and (b) to separate system and central staff responsibilities from campus/provostal area responsibilities.

A Transition Advisory Committee was appointed to advise on governance issues prompted by the reorganization. The related Transition Task Force Steering Committee, chaired by the two senior vice presidents, was instructed to manage and coordinate the assignments to be performed by the Task Force Systems Subcommittee and the Task Force Provostal Subcommittee.

The principles used to guide the implementation of the new organization were as follows: (a) assign explicit decision-making authority and accountability to the Chancellors of the coordinate campuses and to the three Provosts of the Twin Cities campus; (b) assign explicit responsibilities to system officers providing staff support to the President; (c) separate system and campus responsibilities; (d) separate staff and line responsibilities; (e) provide clear reporting and consulting lines; (f) assign manageable spans of responsibility; and (g) flatten and decentralize the organization to minimize the number of layers between faculty and central administrators.

The outcome of extensive committee work during 1994-95 was presented to the Board of Regents in July 1995. The report *Administrative Roles, Responsibilities and Requirements at the University of Minnesota* outlined roles and responsibilities for central, campus, provostal and departmental administrators in each of the following 15 areas:

- Data Collection, Management, and Analysis
- Environmental, Health and Safety
- Financial Management
- Instruction
- Management of Human Resources
- Management of Information Technology
- Management of Institutional Relations
- Management of Minority Affairs and Diversity Issues
- Management of Outreach Activities
- Management of Student Affairs

- Management of University Facilities
- Office of the General Counsel
- Research, Scholarship, and Management of Sponsored Programs
- Resource Allocation
- Strategic Planning

Extensive outlines that delineate levels of responsibility in each of the above areas are available for review. Taken together, these documents outline how the three provostal model will operate.

Administrative Process Redesign Efforts

In July 1995, President Hasselmo appointed the Administrative Process Redesign Group, co-chaired by the Senior Vice President for Academic Affairs and the retired CEO of ADC Telecommunications, as one of the institution's efforts to integrate the process of reengineering administrative and management information systems. The first efforts of the group centered on identifying as their highest priorities those systems redesign efforts that are already underway and that need immediate attention to ensure that on-going efforts are coordinated and integrated into a comprehensive institutional redesign program. The areas identified were as follows:

- Student Systems -- The project "Student 2000: Student Support Systems for the Year 2000 and Beyond" will replace existing student information systems to enhance student transactions with the University to ensure that system changes required for the semester conversion are met, and to meet the needs imposed by the year 2000.
- Grants Management -- Efforts are underway regarding the roles and responsibilities of the Office of Research and Technology Transfer Administration (ORTTA), and the long-term changes necessary for effective oversight and compliance regarding research grants.
- Information Technology -- Consolidation of academic and administrative information technology areas began in October 1995.
- Human Resources -- Review is underway for redesigning major human resources processes and systems. Efforts addressed roles and responsibilities, policies and procedures, information systems, organizational modifications, and training. Redesign principles and strategies were developed before a timetable was established.
- Business Service Delivery (Procurement) -- Efforts to improve delivery of business services have focused on the areas of purchasing and procurement and included the following:
 - Increasing the number of transactions and vendors on the online purchasing system to reduce transaction costs
 - Consideration of increasing the number of pre-approved travel agencies to reduce the paper processing of travel document
 - Use of a University-wide procurement card to reduce processing of paper invoices
- Other Areas of Prioritization -- Process redesign principles and strategies were developed for further improvements in financial management systems, student systems, and facilities utilization.

Discussions about the Future of Tenure

Over the past three years, faculty consultative and governance leadership has been working with University administration to address a series of human resources issues and management problems that affect faculty life and work in carrying out the teaching, research and outreach missions of the University. These efforts coincided with questions inside the University and outside (e.g., in the Minnesota Legislature, the Governor, the public) asking: How can the University maintain faculty and staff morale and improve performance in accomplishing its diverse missions during an era of persistent underfunding? The January 1996 discussion document *Faculty Appointment, Tenure, and the Research University -- Issues and Alternative* introduced the issue as follows:

In response to plans set in motion by U2000 initiatives, to discussions between faculty and administration during the 1994-95 academic year, to the installation of a provostal system of administration on the Twin Cities campus, and to their own deliberations, the Board of Regents requested an analysis of the definition, status and role of faculty tenure both nationally and at the University of Minnesota. The discussion is being carried out during the 1995-96 academic year and is scheduled to conclude in summer 1996.

There are approximately 3,500 faculty (professor, associate professor, assistant professor, lecturer, etc.) in the University of Minnesota system. Of the 3,096 faculty on tenure track in 1994-95, 2,588 (84 percent) were tenured and 508 (16 percent) were untenured. Between 1989-90 and 1994-95 the number of new faculty hires per year has varied from 171 in 1989-90 to just over 100 in the two most recent years.

The discussion document has served as background for a series of faculty-led, University-wide forums to discuss faculty appointments and tenure, and followed two discussions with the Board of Regents in late 1995. The first discussion focused on national trends and issues and featured a presentation by a prominent national authority on faculty tenure in higher education, and was followed by a faculty panel that provided responses to the discussion. The conclusion in the discussion document was that there was: “. . . inevitability of change in the Tenure Code and the requirement that changes be designed by faculty working with the administration.”

The second session focused on the tenure process, statistics, and critical issues at Minnesota. Materials provided a brief overview of the process for awarding or denying tenure, selected statistics showing the breakdown of tenure-track and tenured faculty by college and campus, the rate of tenure, and an issues paper.

In a February 12, 1996 meeting with department chairs, the chair of the Faculty Consultative Committee made the following observation:

“Across the country, most of the 200 peer institutions of the University are looking at tenure, so this is not unique to Minnesota. Some would say, in fact, that the way Minnesota is approaching the discussion is exemplary for faculty: it is a faculty-led effort. Both the administration and the Board have said there is a constitution in place and it will be followed.”

Subsequently, two faculty-led forums on tenure occurred in March and an editorial appeared in the February issue of *Kiosk*, a newsletter for faculty and staff, to begin the process of debating the detailed proposals for language changes. Additional meetings are scheduled.

Academic Health Center and the University Hospital and Clinic

A major institutional issue currently under discussion is the reorganization of the Academic Health Center and the possible merger of the University Hospital and Clinic with a large nearby private health care system. The Academic Health Center faces an urgent need for fundamental restructuring: all funding sources are under extreme pressure; intense competition has reduced the University's access to patients; and the rapid expansion of managed care is shifting the demand of health professionals' skills. A comprehensive reengineering effort has begun to restructure and redesign educational and research programs to respond to these changes. The AHC has recently requested additional state funding to support reengineering and for information technology to improve educational delivery.

Although the current year is not a year in which the University of Minnesota submitted a biennial budget request to the Minnesota Legislature, certain budget issues have been discussed, including the University's request for \$14.5 million dollars to implement changes in the Academic Health Center. The proposed legislative language specified that the additional funding be linked to institutional performance measures, such as the revision of tenure policies for clinical faculty in the Academic Health Center. As of the end of March 1996, the tentative additional allocation is \$8.6 million and the legislative language indicates the Board of Regents must certify that changes have been made in personnel policies so that the University can downsize and change the salaries of faculty in the Academic Health Center.

CHAPTER II

INSTITUTIONAL OVERVIEW AND CONTEXT

When the Twin Cities campus of the University of Minnesota was last accredited in 1986, the institution found itself at "the crossroads" in terms of its future. That perspective was reflected in the title of the report *Self-Study: A University at the Crossroads*. The Board of Regents had appointed Kenneth H. Keller as the new president of the University of Minnesota in 1985. President Keller proposed *A Commitment to Focus* as a plan for the institution's future. That statement, subsequently endorsed by the Board of Regents, provided a context for the preparation of the self-study report that gave special attention to planning, faculty research, and graduate education. Those three areas will be revisited as part of the current comprehensive self study of the Twin Cities campus of the University of Minnesota.

Shortly after the 1986 Accreditation Review, the report of the Advisory Task Force on Planning (June 1987) titled *Plan for Focus: University of Minnesota, Twin Cities Campus* outlined recommendations on campus-wide priorities and made extensive use of the 1986 accreditation self-study report. The transmittal letter from the Chair of the Advisory Task Force on Planning included the following statement:

"The Task Force developed a grave concern about the drift toward mediocrity in many of the academic programs on the Twin Cities Campus, particularly within the traditional arts and sciences core. This concern was unanimous; the recommendations developed to reverse this trend represent a consensus without dissent. The truly difficult challenge was to see how to fund this action within an overall constant budget. The inevitable conclusion was that, in order to do some things better, in order to assure that the undergraduate education on this campus will be at an acceptable standard as we move into the next century, it will be necessary to close some programs unless some substantial increase in funding is coming from the State. In the face of reported retrenchments in the last decade, we thought it ill-advised to make partial reductions which would result in further lowering of quality."

The choice of the words "the crossroads" in 1986 certainly anticipated the fact that the University of Minnesota, like many other similar institutions, was at the beginning of a decade that posed many serious challenges to institutions of higher education. In anticipation of the challenges facing the institution as it enters the 21st Century, President Hasselmo proposed the strategy *University 2000 Mission, Vision, Strategic Directions and Performance* to guide the institution's institutional change efforts. That statement, approved by the Board of Regents on January 14, 1994, provides the framework currently being used to guide the institution in its strategic planning efforts.

The University of Minnesota, with its four campuses, is one of the most comprehensive in the country and ranks among the leading universities in the United States. It is both the state land-grant university, with a strong tradition of education and public service based on its academic reputation, and a major research institution, with scholars of national and international reputation. The University has set a goal of further improving its academic reputation as one of the top public institutions in the country.

The Twin Cities campus in Minneapolis and St. Paul includes 20 colleges and offers approximately 160 undergraduate majors, as well as over 300 graduate and professional degrees. Total enrollment on the Twin Cities campus for fall quarter 1995 was 36,995, of which 8,299 were students enrolled in the Graduate School. The University of Minnesota, Twin Cities, also was ranked one of the top 25 "best college buys" among national universities by the *U.S. News & World Report 1994 Guide to Colleges*.

According to the 1995 National Research Council's assessment of 41 doctoral programs in arts, sciences, and engineering, the University ranked 9th among U.S. public universities, based upon total score of all ratings above 3.5 for the scholarly quality of the graduate faculty, and 20th among all U.S. public and private universities. Fifteen programs were ranked in the top 20 in the nation, of which five were in the top ten. Top-ranked programs include: chemical engineering (1), geography (3), psychology (7), mechanical engineering (8), and economics (10). As the extensive discussion in Chapter VII: Graduate and Professional Education suggests, however, some slippage has occurred in the last decade, some of which is attributable to increasing competition from both public and private research institutions elsewhere.

Several of the University's professional programs also ranked in the top 20 in the nation according to the *U.S. News & World Report's 1996 America's Best Graduate Schools*. Top-ranked health science programs on the Twin Cities campus include pharmacy (3), public health administration (5), public health (6), dentistry (7), rural medicine (University of Minnesota, Duluth) (2), primary care (University of Minnesota, Duluth) (2), and nursing (21). Overall, the College of Education and Human Development ranked 13th in terms of its academic reputation among all U.S. public and private universities. Top-ten ranked education programs are: educational psychology (5), counseling/personnel psychology (1), special education (4), and vocational technical education (2). Other distinguished University professional programs based on their reputation also include MBA (21), the part-time MBA (9), management information systems (2), architecture (13), law (17), social work (20), drama/theater (20), and music (25).

In fall 1995, the President appointed an *ad hoc* committee of six faculty to think about the "profile" for the University of Minnesota to provide further guidance in the continuing implementation of University 2000. Their final report *Statement on the Profile of the University of Minnesota*, submitted in December 1995, includes the following statements:

"A university's profile is that combination of highly visible characteristics that gives a university its identity, both internally and externally, and differentiates it from other institutions of higher learning. It is important not only because it defines a university for its publics, but also because it shapes and colors what the university does and how it does it.

The University of Minnesota's profile has been, and should continue to be, that of a major land-grant research university with its flagship campus located in a large metropolitan area. As a research university, its primary commitment is to the generation of knowledge as well as to its preservation and its dissemination by publication and teaching. As a land-grant university, its commitment is to the dissemination of knowledge far beyond the confines of the campus and the scholarly community; it seeks to put basic research into practice through professional education, outreach programs, and knowledge and technology transfers, bringing not only research to practice, but the experience of practice back to research.

Being a great research university, and acknowledging that we are one, best defines what we are and what we do. The great research universities of this country are among the world's great educational and intellectual centers. Individually we are engines of economic development for our states and regions, but we are more than that. We are places of pride, positive influences on the quality of life, agents for solving social problems. Our libraries and all of our research facilities are important regional resources. We have, moreover, played a pivotal role in the development of the most open and extensive system of higher education in the world. Those indeed are reasons American research universities are the envy of the rest of the world and why the rest of the world sends many of its brightest young talents to us. We have every reason to be proud of our past and every reason to be confident of our future if only we will act to insure it."

A brief overview of significant events and developments is necessary to a current understanding of the institution. In preparing this chapter of the self-study report, several individuals were asked to list the significant events of the last decade that have affected the campus, and administrators of particular units were asked to respond to specific issues identified in the 1986 site visit team's report. The second section is an overview of how postsecondary education in Minnesota has changed since the last accreditation review. The third section is a brief overview of the Twin Cities metropolitan area, and how selected changes in the metropolitan area have provided both opportunities and challenges for the University of Minnesota. The fourth section of this chapter is an overview of selected other major developments that occurred during the 1995-96 academic year at the same time as the preparation of the self-study report. The final section briefly responds to the overall institutional issues and concerns that were posed in the 1986 site visit team report.

Significant Changes in the Last Decade

Since the last accreditation review in 1986, the University of Minnesota has become a somewhat different institution as a result of its responses to forces from within and outside the institution. Most of the changes that are briefly described in this section are discussed in greater detail elsewhere in this self-study report.

Overall Institutional Characteristics and Enrollment

The Legislative Assembly incorporated the University of Minnesota as a preparatory school in 1851, seven years before the Territory of Minnesota became a state. The University of Minnesota was included in the Land-Grant Act of 1862, and it has constitutional autonomy from the State of Minnesota. It became an institution of higher education in 1867, and William Watts Folwell became its first president in 1869. Although there are 66 publicly funded campuses in the State of Minnesota most of them (N=53) are located outside of the metropolitan Twin Cities area.

The University of Minnesota consists of four degree granting campuses and several other educational, research, and outreach facilities across Minnesota. The Crookston campus, which became part of the University of Minnesota in 1966 and offered two-year degrees in agriculture-related fields, recently gained approval to change to a four-year institution offering career-oriented baccalaureate programs. The Duluth campus, which joined the University in 1947, offers primarily undergraduate programs, with some graduate programs coordinated by the Graduate School on the Twin Cities campus and a two-year Medical School. The Morris campus, a four-year liberal arts campus begun in west central Minnesota in 1960, is one of the few nationally known public liberal arts institutions. The Twin Cities campus, with facilities in both Minneapolis and St. Paul, consists of 20 separate collegiate

units, organized as of July 1, 1995 into three provostal areas: Academic Health Center; Arts, Sciences, and Engineering; and Professional Studies. A fifth campus of the University of Minnesota was located in Waseca, and offered two-year technical degrees until its closure in 1992 as part of the institution's overall planning and budgeting process. Although the Mayo Medical School in Rochester has not been affiliated with the University of Minnesota since December 1982, the University of Minnesota maintains a presence in the Rochester area through its programming with other institutions in the Rochester Center.

In addition to its four campuses that offer degree programs, the University of Minnesota, especially through research and outreach activities centered on the Twin Cities campus, maintains a physical presence and significant impact throughout the state. These other facilities, most of which are specialized research facilities, include the following: Hormel Institute in Austin, the Lake Itasca Forestry and Biological Station, the Cloquet Forestry Center, the Rosemount Research Center, the Horticultural Research Center at Excelsior, the Landscape Arboretum near Chanhassen, and the Agricultural Experiment Stations at Rosemount, Crookston, Grand Rapids, Lamberton, Morris, and Waseca. Through its outreach efforts in Continuing Education and Extension/University College and the Minnesota Extension Service, the University of Minnesota provides opportunities to a significant percentage of Minnesota's citizens.

Overall fall quarter day school enrollment across all campuses declined from 56,076 in 1985 to 48,091 in 1995, a result of intentional strategies to reduce overall undergraduate enrollments as well as the closure of the Waseca campus. For the Twin Cities campus, fall enrollments declined from 44,490 in 1985 to 36,995 in 1995, a decline from 79 percent to 77 percent of total system enrollment. Table 1 indicates the actual enrollments on the Twin Cities campus and for the system for the period from 1965-66 through the present, and projected enrollments for the next several years. Enrollment in fall quarter 1995 was 66,772 if enrollments in Continuing Education and Extension/University College (CEE/UC) are included.

In January 1986, the Twin Cities campus had 10,031 total academic employees, 12,484 total civil service employees and 4,034 total hospital employees. Current figures are 11,685 academic employees, 14,166 civil service employees, and 4,054 hospital employees.

Changes in Presidency of the University of Minnesota

President Kenneth H. Keller, inaugurated as the twelfth president in November 1985, served as president until his resignation in March 1988. He was succeeded by Interim President Richard Sauer, who served until Nils H. Hasselmo was appointed President in January 1989. President Hasselmo has announced that he will retire in June 1997.

Organizational Structure and Administrative Changes

A major change in the organization of the University of Minnesota during the 1994-95 academic year restructured central and campus administration, especially the organization of the Twin Cities campus. At the time of the 1986 self-study, the Twin Cities campus administration consisted of the president and seven vice presidents: Academic Affairs and Provost; Agriculture, Forestry and Home Economics; Finance and Operations; General Counsel; Health Sciences; Institutional Relations; and Student Affairs. There were chancellors for each of the four campuses at Crookston, Duluth, Morris, and Waseca. Provostal responsibilities on the Twin Cities campus were combined with those of the Senior Vice President for Academic Affairs. In May 1990, the position of Vice Provost for Arts, Sciences, and Engineering was created.

Table 1

Enrollments on the Twin Cities Campus of the University of Minnesota,
 Actual Enrollments (1965-66 - 1994-95) and
 Projected Enrollments (1995-96 - 1999-2000)^a

Year	Twin Cities Campus	System Total
1965-66	36,187	41,640
1966-67	37,615	43,435
1967-68	39,151	45,485
1968-69	40,285	46,920
1969-70	42,424	49,955
1970-71	42,878	50,580
1971-72	43,061	50,799
1972-73	41,220	49,451
1973-74	41,005	49,464
1974-75	42,970	51,494
1975-76	45,289	54,727
1976-77	45,788	55,761
1977-78	44,778	55,077
1978-79	44,828	55,203
1979-80	45,789	56,290
1980-81	47,386	58,705
1981-82	47,427	58,903
1982-83	47,383	58,962
1983-84	46,445	57,831
1984-85	44,659	56,050
1985-86	44,590	56,076
1986-87	45,006	56,443
1987-88	44,293	55,924
1988-89	42,571	54,517
1989-90	41,016	53,339
1990-91	40,972	53,294
1991-92	39,315	50,886
1992-93	38,019	48,994
1993-94	37,548	48,524
1994-95	36,699	47,647
1995-96	37,217	48,375
1996-97	38,319	49,582
1997-98	38,613	49,984
1998-99	39,101	50,563
1999-2000	39,232	50,694

^aSource: Office of Planning and Analysis, 9/4/95

Now the administration includes the president; two senior vice presidents, one for Academic Affairs and one for Finance and Operations; vice presidents for Institutional Relations (currently vacant), Research, and Student Development and Athletics; and the General Counsel. As of July 1, 1995, there are three provosts on the Twin Cities campus: Academic Health Center; Arts, Sciences and Engineering; and Professional Studies. There are chancellors for the campuses at Crookston, Duluth, and Morris.

The past decade has witnessed numerous leadership changes at the University of Minnesota, from the level of president and vice presidents to the deans of the collegiate units. Several recent changes have occurred in the transition to the three provost model. Appendix B "Administrative Changes" is a chronology of changes in those individuals holding central administrative positions in the last decade.

Centers and Institutes

Although disciplinary based departments continue to be the primary structure and home base in which faculty engage in research, teaching and service activities, interdisciplinary activities and research centers have become increasingly prominent in the last decade. Although there is no central coordination of centers and institutes, they clearly are an important component of the institution's efforts. Some centers cut across departments or collegiate units, others are groups of faculty within a department, and others may represent the entrepreneurial spirit of single faculty members. A detailed listing of centers and institutes is contained in Chapter XIII: Faculty.

Ten-Year Statistical Comparisons

This self-study report includes detailed statistical information about the overall characteristics of the University of Minnesota, as well as information specific to the strategic areas currently identified by the institutional planning process. Summarizing that detailed information and indicating similarities and changes during the past decade provides another perspective on how the institution has changed in response to both internal and external change factors.

One of the purposes in summarizing certain data, especially in the areas of faculty research and graduate education for the 1985-86 accreditation report, was to provide a base of information "that will serve as the basis for an evaluation of the effects of planning when the next North Central Association Accreditation Review occurs in 1996." Although much of that data in the previous report focused on research and graduate education, the Advisory Committee identified additional types of information that would serve as a ten-year comparison of central characteristics and institutional outcomes of the University of Minnesota. Figure 2 below illustrates the changes that have occurred in certain aspects of the University of Minnesota in the last decade. Information in Figure 2 is summarized within each of the strategic areas identified in University 2000 and parallels the organization for Chapters VI to XIV in this self-study report.

As the statistics in Figure 2 suggest, the University of Minnesota, Twin Cities campus has changed considerably in the last decade, especially in the arena of undergraduate education: overall undergraduate enrollments have declined and the ratio of graduate/professional school students has declined according to plans outlined a decade ago; more undergraduate students apply for admission as freshmen and the institution has become considerably more selective in its freshman admissions; the demographic characteristics of entering freshmen have changed somewhat, including in residency, ethnicity, and academic preparation; retention and graduation rates have improved slightly; and mean class section sizes and adviser/student ratios have decreased.

Figure 2

**Institutional Changes Over Ten Years
Twin Cities Campus**
(All dollar amounts reported as constant 1995 dollars)

	<u>Ten Years Ago</u>	<u>Most Recent^a Information</u>
Overall Institutional Characteristics		
Total institutional budget	\$1,416,168,000	\$1,686,972,000 ^b
Percent of budget supported by state funds	31.0%	26.6%
Fall quarter total headcount		
Day School Twin Cities campus enrollment only	44,590	36,995
Degrees awarded, all levels	9,366	8,867
Ratio of undergraduates (to graduate and post-baccalaureate professional students combined)	3.9	2.6
Undergraduate Education		
Total fall quarter undergraduate headcount enrollment	31,068	23,561
UM percentage of statewide undergraduate enrollment	25%	18%
MN private college and universities (percentage of statewide undergraduate enrollment)	17%	21%
Number of freshman applications	9,386	13,271
Number of fall quarter new freshmen	5,072	4,356
New freshman mean high school rank	69.5	73.9
New freshman mean ACT composite score	22.4	23.9
Ratio of freshman selectivity (percentage admissions to complete applications)	85.7%	62.1%
Number of fall quarter new advanced standing (students with 39 or more transfer credits)	4,048	2,235
Student/advisor ratio, CLA lower division (1987-88, 1993-94)	577:1	275:1
Student/advisor ratio, CLA upper division (1987, 1992)	942:1	622:1
Five-year graduation rate for entering (NHS) freshmen (1986 and 1990 cohort)	28.8%	33.5%
Mean number of years to completion of baccalaureate degree (1986 and 1990 [estimated] cohort)	5.34	5.21
First year retention rates (all entering NHS)	78.5%	80.3%
Baccalaureate degrees awarded (1984-85, 1994-95)	5,772	5,162
Associate degrees awarded (1984-85, 1994-95)	258	3
Percent of entering freshmen living in residence halls (Fall 1987, 1995)	51%	70%
Percent of undergraduates from Twin Cities metropolitan area	72%	57%
Percent of undergraduates from Minnesota	88%	74%
Percent of undergraduates who are women	46%	50%
Percent of undergraduates who work (1985, 1991, estimated)	74%	83%
Median age of undergraduates	21.5 years	21.0 years
Percent of students receiving some type of financial assistance (both need and merit based)	48%	69%
Mean number of credits per quarter	12.1 credits	12.2 credits
Undergraduate majors	155	172
Student-faculty ratio	14.6 to 1	15 to 1

Fall quarter mean section size(upper and lower division)	32.6	27.7
Lower division mean section size (1986, 1993)	35.9	29.6
Central allocation to improve course access	zero	\$1.2 million
Number of UROP participants	285	362
Allocation for UROP awards	\$276,600	\$388,350
Study Abroad participation (1989-90, 1994-95)	521	535

Graduate And Professional Education

Degree programs offered		
Master's	162	198
Doctoral	119	116
Enrollment in Graduate School (headcount)	7,466	8,299
Enrollment in Medical School (headcount)	980	855
(See Table 5 for registration in each collegiate unit)		
Doctoral degrees awarded	515	686
National ranking for number of doctoral degrees	na	4th
Master's degrees awarded	1,881	2,271
National ranking for number of master's degrees	na	24th
Post-baccalaureate professional degrees awarded	743	682
Median age of professional school students	27 years	25 years
Median age of Graduate School students	29years	28 years
Percent of currently enrolled graduate students from Minnesota	50%	52%
Percentage of graduate students who are women	46%	46%
Number of faculty with appointments in the Graduate School	2,434	2,841
NRC national ranking of public doctoral programs in public institutions (1982, 1993)	8th	9th
Number of fellowships (annual new awards by Graduate School)	74	68
Stipend of Graduate School Fellowship Program	\$9,958	\$10,875
Number of Doctoral Dissertation Fellowships	53	57
Stipend of Doctoral Dissertation Fellowship	\$11,617	\$11,360

Research

Number of proposals submitted (ORTTA)	2,750	4,302
Dollars of sponsored funding from all sources (1983, 1995)	\$123 million	\$294 million
Federal support (1984, 1993)	\$176 million	\$245 million
Institutional rank in federal funding for research and development (1983, 1993)	16th	16th
Percentage of external funds from U.S. government	75%	51%
Percentage of Medical School funds from state (1982-83, 1992-93)	26%	20%
Number of faculty receiving instituional summer research grants	60	27
Number of patents approved	11	34
Number of Graduate School grants-in-aid awarded	308	175
Average amount of current Graduate School grant-in-aid	\$9,050	\$13,711

Outreach

Fall quarter headcount enrollment (credit courses offered through Continuing Education and Extension; now CEE/University College)	18,115	15,124
Number of enrollees in Independent Study courses	7,500	6,528
Number of enrollees in CEE conferences		
1994-95 Professional Development Programs & Conferences	na	16,050
1994-95 CME conferences	na	8,220
Summer school enrollment	24,360	22,216
Summer-only enrollment (Not previously enrolled at the University)	2,468	2,933
Attendance at concerts and lectures (Northrop)	na	194,428
Participation in PSEO (On campus enrollment in Post-Secondary Enrollment Options Program)	214	1,233
Number of hospital inpatients	19,991	16,855
MINITEX (statewide) borrowing from University Libraries	na	230,000 items
Number of members in Minnesota Alumni Association	30,000	35,000
Number of alumni chapters nationwide	11	60

User Friendliness

Computer work stations (faculty, staff, and students; estimated)	few	20,000
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Diversity

Percent of entering freshmen students of color (Fall 1990, Fall 1995)	11.6%	17.4%
Fall quarter headcount enrollments, undergraduate students of color	2,948	4,566
Baccalaureate degrees awarded to students of color	221	425
Percentage of new female faculty hires	27.6%	34.7%
Percentage of Ph.D.s granted to minority students	4.9%	3.8%
Percentage of master's degrees granted to minority students	3.6%	6.5%
Number of international students	2,535	2,548
Percentage of students with disabilities (estimated)	na	5%

Finances

Sources of income (system wide)		
State appropriations	31%	27%
Student tuition and fees	11%	12%
Federal appropriations	2%	1%
Gifts, grants, contracts	19%	24%
Hospital earnings	18%	19%
Auxiliary service income	9%	8%
Department earnings	8%	7%
Endowments and investment income	2%	2%

Funding from the State of Minnesota	\$433 million	\$462 million
State direct instructional expenditures per full year equivalent student	\$4,356	\$5,327
Tuition revenue as a percentage of instructional expenditures	34.0%	40.8%
UM's percent share of MN state and local tax revenues	4.5%	4.0%
Auxiliary income (bookstores, dormitories, dining facilities, parking)	\$129.8 million	\$134.4 million
Students employed on campus through Student Employment Office	13,415	8,578
Number of alumni donors (1981, 1995)	22,098	21,000
Undergraduate resident tuition		
Liberal Arts upper division	\$74.68/credit	\$77.82/credit
CLA undergraduate resident annual tuition and required fees	\$2,686	\$3,423
Student Services Fee	\$126	\$142
Infrastructure		
Volumes held in University Libraries	4+ million	5+ million
National ranking of library holdings	14th	17th
Libraries acquisitions fund	\$5.9 million	\$6.4 million
Number of microcomputers sold at bookstore	3,000	6,300
Campus bus ridership (Route 13)	3.6 million	2.7 million
Commuter bus ridership (Route 52)	939,000	459,000
Parking spaces	14,000	19,000
E-mail messages per week	none	2 million
Gopher servers	none	6,700
Number of buildings with serious or major safety code deficiencies	na	116
Percentage of classrooms below standard	na	66%
Deferred maintenance: Percent of total asset value	na	32%
Total gross square footage	17,415,203	19,121,012 ^c
Total assignable square footage	10,596,003	11,651,004 ^c
Faculty and Staff		
Instructional faculty	3,120	2,840
Professional and Administrative	1,978	3,027
Student academic	4,933	5,818
Total academic	10,031	11,685
Non-student civil service	7,964	8,950
Student civil service	4,520	5,216
Total civil service	12,484	14,166
Non-student hospital	3,523	3,729
Student hospital	511	325
Total hospital	4,034	4,054
Total number of Twin Cities employees ^d	26,549	29,905

Percentage of total class hours taught by faculty rank		
Professor	23%	40%
Associate Professor	17%	22%
Assistant Professor	14%	13%
Teaching Assistant or Associate	32%	14%
Other	14%	12%
Percentage of faculty who are tenured	50%	71%
Percentage of full professors	37%	47%
Number of endowed chairs and professorships	17	238
Mean age of faculty	46	50
Mean number years on faculty	12 years	15.5 years
Percentage of minority faculty	6%	9.2%
Percentage of women faculty	20%	24%
Percent of faculty with Ph.D.	65%	65%
(Significant numbers have advanced professional doctoral degrees such as D.V.M., M.D., J.D., D.D.S., etc)		
Average faculty class contact hours per week	8.5	9.5
Average number of graduate advisees	4.4	5.5 ^e
Number of Grant-in-Aid research awards (Graduate School)	446	326
Number taking a sabbatical	105	119
Number taking a single quarter leave	116	90
Salary by rank		
Nine month appointees:		
Professor	\$65,383	\$71,067
Associate Professor	\$46,558	\$49,018
Assistant Professor	\$39,590	\$41,663
Instructor	\$32,577	\$29,199
Twelve month appointees:		
Professor	\$75,578	\$77,201
Associate Professor	\$59,007	\$58,880
Assistant Professor	\$49,498	\$49,466
Instructor	\$40,736	\$42,842

^a Unless otherwise specified, the comparison is for the Twin Cities campus only, and is between 1985-86 and 1995-96; enrollment and other related information refers to the fall quarters of the two academic years.

^b All dollar amounts have been converted to constant 1995 dollars, and compare 1986 to 1996.

^c Total floor area of the room available to the assigned occupant or use. If the space is prorated, the assignable area should be proportionately allocated.

^d Source: Geographic Location Report: January 15 payroll snapshot. "Twin Cities" includes: Minneapolis campus, St. Paul campus, St. Paul Experimental Station, St. Paul Extension Service, Rosemount Station, and Hospitals. The split on instructional (94xx classes) faculty and P&A (93,96,97xx classes) was made using percentages of Twin Cities colleges from the Headcount Run from the Personnel Data Base.

^e It is uncertain how the 1986 statistic was calculated. For current data, the mean is 5.5 if only fall and winter quarters are included. The mean is 6.2 if students registered within two years are included.

Relative to the institution's research mission, the institution's faculty numbers have declined, but their success in obtaining outside funding has remained strong: proposals submitted and federal support dollars have increased dramatically; and the sources of research funding have changed as well.

In the past decade the institution's outreach activities have remained extensive, although the particular activities and accomplishments have changed to respond to the needs of the publics served by the institution.

A decade ago, concerns about diversity in its many facets were beginning to emerge, and the institution has addressed many of those concerns with new initiatives, the outcomes of which are only now being demonstrated. And a decade ago, the term "user friendliness" and "customer service" were not yet part of our lexicon or institutional counting mechanisms, so that statistical comparisons are not available.

Central to the institution's success in accomplishing its mission are the faculty, the finances available to the institution, and the institution's infrastructure to support faculty, staff, and students. In the last decade, the size and characteristics of faculty have changed; faculty salaries have increased slightly; a higher percentage of faculty are tenured; and their responsibilities and work load have increased. The institution's overall finances have remained strong, largely as a result of considerable internal reallocations; the future portends even more significant changes and challenges. Statistics alone can convey only some of the infrastructure changes in the last decade and the challenges in the future.

Considered as a whole, the statistics suggest an institution that has made notable changes, and a faculty and staff that are maintaining high levels of productivity in a time of new challenges and declining resources. Undoubtedly, this is a concern likely to be voiced in meetings during the site visit.

Major News Issues

During the past decade, the University of Minnesota has been the focus of considerable negative publicity about some aspects of its internal operations. The institution has taken these crises as opportunities to reform certain aspects of its operation. The three major issues since 1985 and the institution's response to each are briefly described below.

Financial Management. Cost overruns in remodeling Eastcliff, the official residence of the University president, and the public disclosure of a central reserve fund that initiated academic programs but that also helped to pay for the project, led to the resignation of President Keller in March 1988.

When he became president in 1989, Nils Hasslemo's highest priorities were to strengthen financial management and re-commit the University to a high standard of accountability to the people of Minnesota. To help meet this commitment, the University has undertaken the following initiatives:

- Established a comprehensive budget process on the size and uses of central reserves
- Installed a computerized financial management system
- Reorganized Facilities Management
- Appointed a University audit compliance officer

Reform of Intercollegiate Athletics. In response to NCAA rules violations between the years 1983 and 1987 and to low graduation rates of its student athletes, the University of Minnesota has taken a leadership role in the reform of intercollegiate athletics throughout the country. Actions in this area include:

- Appointment of a full-time athletic compliance officer to monitor compliance with NCAA and conference rules
- Establishment of an Ad Hoc Committee on Intercollegiate Athletics, which led to new mission and goal statements for athletic departments
- Development of an academic counseling program to provide scholastic support to male and female athletes

Because of the issues raised in the mid-1980s, Chapter V: Collegiate Overviews, Plans, Actions, and Concerns includes a somewhat detailed discussion of the current status of Men's and Women's Intercollegiate Athletics.

Medical School and the Department of Surgery. Since 1992, much of the University's effort to improve accountability has focused on the Medical School and the Department of Surgery. Improved internal reporting, accounting and auditing practices have included:

- Restructuring and eventual closure of the Anti-Lymphocyte Globulin (ALG) program due to of FDA regulations violations
- Identification of management and oversight problems in the Medical School and the Department of Surgery, leading to management changes and an annual review of income and expenditures
- Revision of the medical practice plan policy and public disclosure of physicians' salaries

Changes in Personnel Policies and Practices

Subsequent chapters discuss in detail changes in personnel policies and practices in the last decade, and their effects on faculty in particular. This section highlights the status of three major developments.

Consolidation of Personnel Offices. Discussions began in 1991 that have resulted in the consolidation of the academic and civil service operations into a single human resources unit. Consultants worked with the Office of Human Resources to define a new, customer-focused mission for Human Resources that supports the institution's mission and to develop an internal structure and management process for the consolidated Human Resources function. The consultants' final report *Human Resource Consolidation*, July 1992 outlined the advantages of a consolidated office over the previous structure of two separate personnel offices as follows:

- The new office will provide "one-stop shopping" for information, policies, and services for all employees while at the same time, recognizing that each group -- faculty, professional and administrative, graduate assistants and staff -- has unique needs and traditions that must be preserved. The goal is to reduce confusion and redundancy, resulting in a more streamlined and coordinated human resource function

- The new office will emphasize outcomes over process. The goal is to become more accountable for helping "customers" get what they need in less time and with less bureaucracy and paperwork
- The new office will provide comprehensive professional development opportunities for all employees in a systematic, coordinated fashion

The consolidation has provided an opportunity to take stock of priorities. Resources now can be focused on those areas of higher priority and away from less important human resources functions.

New Policies on Conflict of Interest, Conflict of Commitment, and Research Integrity. During the past decade, the University of Minnesota has responded to the increasing concerns for accountability by developing a set of processes and requirements that more clearly address how faculty carry out their institutional responsibilities in light of related professional activities. Among the developments are the following: new policies on Conflict of Interest and Conflict of Commitment have been drafted; development of institutional level-critical measures, including measures that focus on faculty members' accomplishments (e.g., research, scholarship and artistic accomplishments); development of collegiate work load policies; and enhanced grants management policies and procedures. More detail on some of these developments is included elsewhere in this self-study report.

Resolution of the 1980 Consent Decree. In 1980 the University of Minnesota entered into the Rajender Consent Decree with the U.S. District Court of Minnesota to resolve a class action sex discrimination complaint. The University of Minnesota resolved "to correct previous inequities, if any, and to achieve on behalf of women full representation with respect to faculty employment at the University of Minnesota." At the time of the last Accreditation Review, there had been a total of 310 claims and petitions since August 1980, 42 of which were still pending. The University of Minnesota was required by a 1980 court decree to establish an Affirmative Action program for female academic non-student employees and applicants. The Rajender decree was signed by the President in 1980 and extended to 1991. Specifically, it required that the University advise women of available positions, to make a good-faith effort to hire qualified women, that a written hiring plan be filed with the EEO officer, and that the outcome of the search process be approved by the EEO officer before the position could be offered to an applicant. Salary adjustments for women academic employees occurred in 1987. More detailed information is contained in Chapter XIII: Faculty.

Overview of Internal Changes in Institutional Financing

This section highlights several of the changes both within and outside the institution that have directly affected institutional finances and accounting procedures. More detailed discussion can be found in Chapter XII: Institutional Finances.

Retrenchment and Reallocation of Resources. At the time of the last self study, the Twin Cities campus was one of five campuses of the University of Minnesota (other campuses included a comprehensive campus at Duluth, a liberal arts campus at Morris, and two-year technical institutions at Crookston and Waseca). Since that time the two-year technical campus at Waseca was closed and the two-year campus at Crookston was changed to a four-year institution offering career-oriented baccalaureate degrees. The closing of the campus at Waseca is noted to convey the seriousness of the budgetary issues that have confronted the institution in the last decade. More recent additional closures include the Gray Freshwater Biological Institute, the Mineral Research Resources Center (MRRC),

and the Underground Space Center. The University of Minnesota adopted in 1991 a five-year plan for internal restructuring and reallocation of resources. Approximately \$100 million has been reinvested in high priorities over the five-year period. The continual process of retrenchment and reallocation of resources has been used to fund a portion of the salary increases for faculty and staff.

Changes in institutional finances in the last decade are due, in large part, to the changes in public funding for higher education. Nationally, spending on higher education grew in 1995-96 for the third straight year (*Chronicle of Higher Education*, October 20, 1995), but the growth barely outpaced annual inflation rates. Minnesota ranks 12th in its 1995-96 total state appropriations, but ranked 32nd in the two-year change adjusted for inflation, with zero percent change over the past two years.

The Minnesota Campaign. The University of Minnesota launched the Minnesota Campaign in 1986, a \$300 million fund-raising effort to enhance the University's quality. The state contributed to this effort by the decision of the 1985 Minnesota Legislature to release the \$65 million Permanent University Fund (PUF) to increase the number of endowed chairs and other endowed faculty positions. Some of the research areas for special emphasis included basic biology, high-speed computing, cognitive science, information processing, economic development, comparative culture and civilization, and ethics and values in a new age. The central role that faculty play in the linkage between the University's instructional and research missions is well-summarized by the following statement:

“A university stimulates the spirit of inquiry, fosters skills of evaluation, and caters to the innate creativity of its students. All of this can best be performed by a faculty that in its own work demonstrates creativity, skills of evaluation, and a spirit of inquiry.” (Minnesota Capital Campaign Statement on the Strength of a University, p. 2)

Release of PUF Endowment. The Permanent University Fund (PUF) is an endowment of the University of Minnesota which has been accumulated from several sources, including the original land grants and certain dedicated proceeds from mining taxes and timber lands. For a long period prior to 1987, it was the practice to deduct the earning of the PUF reserve from the state gross appropriation, a practice that provided no current assistance to the University and little incentive to maximize current earnings. Thus the investment practice was to build the reserve by investing for capital appreciation rather than current income.

The 1985 session of the Minnesota Legislature agreed to abandon the offset of the PUF earnings to allow use of the PUF as a source of endowment for teaching and research chairs when matched by privately donated endowment gifts. The program has been fully utilized and has resulted, as of the end of the 1995 fiscal year, in the endowment of 238 chairs and professorships, of which private pledges for 233 have been obtained.

Release of Indirect Cost Recovery (ICR) Revenue by the State. Like all research universities, the University of Minnesota receives substantial reimbursements from the federal government and other research sponsors for the indirect costs of conducting sponsored programs. The historical practice was to deduct nearly all of this income from the state's gross appropriation to the University. In 1983, 95 percent of an estimated recovery of about \$14.5 million was being offset. In the ensuing years the Minnesota Legislature has gradually agreed to reduce this offset, leaving the budgeting of the funds so released to the discretion of the University. In 1996, the remaining offset is \$6.5 million, or about 15 percent of the estimated recoveries of \$43 million. Currently, the only restriction imposed by the legislature is that the released funds be used for the encouragement of research, broadly interpreted.

Property Inventory and Audit. During fiscal 1993-94, a complete inventory of existing University equipment was carried out. No single point inventory had been conducted for many years, and while the existing perpetual inventory was found to be more accurate than was to be expected, many errors were found involving uninventoried property, property on the inventory that could not be located and was written off, and property whose location, custody, and use was not correctly recorded. A result of having a more complete property inventory is that the University's cost studies for federal and other purposes are far more reliable and the rates derived from them can, more confidently, be regarded as maximal.

Changes in the Health Sciences

One of the most visible set of events in the last decade concerned certain aspects of the operation of the Health Sciences (now the Academic Health Center) on the Twin Cities campus. Both fiscal and legal problems brought into clear focus the need for reforms.

The Academic Health Center (AHC) includes more than 14,000 faculty and staff in seven professional schools and a health care system. Its annual expenditures are 40 percent of the University's total budget (less than 20% of this budget comes from taxpayers), and it educates more than 5,000 students in medicine, dentistry, pharmacy, public health, nursing, allied health professions, and veterinary medicine. It has equipment, facilities, and systems to care for more than 400,000 clinic and hospital patients annually, and a research enterprise of more than \$132,460,000 in annual program expenditures (about half of the University total).

There are many benefits to the state from the Academic Health Center. More than 80 percent of the state's health care professionals are graduates of the AHC. It attracts \$120 million annually in federal research funding and \$80 million net health care revenue from out-of-state referrals. Research breakthroughs have enhanced the state's reputation for health care innovation.

The AHC faces a need for fundamental restructuring: all AHC funding sources are under extreme pressure; the shift of area patients to managed care organizations has reduced the University's access to patients and thus, drastically reduced its major source of revenue; and the rapid expansion of managed care is shifting the demand for health professions' skills. The AHC has begun a comprehensive reengineering effort to restructure and redesign its education and research programs to respond to these changes. They have recently asked for state funding to support reengineering and for information technology to improve educational delivery. The University Hospital and Clinic are negotiating a merger with a large nearby private health system.

Physical Facilities

During the past ten years several new buildings have been completed or nearly completed, in contrast to more limited new construction in the previous decade. In addition to the construction of new buildings, considerable effort and investment have addressed overall campus environment issues (e.g., improved signage on campus) as well as the up-dating of classroom facilities. Major financial investments are necessary in the campus steam plant. The discussion of options has led to considerable controversy about the decision on fuel sources for the steam plant. The need for renovation of classrooms and the reduction of deferred maintenance is being addressed as part of the institutional-level critical measures that have been developed as part of the U2000 planning process. Chapter XIV: Infrastructure includes more detail on the extensive facilities infrastructure changes that have occurred in the last decade, and outlines a strategy for improving classrooms on the Twin Cities campus.

Emphasis on Technology Transfer

No overview of changes in the last decade would be complete without mentioning the increased emphasis on "technology transfer," a term that became somewhat of a buzzword during the latter half of the 1980s. That term became visible within the institution in 1984 with the review of the Office for Research and Technology Transfer Administration.

Technology transfer is the process of obtaining technical knowledge, ideas, services, and inventions from their origin and applying them. Currently, work is underway by the Office of Planning and Analysis, as part of the development of the third phase of institutional-level critical measures, to outline a framework for measuring the institution's performance in this increasingly important arena.

Attention to Intercollegiate Athletics

The last decade has posed a series of challenges for intercollegiate athletics on the Twin Cities campus of the University of Minnesota. Although the self-study process did not address intercollegiate athletics in depth, in part because of the separate certification process recently instituted by NCAA, it is appropriate to provide a somewhat detailed evaluative and descriptive overview. Chapter V sections on Men's and Women's Intercollegiate Athletics includes some of the significant developments in intercollegiate athletics since the time of the last Accreditation Review.

After nearly a year of work, the Blue Ribbon Panel to review the Gopher football program and develop recommendations for improving its competitiveness submitted its report *Blue Ribbon Football Panel Report*. In his September 1995 Report to the Board of Regents, President Hasselmo's position relative to three key issues were stated as follows:

- There are no plans to pursue a "winning at all costs" strategy. As expressly stated in the panel's report, "Winning should not, cannot and need not be pursued at the expense of the institution's integrity, the academic welfare of its student athletes, nor to the detriment of its other priorities."
- There are no plans to build a new on-campus football stadium. While prudent management requires and will include the consideration of long-term site options, the University intends to abide by its current lease agreement to play home football games in the Hubert H. Humphrey Metrodome until the year 2012.
- There are no plans to relax academic standards for student athletes. While the University has a special obligation to students whom it recruits, that responsibility does not include a compromise in scholastic expectations to the exclusion of other undergraduates.

Participation in Pew Roundtable and ACE/Kellogg Project

In the last decade, the University of Minnesota has been the recipient of several substantial grants and institutional transformation projects that have had a significant impact on the institution. Some of those, such as the Bush Faculty Development Program for Excellence and Diversity in Teaching and the Teaching Opportunities Program for Doctoral Students, are described elsewhere in this self-study report. One notable recent project that has affected the campus as a whole was participation in the Pew Roundtable, the second part of which is now the ACE/Kellogg Project.

The University of Minnesota is one of over 130 colleges and universities engaged in a partnership with the Pew Higher Education Roundtable to undertake discussions with members of their campus communities. This group represents a broad range of higher education institutions: public and private, two- and four-year, large and small institutions, residential and community colleges, comprehensive doctoral-granting institutions, and major research universities from throughout the United States. Together these institutions comprise a national laboratory, testing means to bring about constructive change to higher education. Collectively, the institutions are undertaking a search for "best practices" to make colleges and universities more effective and efficient places of learning.

The American Council on Education (ACE) has launched a project "Leadership and Institutional Transformation" funded by the W. K. Kellogg Foundation to help colleges and universities not only respond to external pressures for change, but also take charge of change. Twenty-six institutions were selected through a national competition from a pool of 110 applications to work with one another, ACE staff, and a team of consultants. In selecting participants, ACE sought a diverse group of institutions that were ready to undertake serious and far-reaching change. The University of Minnesota is one of the three research universities, along with Michigan State University and the University of Arizona, selected to participate in the project. This project builds on the work that has already been done in the context of the Pew Higher Education Roundtable.

The project encourages institutions to identify and address their own agendas for change, focusing on both substantive change themes such as improving teaching and learning, internationalizing the campus or redefining curricular priorities, and on change processes, including such issues as the role of leadership throughout an institution, the underlying values and assumptions, and creating a climate of trust and civility. A probable theme for the University of Minnesota's project is the Freshman Year Experience, that will enable the institution to pull together and expand the several initiatives that currently are underway and to address issues of retention and graduation. The five goals for the ACE Project are as follows:

- Help participating institutions to clarify their agendas for change, to create processes, programs, and strategies that facilitate change, and to enhance their capacity to undertake significant change.
- Provide frameworks and discussion guides to help institutions specify their intended outcomes and the processes for achieving them.
- Create opportunities for participating institutions to share experiences and strategies with other participating institutions through cluster meetings, inter-institutional visits, and electronic communications.
- Maintain regular contact with participating institutions through Senior Liaisons to facilitate forward movement.
- Assist participating institutions in monitoring their progress towards achieving their intended outcomes.

Collaboration in Distance Education

In the last few years, regular discussions, led by the Graduate School, have occurred between the University of Wisconsin-Madison regarding the collaborative offering of courses. As a result of those discussions, a "home institution" model has been developed that suggests roles and responsibilities in distance education initiatives. At the heart of this

venture are the individual faculty and staff involved in the department that is sponsoring the course, as well as the faculty and staff at the student's home institution. Initial planning assumed that discussions are occurring on each campus regarding the need for a campus-wide coordinator or liaison for distance education.

Changes in Postsecondary Education in Minnesota

Although it is not necessary to chronicle in great detail how postsecondary education has changed in the State of Minnesota in the last decade, a few major changes that have affected the University of Minnesota are worth noting as overall contextual developments.

Minnesota Higher Education Policy

The University of Minnesota has constitutional autonomy, but it is nevertheless affected by higher education policies enacted in the State of Minnesota. The January 1993 document *A History of Minnesota Higher Education Policy* is a brief overview of the history of higher education governance and coordination in Minnesota. The conclusion from that analysis was that the directions of higher education policy over the past 45 years could be characterized in three eras describing the distribution of responsibility and decision making: the campus era, the system era, and the legislative era.

In the period from 1946 through 1962, the campus era was characterized by policy development at the campus level in which the legislature and the executive branches presumed a strong "hands off" approach to higher education. In the period between about 1963 and 1983, authority became more centered in the several state governing boards, including the Board of Regents and state coordinating boards, and less at the individual campus level. The legislative era, which began shortly before the 1986 Accreditation Review, marked the increase in efforts of the Minnesota Legislature to address policy issues, including a new funding formula in the early 1980s that linked appropriations to enrollments. This legislative involvement continued into the 1990s when budget crises increased the pressure on the Minnesota Legislature to consider major policy changes and to consider alternative ways of delivering and funding higher education.

Some particularly relevant legislative actions since the time of the last accreditation self study include:

1987

Legislature strengthens Minnesota Higher Education Coordinating Board (MHECB) authority to direct development of intersystem plans.

Legislature directs MHECB to assess implications of changing definition of full-time student status used in state grant program from 15 to 12 credits.

1988

Legislature directs MHECB to conduct a major study of higher education needs in two phases: metropolitan corridor, and remainder of state.

1989

Legislature requires systems to study and plan for: quality education on each campus experiencing growth; mechanisms to encourage timely completion; and preparation requirements to improve academic readiness of entering students.

1990

Legislature requires each governing board to develop a plan for managing its enrollments and to submit plans for providing undergraduate and practitioner oriented graduate programs in the metropolitan area.

1991

MHECB recommends in its MSPAN 2 report that no new campuses be created, better planning be done through greater attention to demographics, and Metropolitan State University be expanded into a comprehensive four-year institution.

1992

Levi commission recommends that: state policies be explicit; systems be held responsible for funding to implement those policies; and cooperation be improved by establishing regional advisory boards.

1995

Minnesota Legislature abolishes MHECB and its program review and approval roles and creates the Minnesota Higher Education Service Office.

Changes Relative to the State of Minnesota's Funding of Higher Education

Several changes affecting the structure and funding of higher education in Minnesota have occurred during the last decade.

Proposed Changes in Legislative Funding for Higher Education. Currently, Minnesota appropriates approximately 90 percent of its general fund monies for higher education directly to the University of Minnesota and to MnSCU, and the remaining 10 percent is appropriated for direct financial aid to students. During the same time period between 1985 and 1995, the tuition and fees increases surpassed increases in Minnesota per capita income adjusted for inflation. The increases ranged from 17 percent in the Minnesota Community Colleges to 55 percent for Minnesota Private Colleges; the percentage increase for the University of Minnesota was 62 percent. State funding for higher education has declined considerably since the last Accreditation Review, from 15.8 percent for 1986-87 to 11.8 percent for the 1996-97 biennium. A more complete discussion of specific changes is included in Chapter XII: Institutional Finances.

Recent Linkages between Legislative Funding and Performance Measures. In recent years the Minnesota Legislature required that state agencies submit performance reports and has linked agency performance to agency funding. Although higher education was not included initially, the requirement was expanded to include higher education agencies starting in 1994.

Fortunately, the University of Minnesota had initiated the development of a set of institutional-level critical measures that were ideally suited to that purpose, and they served as the basis for the first *Annual Performance Report*, which was submitted to the Minnesota Department of Finance on October 31, 1994. The report contained two parts: Part I outlined the University 2000 planning process and presented the baseline information and performance goals for the first five institutional-level critical measures that had been previously approved by the Board of Regents; and Part II presented information on institutional performance according to the seven NACUBO categories suggested by the Department of Finance.

In addition to the submission of an annual performance report, the development of institutional-level critical measures has been viewed favorably by the Minnesota Legislature in its movement towards performance based funding for higher education.

The 1995 Minnesota Legislature took an initial step to link some institutional funding to institutional performance. One million dollars of the institution's 1995-97 budget is linked to each of the following five performance measures:

- Characteristics of Entering Students: increases at the Twin Cities campus, excluding General College, in the percent of 1996 new entering freshmen ranking in the top 25 percent of their high school class.
- Retention: increases in the rate of retention of 1995 new entering freshmen.
- Underrepresented Groups/Diversity: increases in the number of 1996 new entering freshmen who are minority students and increases in the percent of faculty hired in 1995-96 who are women or minorities.
- Graduation Rate: increases in the five-year graduation rate measured between August 1994 and August 1996.
- Additional Performance Goal not Included in the University's Critical Measures: increases in the number of credits issued through telecommunications between fiscal year 1995 and fiscal year 1996.

Merger of Other Public Systems. At the time of the last self study, the University of Minnesota was one of four public postsecondary systems in Minnesota. As a result of action taken in 1992 by the Minnesota Legislature, the other three previously separate systems (i.e., the Minnesota System of State Universities, the Minnesota Community College System, and the Minnesota System of Technical Colleges) were merged as of July 1, 1995 into a single system named the Minnesota State Colleges and Universities (MnSCU). MnSCU is now a consolidated system of 62 community colleges, state universities, and technical colleges. Fall 1994 headcount enrollment for MnSCU was 162,988, compared to 47,647 for the University of Minnesota and 53,836 for private colleges and universities in Minnesota. The proposed MnSCU budget for 1996-97 is supported by state appropriations (58%), student tuition and fees (33.5%), funds from the federal government (4.5%), and other miscellaneous income (4%).

Enrollments in Postsecondary Education in Minnesota

Enrollments in Minnesota postsecondary education institutions for fall quarter 1995 decreased from the previous fall, according to figures prepared by the Minnesota Higher Education Services Office (MHESO, formerly MHECB). Preliminary headcount for fall 1995 was 268,166, a decrease of 1.3 percent, or 3,604 students, from fall 1994. Enrollment in public institutions fell 2.7 percent while enrollment in private institutions increased 2.7 percent. Over the past five years, total headcount enrollment decreased by 1.9 percent, from 273,473 to 268,166. Enrollment in public institutions decreased 6.5 percent, while enrollments in private institutions increased 13.9 percent.

Among public institutions, enrollments increased by nine-tenths of a percent at the University of Minnesota but decreased 3.8 percent at MnSCU campuses. Within MnSCU, enrollments decreased 4.1 percent in state universities, 3.1 percent in community colleges, 4.7 percent in technical colleges, and seven-tenths of a percent in consolidated colleges. In July 1995, three pairs of campuses consisting of community and technical colleges consolidated their operations. More consolidations are planned in future years.

Among private institutions, enrollments increased by 1.9 percent in colleges and universities, 5.8 percent in graduate and professional schools, and 5.9 percent in private career schools.

In addition to declining enrollments, changes have occurred in the distribution of enrollments. For the first time in fall 1995, private colleges and universities had the largest single share, 21 percent, of Minnesota enrollments. Of total enrollment, state universities made up 20 percent; community colleges, 18 percent; University of Minnesota, 18 percent; technical colleges, 15 percent; consolidated colleges, 3 percent; private career schools, 3 percent; and private graduate and professional schools, 2 percent.

While enrollments statewide increased 18 percent between 1986 and 1995, enrollments at the University of Minnesota decreased 15 percent (due largely to the planned reductions in enrollments negotiated with the Minnesota Legislature), and private college and university enrollment increased 30 percent. This decrease was planned and was first suggested in the 1985 planning strategy *A Commitment to Focus* that resulted in action of the Minnesota Legislature to reduce enrollments at the University of Minnesota. As a result, the University of Minnesota's share of total enrollment dropped from 25 percent in fall 1986 to 18 percent in fall 1995, while that of private colleges and universities increased from 17 percent in 1986 to 21 percent in 1995. In fall 1995, enrollment decreased seven-tenths of a percent in metro institutions and fell 2 percent in non-metro institutions. Institutions in the seven-county metro area account for 136,808 students compared to 131,358 at institutions located outside the metro area. The disparity has been growing since 1990 when the distribution of enrollments was nearly equal -- 135,759 in metro area and 135,038 outside the metro area.

Elimination of the Minnesota Higher Education Coordinating Board

The Minnesota Higher Education Coordinating Board's (MHECB) report *Minnesota Higher Education: Recommendations for Change* highlighted eight changes likely to pose challenges for postsecondary education in Minnesota, several of which are especially salient for the University of Minnesota. MHECB was itself affected by some of the challenges it outlined. On July 1, 1995, MHECB was abolished and its duties and responsibilities were transferred to the Higher Education Services Offices (HESO), and positions in MHECB were transferred to HESO. Appendix C is an overview of the responsibilities of HESO.

University of Minnesota Coalition for Higher Education

The University of Minnesota Coalition for Higher Education (UMCHE) is a non-profit, non-partisan organization dedicated to the University of Minnesota and its students. UMCHE is an association of the five student governance organizations from the four campuses. The organization combines efforts and resources to present a unified voice to the State Legislature on the issues that affect affordability, and quality education for Minnesota students at public higher education institutions. The top three priorities identified by UMCHE for the 1995-96 legislative session, as outlined in the brochure *Investing in Public Higher Education* are: capital bonding request, state support for affordable public higher education, and the Academic Health Center request.

Students urged the State of Minnesota to re-establish public higher education as one of its highest priorities, and to expand the Minnesota State Grant Program. Students also urged the state to recognize its public universities as the cornerstone of the State of Minnesota's commitment to higher education. Students have recognized that loss of state support translates into higher tuition. Their long term policy goals include:

- Reversing the decline in state appropriations of public higher education
- Increasing need-based financial aid and maintaining need-blind admission for public education
- Increasing the diversity in public universities
- Supporting the unique role of the University of Minnesota as a land-grant institution by providing research economic development and services to the entire state
- Ensuring the leadership position of the University of Minnesota as a world-class university

Significant Forces Affecting Expectations of Postsecondary Education

Several significant forces are influencing postsecondary education. These demographic, social, economic, and technological changes are affecting demand for and provision of postsecondary education. As a result of these forces, many postsecondary policies and practices have been and will continue to be altered. Many students will continue to obtain post-high school education in traditional ways; however, more and more students will benefit from alternative approaches to learning and delivery of instruction. The following conditions are likely to pose additional challenges:

- Demographic and social changes are challenging Minnesota postsecondary education to meet the needs of an increasingly diverse student population.
- The growing use of technology is a major force for change in higher education.
- A growing recognition that the educational system needs to be more responsive to the changing nature of work.
- Several economic pressures make it difficult for postsecondary education to respond to increased demands placed on it.
- The public has expressed growing skepticism about the effectiveness, efficiency, and value of postsecondary education, as well as increased anxiety about affordability.
- Policymakers continue to expect more of postsecondary education.
- Learners at all levels of education will continue to have more options available to them.
- Changes will occur in the organization and structure of postsecondary education.

MSPAN Reports

The 1988 Legislature mandated the Minnesota Higher Education Coordinating Board (now the Minnesota Higher Education Services Office) to study Minnesota postsecondary education needs. The first part, MSPAN I, addressed the education needs of the metropolitan corridor from St. Cloud through the Twin Cities metropolitan area to Rochester/Winona. Submitted to the 1989 Legislature, the reports included conclusions and recommendations for the entire state.

There were three purposes for MSPAN: to identify Minnesota conditions, trends and emerging educational needs; to analyze potential strategies to meet needs; and to evaluate costs and implications of their strategies. The reports described the solid foundation Minnesota has for higher education, and the rapidly changing environment to which higher education must respond. The reports suggested that resources must be redistributed to meet new needs, that quality must be reconfirmed as the essential state achievement, and that strategic planning is essential to change.

The most significant issue that emerged from the two primary studies was the geographic mismatch of existing postsecondary educational institutions and projected student population. The population of Greater Minnesota decreased in the 1980s while the metropolitan corridor population increased significantly. The median age of the Greater Minnesota's population will increase faster than that of the metropolitan corridor. Traditional students seemed to be well served but non-traditional and other students had fewer options. Specific recommendations were grouped under five themes:

- Recommendation One: Physical Capacity. Adjust Minnesota's postsecondary education physical capacity to better match demographic conditions and promote efficient program delivery.
- Recommendation Two: Structure. Restructure public postsecondary education to enhance educational opportunities and managerial efficiency.
- Recommendation Three: Programs. Achieve greater efficiencies through reduction in number of duplicated programs, responsibility for offering certain types of programs, and methods of delivering programs.
- Recommendation Four: Students of Color. Continue and extend commitments to enrolling and graduating more students of color and to improving the campus climate for cultural diversity.
- Recommendation Five: Science and Technology Education. Postsecondary education should develop programs and partnerships with elementary and secondary education and industry to improve mathematics and science education for all students, and raise the number of students choosing science, technology and mathematics majors and occupations.

Establishment of Midwestern Higher Education Commission

The Midwestern Higher Education Commission (MHEC) selected the University of Minnesota as its home in June 1992, and has been housed on campus since December 1992. At that time, seven states (i.e., Illinois, Kansas, Minnesota, Michigan, Missouri, Nebraska, and Ohio) were members of the Commission and each state has five representatives on the Commission. Initially, MHEC proceeded in four programmatic areas: student exchange programs, telecommunications, risk management, and minority faculty development. The Midwestern Student Exchange Program (MSEP) enables students in member states to enroll in selected academic programs in other states at 150 percent of resident tuition. Our participation in the MSEP replaces our participation in a similar program when Minnesota was part of the Western Interstate Commission for Higher Education (WICHE). The 1991 Legislature instructed the Minnesota Higher Education Coordinating Board to terminate Minnesota's membership in WICHE. Appendix D is an overview of highlights of recent MHEC sponsored activities.

Developments in the Twin Cities Metropolitan Area

No self study of a land-grant research institution is complete if it does not address how the community surrounding the institution affects and is affected by the institution. This section is a brief overview of the Twin Cities metropolitan area and how it has changed in the last decade.

Metropolitan Region

As both the land-grant and research university for the state, the University serves all of Minnesota and for much of its history its students were drawn from throughout the region. However, the University's location in the heart of the Twin Cities has also given it a uniquely urban flavor especially in the past two decades. The Twin Cities with about 2.4 million people represents slightly more than half of the state's total population. It encompasses a huge 11-county area with the two major cities in the center and the University at their core. The metropolitan region grew by more than 24 percent between 1970 and 1990 but, like most other urban regions, the distribution and composition of that population have been changing significantly. The population sizes of the two central cities has remained relatively stable during this period, while significant growth has taken place in the second and third ring suburban areas.

Historically, both the state and the Twin Cities region have had a relatively small minority population, relatively high education levels (including years of schooling completed and proportion of high school graduates going on to postsecondary education), and high home ownership levels. Economically, there is very little heavy industry, the economy is diversifies and the area is the headquarters for a disproportionate number of FORTUNE 500 companies.

The minority population more than doubled between 1970 and 1980, including significant numbers of immigrants from Southeast Asia. Despite the small minority population base, however, their growth accounted for half of the region's growth in that decade. Significant minority population growth continued in the 1980s, especially in the two central cities where the minorities now constitute roughly 20 percent of the total population and in the K-12 systems they are the majority.

Subsequent to the 1990 Census, there has been substantial concern about what appear to be significant increases in concentrations of poverty in the two central cities, in areas which also have high concentrations of minority populations. A comparison with other metropolitan areas shows that the picture is more complex but that the increase in the number of census tracts with high levels of welfare dependency has indeed been well above average, but that the same is not true for other measures of poverty.

Nonetheless, the traditional picture of the Twin Cities, with its stable healthy economy and relatively limited social problems has been disturbed by recent data and events, now sees itself as looking more like many other metropolitan regions, and struggles to address the questions that are raised. For the Twin Cities campus of the University, this has meant much greater attention to outreach and service missions in the community and significantly greater concern for the accessibility of students, particularly students of color and students of limited means, to the University.

Developments During the 1995-96 Academic Year

This section is a more detailed overview of selected other planning, evaluation, and institutional change efforts that were occurring simultaneously with the self-study process and that are not discussed in subsequent chapters.

Transition to the Semester System

Periodically over the last several decades, there have been serious discussions about changing from the quarter to the semester system. At their meeting on September 9, 1995, the Board of Regents approved a resolution changing all campuses of the University of Minnesota to a semester calendar beginning fall quarter 1999. The text of the resolution is as follows:

“WHEREAS, a semester-based academic calendar offers at least as many academic advantages for students and faculty as a quarter-based academic calendar, and

WHEREAS, a change to a semester-based academic calendar will promote a significant rethinking of the curriculum in all University programs, as envisioned in U2000, and

WHEREAS, a change to a semester-based academic calendar will result in greater administrative efficiency and improved services for students, and

WHEREAS, a change to a semester-based academic calendar will facilitate greater cooperation with other institutions of higher education throughout the state and the nation,

NOW THEREFORE BE IT RESOLVED, that the University of Minnesota, on all four campuses, change from a quarter-based academic calendar to a semester-based academic calendar effective before Fall 1999.

AND BE IT FURTHER RESOLVED, that the implementation of the change from a quarter-based academic calendar to a semester-based calendar be conducted according to principles and objectives that are first established in close consultation with the faculty governance system and with academic units.”

Making the decision to change to the semester system has been a long process, in part because of the problems in scheduling a fall semester after the Minnesota State Fair, which ends on Labor Day, and before the holidays. The University of Minnesota first considered changing from a quarter system to a semester system in 1913. Administrators have decided at various intervals that, although there were some advantages to the semester system, the advantages did not outweigh the costs and disadvantages of making the transition.

- In 1978, the report *A Survey of Student and Faculty Opinion toward The Campus Calendar, the University of Minnesota, Twin Cities* concluded that two to one majorities of both students and faculty preferred a quarter system over the semester system, but that the two groups differed as to which quarter system they preferred.
- In April 1985, the Semester Working Group submitted a report to the faculty about changing to the semester system that identified major issues to be addressed if a change were to occur.

- In 1986, the faculty Semester Working Group sent a survey on the topic to all regular faculty on all campuses. The report *Faculty Views Concerning the Proposal to Change to the Semester System* showed that overall 49 percent preferred the quarter system, 37 percent preferred the semester system, and 13 percent had no preference.
- A 1992 *Minnesota Daily* article predicted that by 1995 University students might find themselves on the semester system. It said that such a proposal was being discussed by the provost council and college deans, and it described the pros and cons of the issue. As recently as January 1993, another *Minnesota Daily* article reported that "the quarter system is at the University to stay—at least for the next five years."
- In 1995, the Minnesota State Legislature mandated the semester system for all state institutions of higher education, and, subsequently, the University of Minnesota again revisited the question of changing to the semester system.
- On September 9, 1995, the Board of Regents approved a resolution changing all campuses to a semester calendar beginning fall quarter 1999.

In discussions leading up to the vote by the Board of Regents, the following four basic questions were posed regarding the proposed change to a semester-based academic calendar:

- Should the University of Minnesota adopt a semester-based calendar that is the same for all colleges and campuses? (The University operated with at least six different calendars, one of which (the Law School at the Twin Cities campus) was a semester-based calendar.)
- Should the University adopt a 14-week semester calendar, with a fall term that begins immediately after Labor Day and that ends before the December holiday break and that has fewer than 75 class days? (This is the calendar currently used by more than 10 percent of institutions nationwide. In past considerations of a change in calendar, this is the calendar that has been favored by the Duluth and Morris campuses, but because of the Minnesota State Fair (held adjacent to the St. Paul campus), it would be impossible for the Twin Cities campus to begin a semester until after Labor Day. With such a beginning date, it would be impossible to complete a full 15-week, 75-class day semester before the December holidays.)
- Should the University use the change to a semester-based academic calendar as an opportunity to (a) rethink academic programs in significant ways; and (b) clean up some of the bureaucracy that occasionally ties the University's faculty, staff, and students in knots? (Some argued that in the course of converting to semesters, many other problems would be addressed as a windfall of the process. The University should accept the windfall, but not overreach in trying to address other problems. Others argued that one of the principal advantages of changing academic calendars is that it offers an opportunity to rethink degree programs and curricula in significant ways and that as various student affairs systems are revised (e.g., the student database), the institution should also rethink its business and attempt to simplify it (e.g., did we really need seven grading systems on the Twin Cities campus and as many ways of counting D's as there are campuses and colleges, and 300 "hold" codes that prevent student actions?). Student affairs systems are complicated in large measure because the institution has allowed the business to be complicated, by allowing multiple grading systems, different kinds of fees, special tuition plans, various kinds of holds, different calendars, and so forth and so on.)

- Should the University adopt a three-year transition schedule, with a first semester in fall 1998 or a four-year transition schedule, with a first semester in fall 1999? (The University needs to allow a full year for the printing of bulletins, transition materials for students, and so forth, and it should have these materials available to students no later than the start of the last winter quarter before the first fall semester. Under a three-year schedule all of the work of revising degree programs and curricula would have had to be accomplished over 16 months, with bulletin copy delivered by December 31, 1996. Under a four-year schedule all of the work of revising degree programs and curricula would have had to be accomplished within 28 months, with bulletin copy delivered by December 31, 1997.)

The Semester Conversion Project, coordinated by staff in the Office of Planning and Analysis in the Office of the Senior Vice President for Academic Affairs, includes six phases that culminate with the implementation fall quarter 1999: mobilization/organization/base information; timelines, guidelines, and objectives; academic program conversion; student information/advising; student systems redesign project; and other policies and procedures. One of the items being discussed currently in the Senate Committee on Educational Policy is the creation of a curriculum committee on the Twin Cities campus to guide the overall curriculum transformation process required in the change to a semester system. Appendix E "Implementation Timetable for Semester" contains a detailed outline of the tasks and milestones within each phase. Periodically, the newsletter "3 to 2 Semester Conversion Project News" is prepared and distributed by the Office of the Senior Vice President for Academic Affairs to inform members of the campus community of important transition information. The February 19, 1996 issue included the following statement of objectives for the changes to semesters that was adopted by the Change to Semesters Coordinating Group:

- The conversion to semesters should preserve a program's instructional hours.
- The conversion of a program from quarter courses to semester courses should preserve the intellectual content of the program, and the distribution of courses by credit module (e.g., 3 credits, 4 credits) in the new curriculum should be justifiable, as judged by the impact on faculty workload and on student progress toward a degree.
- The impact of the change to semesters on faculty and instructional staff workloads should be neutral.
- The service provided by a program to other programs should be preserved.
- A semester-based program should not require greater financial resources than its quarter-based predecessor and should be justifiable in terms of its impact on classrooms and other University resources.
- At the undergraduate level, the redesign of programs and the conversion of courses should result in a campus-wide undergraduate curriculum that is coherent, as measured by the intellectual content of undergraduate degrees and student progress toward a degree.
- At the graduate and professional levels, the conversion of programs should be carefully coordinated to preserve the integrity of programs involving the intellectual resources of more than one department.

The proposed semester calendar would provide as many days as possible for the fall semester (70-74 days), with the fall semester starting after Labor Day, and 74 or 75 days during the spring semester. Portions of the proposed semester conversions standards as of March 1996 are as follows:

There shall be two semesters, each of which shall provide a minimum of 70 days of instruction and a maximum of 75 days of instruction, at least one study day, and approximately one week of final examinations (including Saturdays but not Sundays).

For the fall semester, classes shall begin after Labor Day and the exam period shall end not later than December 23. Final grades for the fall semester shall be submitted to the Registrar no later than 120 business hours (5 business days) following the date of the exam, except that final grades which would fall due during the period December 24-31 may be turned in two business days after January 1.

For the spring semester, classes shall begin on the third Tuesday of January and provide 74 or 75 class days of instruction. Final grades for the spring semester shall be submitted to the Registrar no later than 120 business hours (5 business days) after the final examination. In general, students must be able to complete their degrees by enrolling only for the fall and spring semesters.

There shall be at least two summer terms which may not begin before K-12 public school classes are completed. Departments may schedule a short three-week intersession following the end of the spring semester and before the first summer term, using Summer Session compensation and tuition practices.

The standard class period during fall and spring semesters shall be 55 minutes. The standard class period during the summer term(s) shall be in proportion to the length of the summer term vis-a-vis the two semesters.

Responsibility Center Management

One important on-going discussion that could have considerable implications for the institution's internal financial operation is the gradual transition to Responsibility Center Management (RCM). In May 1995, in response to the increased administrative interest in a generic concept of RCM in its multiple variations, President Hasselmo appointed a steering committee to evaluate the merits of different versions of this particular approach to planning and budgeting.

During summer 1995, the committee, supported by the Office of Planning and Analysis, prepared a report to guide the evaluation of the merits and design of RCM for the University of Minnesota. Members of the steering committee have studied the options and have submitted their findings in a draft report that served as the basis for continuing discussions within the University community.

A major finding of the committee was that many elements attributed to RCM already exist at the University and have for some years. RCM, if implemented at the University, would hardly be a radical change or a totally new approach to planning and budgeting, but rather a continuation of an evolutionary process that has reached a stage where four key elements of the budgeting process need systematic review: tuition, facilities, indirect cost recovery (ICR), and state funds. The committee's recommendations were to proceed to review each of the four items and to assess the institutional impact of changes proposed for the future and changes made to date over the course of academic year 1995-96. The committee believed that some changes can be phased in during fiscal year 1996-97. Full implementation could begin with the 1997-98 fiscal year.

The first part of the report answered a series of questions about the nature and purpose of RCM and its appropriateness and applicability to the University. The second part provided information on the four areas of the budgeting process in need of review whether or not the RCM concept is formally adopted.

The effects of additional RCM features on collegiate units and department is unclear, especially relative to graduate programs offered under the auspices of the Graduate School. In addition to possible changes as a result of further implementation of RCM, the proposals (outlined previously) within the State of Minnesota to make significant changes in how Minnesota funds postsecondary education that, if implemented, could have dramatic effects on the University of Minnesota.

Issues Identified in the 1986 Site Visit Report

The report submitted by the site visit team following its visit in 1986 provided commentary on several issues affecting the campus as a whole, as well as comments about issues within specific collegiate units on the Twin Cities campus. This section provides a brief overview of the issues identified for the campus as a whole. Chapter V describes collegiate units and provides the context for the responses from the deans of those collegiate units for which specific issues were identified in 1986.

Although the 1986 site visit team report portrayed the Twin Cities campus of the University of Minnesota in positive terms, four areas of potential concern were noted in the team report: (a) need for improved communication; (b) libraries; (c) organizational structure; and (d) issues about women and minorities. In the last decade considerable change has occurred in each of those areas.

Regarding the need for improved communications, the team report suggested that the very complexity and size of our institution made constant attention to effective communication essential, and that an ambitious effort such as *A Commitment to Focus* called for even more efforts at articulation. They had heard concerns expressed from both inside and outside of the University that the institution might act without sufficient consideration of the interests of others.

This certainly is an on-going problem that more recently has affected the implementation of University 2000. Despite extensive efforts at communicating through all available media and involving people via hearings, symposia, and open committees, there still seems to be those who do not feel informed. Recent efforts to use e-mail have alleviated the concerns somewhat, as have the efforts of Institutional Relations to convey recent developments to constituencies both within and outside the institution. Particularly noteworthy are the creation of *Kiosk*, a publication for faculty and staff as well as the publication by the Community Building Project of a calendar of events of interest to students.

In addition to the specific issues raised about the University Libraries, the team report observed that there seemed to be persistent difficulties in management of that unit, and suggested that the Senate Library Committee could benefit from indication from the administration that the problems were recognized and that efforts were underway to bring it under control. After the University Librarian resigned in 1986, an interim Librarian held the position from 1986 to 1988, at which the point the current librarian was hired for the position.

Concerns about the organizational structure suggested that the campus perhaps had too many vice presidents but noted that a vice president for research might be added. Since 1986, the campus organizational structure has changed considerably, and now includes a position that combines responsibilities for the Graduate School and Research and Technology Transfer Administration.

At the time of the 1986 team report, progress had been made for women in the faculty, partly as a result of the implementation of the Rajender Consent Decree, but less progress was observed for the hiring of minority persons as faculty members. Repeated administrative statements of support were suggested, many of which are described elsewhere in this report. Over these ten years, the percentage of women on the faculty increased from 20 to 23 percent. The percentage of minority persons on faculty increased from 6 to 9 percent. Concerns remain about the high turnover rates among some groups of newly hired faculty of color.

CHAPTER III

CRITERIA FOR ACCREDITATION

This chapter addresses each of the General Institutional Requirements (GIRs) as well as the five criteria for accreditation established by the North Central Association of Colleges and Schools, Commission on Institutions of Higher Education. Whereas the responses to each GIR are quite specific, the discussion relative to the evaluative criteria is an overview because those issues are discussed in greater detail elsewhere in this self-study report.

A. GENERAL INSTITUTIONAL REQUIREMENTS

Mission

- 1. It has a mission statement, formally adopted by the governing board and made public, declaring that it is an institution of higher education.**

In July 1975, the Board of Regents drew up a "Statement of Mission and Policy" for the University that guided the institution until a revised statement was adopted by the Board of Regents on July 11, 1980. In that revised statement, the general charge to the University was "to serve the people of the State, wherever they may be, through teaching, research, and public service," and "to contribute as fully as resources permit to the meeting of national and international needs." That mission statement guided the institution until the mid-1990s when a new statement was prepared as part of the institution's overall strategic planning process.

The *University 2000 Mission, Vision, Strategic Directions, and Performance* statement, approved by the Board of Regents on January 14, 1994, emphasized the areas of research, graduate and professional education, undergraduate education, access and outreach, user-friendliness, and diversity, and called for the development of "critical measures" for assessing institutional, campus, and unit performance in realizing the goals of U2000. This strategic vision "University 2000: The University of Minnesota for the 21st Century" sets the course for the changes needed to bring the University of Minnesota to a new century. U2000 publications available for review include the entire U2000 document, as well as selected publicity concerning the new mission statement and the U2000 planning process.

The policy adopted by the Board of Regents regarding the mission of the University of Minnesota is as follows:

The University of Minnesota, founded in the belief that all people are enriched by understanding, is dedicated to the advancement of learning and the search for truth; to the sharing of this knowledge through education for a diverse community; and to the application of this knowledge to benefit the people of the state, the nation, and the world.

The University's mission, carried out on multiple campuses and throughout the state, the nation, and the world, is threefold:

Research and Discovery: Generate and preserve knowledge, understanding, and creativity by conducting high-quality research, scholarship, and artistic activity that benefit students, scholars, and communities.

Teaching and Learning: Share that knowledge, understanding, and creativity by providing a broad range of educational programs in a strong and diverse community of learners and teachers, and prepare graduate, professional, and undergraduate students, as well as non-degree-seeking students interested in continuing education and lifelong learning, for active roles in a multiracial and multicultural world.

Outreach and Public Service: Extend, apply, and exchange knowledge between the University and society by applying scholarly expertise to community problems, by helping organizations and individuals respond to their changing environments, and by making the knowledge and resources created and preserved at the University accessible to the citizens of the state, the nation, and the world.

In all of its activities, the University strives to sustain an open exchange of ideas in an environment that embodies the values of academic freedom, responsibility, integrity, and cooperation; that provides an atmosphere of mutual respect, free from racism, sexism, and other forms of prejudice and intolerance; that assists individuals, institutions, and communities in responding to a continuously changing world; that is conscious of and responsive to the needs of the many communities it is committed to serving; that creates and supports partnerships within the University, with other educational systems and institutions, and with communities to achieve common goals; and that inspires, sets high expectations for, and empowers the individuals within its community.

2. It is a degree-granting institution.

On the Twin Cities campus, the University of Minnesota offers programs leading to Certificates, the Bachelor's degree (arts and sciences curricula, professional curricula); the Master's degree (arts and sciences curricula, professional curricula); the Specialist's degree; and the Doctor's degree (professional curricula and research curricula). As part of the changes initiated by *A Commitment to Focus*, the associate degrees available through General College were eliminated as of August 1991. The degree programs are offered on both the Minneapolis and St. Paul campuses of the University of Minnesota. The University of Minnesota also offers credit and non-credit courses not part of these programs, primarily through Continuing Education and Extension/University College, at various sites within the State of Minnesota. A limited number of Twin Cities campus courses are offered via telecommunications technology at other locations within the State of Minnesota. One example of such offerings are the engineering courses offered through UNITE by the Institute of Technology.

In response to expressed needs within the Twin Cities metropolitan area, the University of Minnesota recently has initiated four applied baccalaureate degree programs (Bachelor of Information Networking, Bachelor of Applied Business, Bachelor of Emergency Medical Services, and Bachelor of Construction Management) in cooperation with the Minnesota community colleges (referred to as the Twin Cities Higher Education Partnership).

The Twin Cities campus also offers credit courses at selected international locations. Procedures for the review and evaluation of international sites are available for review. At the time of the 1986 Accreditation Review, it offered credit courses only at the Jose Ortega y Gasset Foundation in Toledo, Spain, and now offers credit courses at the following 17 other international locations:

- Graz, Austria (classes held at Karl Franzens University)
- Freiburg, Germany (classes held at the Institute of European Studies, University of Freiburg)
- Tianjin, China (classes held at Nankai University)
- Hargzhou, China (classes held at the China National Academy of Fine Arts)
- Copenhagen, Denmark (classes held at facilities of the Denmark International Studies Program)
- Montpellier, France (classes held at Paul Valery University)
- Nantes, France (classes held at the Institute of European Studies in Nantes)
- St. Petersburg, Russia (classes held at the Herzen Pedagogical University)
- Cuernavaca, Mexico (classes held at the Cemenahuac Language Institute)
- Merida, Venezuela (classes held at the VENUSA Institute of Latin American Studies and Modern Languages facility at the Universidad de Las Andes)
- Toledo, Spain (classes held at the facilities of the International Program in Toledo, Spain which is owned by the Fundacion Ortega y Gasset in Madrid, Spain)
- Madrid, Spain (classes held at the Centro Fundacion Ortega y Gasset)
- Nottingham, England (classes held at Nottingham Trent University)
- London, England (classes held in Central London at the Centres for Academic Programmes Abroad)
- Ecuador (classes and internships held in various locations in Ecuador, arranged by a development agency in Quito, Ecuador)
- India (classes and internships held in various locations in India, arranged by a development agency in Pune, India)
- Kenya (classes and internships held in various locations in Kenya, arranged by a development agency in Nairobi, Kenya)
- Senegal (classes and internships held in various locations in Senegal, arranged by a development agency in Dakar, Senegal)

The University of Minnesota offered a total of 650 degree programs as of January 1, 1996. Of these degrees aggregated across the four campuses, 278 are at the baccalaureate level, 214 at the master's level, and 116 at the doctoral level; there are another 16 offered at the associate level (Crookston campus), 6 first professional degrees, and 17 other award categories (e.g., certificates). Professional degrees on the Twin Cities campus are available in the fields of medicine, dentistry, law, veterinary medicine, pharmacy, and public health. The Academic Program Inventory for the University of Minnesota is now available through the World Wide Web, and is the entry point for additional information (e.g., specific program descriptions, enrollment information, and eventually information about the experiences and evaluations of program graduates) about each of the academic programs of the University of Minnesota. Although the Academic Program Inventory is updated continuously, the list of academic programs is reviewed annually. Starting in 1994, a summary of changes in academic programs has been prepared annually for presentation to the Educational Planning and Policy Committee of the Board of Regents.

The policies and procedures to be followed in making changes in academic programs have been developed by the Office of the Senior Vice President for Academic Affairs. The most recent memorandum, dated January 1994, is available for review. The procedures are being revised to account for changes as a result of the elimination of statewide review and approval of new academic programs as a function of the Minnesota Higher Education Coordinating Board

(renamed the Minnesota Higher Education Services Office as of July 1, 1995), as well as to account for the transition to a three-provostal model for the Twin Cities campus.

Since the University awarded its first degrees in June 1873, it has awarded a total of 494,523 diplomas (107,603 since June 1985) through June 1995, 21,996 (6,026 since June 1985) of which were for Ph.D. degrees. For the 1994-95 academic year, the University presented students enrolled in programs on the Twin Cities campus with 10,579 degrees and diplomas, including 667 Ph.D.'s. More detailed information on degrees conferred during the last decade is contained in the February 1996 report *Degrees Conferred Trends, Twin Cities Campus, Fiscal Years 1984-85 through 1994-95*.

Authorization

3. It has legal authorization to grant its degrees, and it meets all the legal requirements to operate as an institution of higher education wherever it conducts its activities.

The University of Minnesota Charter, adopted in 1851 by the Legislative Assembly of the Territory of Minnesota and in 1858 by the State Legislature, entrusts the power "to confer such degrees and grant such diplomas as are usually conferred by other Universities" to the Board of Regents.

4. It has legal documents to confirm its status: not-for-profit, for-profit or public.

The most recent document confirming the institution's status, dated August 25, 1961, from the Internal Revenue Service, U.S. Treasury Department, is available for review. The text of the letter includes the statement "it is concluded that you are an instrumentality of the State of Minnesota, and that you are exempt under section 501(c)(3) of the Code."

Governance

5. It has a governing board that possesses and exercises necessary legal power to establish and review basic policies that govern the institution.

Operating authorities for the University of Minnesota are derived from the Board of Regents.

Since the University of Minnesota was established prior to when Minnesota became a state, the institution has constitutional autonomy.

6. Its governing board includes public members and is sufficiently autonomous from the administration and ownership to assure the integrity of the institution.

The twelve-member Board of Regents is the governing body of the University. The Legislature chooses one regent from each of Minnesota's eight congressional districts and four from the State at large. One of the four at-large regents must be a University student or have been graduated from the University within the five years prior to election. Regents

serve without salary for six-year terms. Vacancies that occur when the Legislature is not in session are filled by the governor. The president of the University is *ex officio* president of the Board of Regents.

The current chair of the Board of Regents is Thomas R. Reagan, and the most recent former chair is Jean B. Keffeler. The Board of Regents meets monthly, except for the month of August. The Board of Regents includes the Committee of the Whole, as well as the following standing committees: Educational Planning and Policy; Facilities; Faculty, Staff and Student Affairs; Financial Operations; Audit; and Special Litigation Review. Brief biographies of the following current members of the Board of Regents are available for review:

- Wendell R. Anderson, Congressional District 6, First elected 1985, Term expires 1997.
- Julie A. Bleyhl, Congressional District 2, First elected 1993, Term expires 1999.
- William E. Hogan, II, Congressional District 3, First elected 1993, Term expires 1999.
- Jean B. Keffeler, Congressional District 5, First elected 1989, Term expires 2001.
- Hyon T. Kim, Congressional District 4, First elected 1994, Term expires 1997.
- Warren C. Larson, At-large Representative, First elected 1995, Term expires 2001.
- H. Bryan Neel, III, Congressional District 1, First elected 1991, Term expires 1997.
- William R. Peterson, At-large Representative, First elected 1993, Term expires 1999.
- Jessica J. Phillips, At-large Representative, First elected 1995, Term expires 2001.
- Thomas R. Reagan, Congressional District 8, First elected 1993, Term expires 1999.
- Stanley D. Sahlstrom, Congressional District 7, First elected 1985, Term expires 1997.
- Patricia B. Spence, At-large Representative, First elected 1995, Term expires 2001.

The process currently used to select regents is described in the document *Regent Candidate Advisory Council Report to the Minnesota Legislature 1995*. In 1988, the Minnesota Legislature adopted Minnesota Statute 137.0245, that established the Regent Candidate Advisory Council consisting of 24 individuals who were to be appointed to staggered six-year terms, one-half by the Subcommittee on Committees on the Committee on Rules of Administration of the Senate and one-half by the Speaker of the House of Representatives. This statute directed the Council, in consultation with current and former regents and the administration of the University of Minnesota, to develop criteria for the selection of regents, to prepare a description of regent responsibilities and duties, to identify and recruit qualified candidates, and to recommend at least two and not more than four candidates for each position to be filled by the Legislature. Pursuant to this legislation in 1989, 1991, and 1993, and following numerous committee and full Council meetings, substantial publicity of its efforts (public hearings, extensive recruitment efforts and consultation with a host of legislators, sitting and former regents, University officials and others), the Council received 141 applications in 1989, 132 in 1991, and 107 in 1993. From these applicants, the Council selected 48 individuals for personal interview in 1989, 47 in 1991, and 42 in 1993. The process resulted in the recommendation of four individuals for each regent position to be filled by the Legislature in 1989 and 1991, and two individuals for the position in 1993.

The most recent selection process began in June 1993 to prepare for the task of seeking out and selecting candidates for recommendation to the Legislature in 1995. The Council is committed to the concept of both diversity and excellence in its selections. In an attempt to learn from past experience, the Council received a grant from the McKnight Foundation to conduct an evaluation of the Council's policies, procedures, method of operating and the effect and impact of its effect and impact of its work. Members of the Council used a variety of methods to seek qualified candidates. The efforts resulted in the submission of 92 applications from extraordinarily well-qualified individuals from all parts of the state, which resulted in two at-large positions if the candidates so desired. A number of them

chose to do so and they were included in the at-large applicant pool if not selected for recommendation for one of those positions. It is a tribute to the University that so many excellent candidates came forward to indicate their willingness to serve on this prestigious, but non-paying board. The following is a breakdown by district of the number of applications received: 5th Congressional District (N=13), At-Large-student (N=26), and At-Large (N=53). Twenty-eight applicants were selected for personal interviews in February 1995, and following the completion of interviews, the Council used its selection procedures to make final recommendations to the Legislature.

7. It has an executive officer designated by the governing board to provide administrative leadership for the institution.

Since 1869, the University of Minnesota has been served by 14 presidents. C. Peter Magrath served as president from 1974 to 1984, Kenneth H. Keller was inaugurated on November 15, 1985 and served until 1988, and Richard Sauer served as Interim President for nine months in 1988-89. Nils H. Hasselmo was inaugurated as president in January 1989, and indicated in July 1995 his intention to serve as president until June 1997 at the end of his current two-year contract with the Board of Regents.

Until recently, the positions of Senior Vice President for Academic Affairs and Provost for the Twin Cities campus were held by the same individual. Effective July 1, 1995, operational responsibility for collegiate units on the Twin Cities campus rested with three provosts: Academic Health Center; Arts, Sciences, and Engineering; and Professional Studies.

Figure 3 is a more detailed description of the organizational structure for the Twin Cities campus, and Figure 4 is the overall organizational structure for the University of Minnesota. Figure 3 indicates the collegiate units that report to each of the three provosts on the Twin Cities campus, and Figure 4, the system administration across all campuses of the University of Minnesota.

Organizational changes continued to occur during the 1995-96 academic year as the senior administration has considered whether or not existing reporting relationships would be effective in addressing institutional change issues articulated in University 2000. One such change occurred shortly after the beginning of fall quarter 1995 in the strategically important area of information technology. More recently proposed changes are outlined in Chapter IV: Institutional Strategic Planning and Performance Assessment.

8. Its governing board authorizes the institution's affiliation with the Commission.

The Committee of the Whole is the context for approval of actions related to the institution's affiliation with the Commission. More detailed discussion of issues related to regional accreditation, as well as program accreditation issues, occurs in the Educational Planning and Policy Committee of the Board of Regents. Periodically, whenever issues emerge relative to institutional affiliation, they are brought to the attention of the Board of Regents through the vehicle of the Senior Vice President's Monthly Report to the Board of Regents. Those monthly reports, as well as other items included in the monthly meetings of the Educational Planning and Policy Committee for the 12 months preceding the site visit, are available for review.

Figure 3
Organizational Structure for Twin Cities Campus

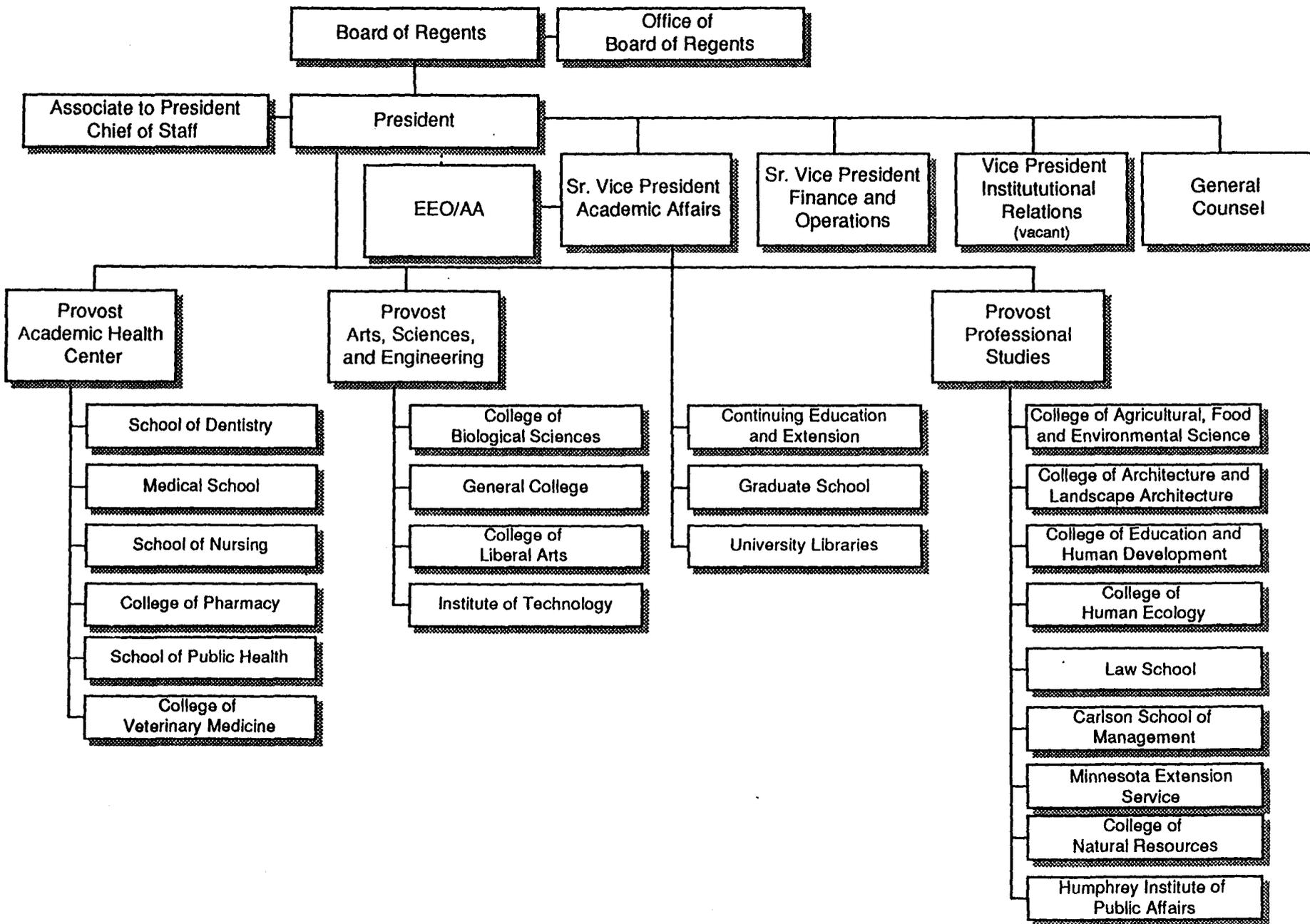
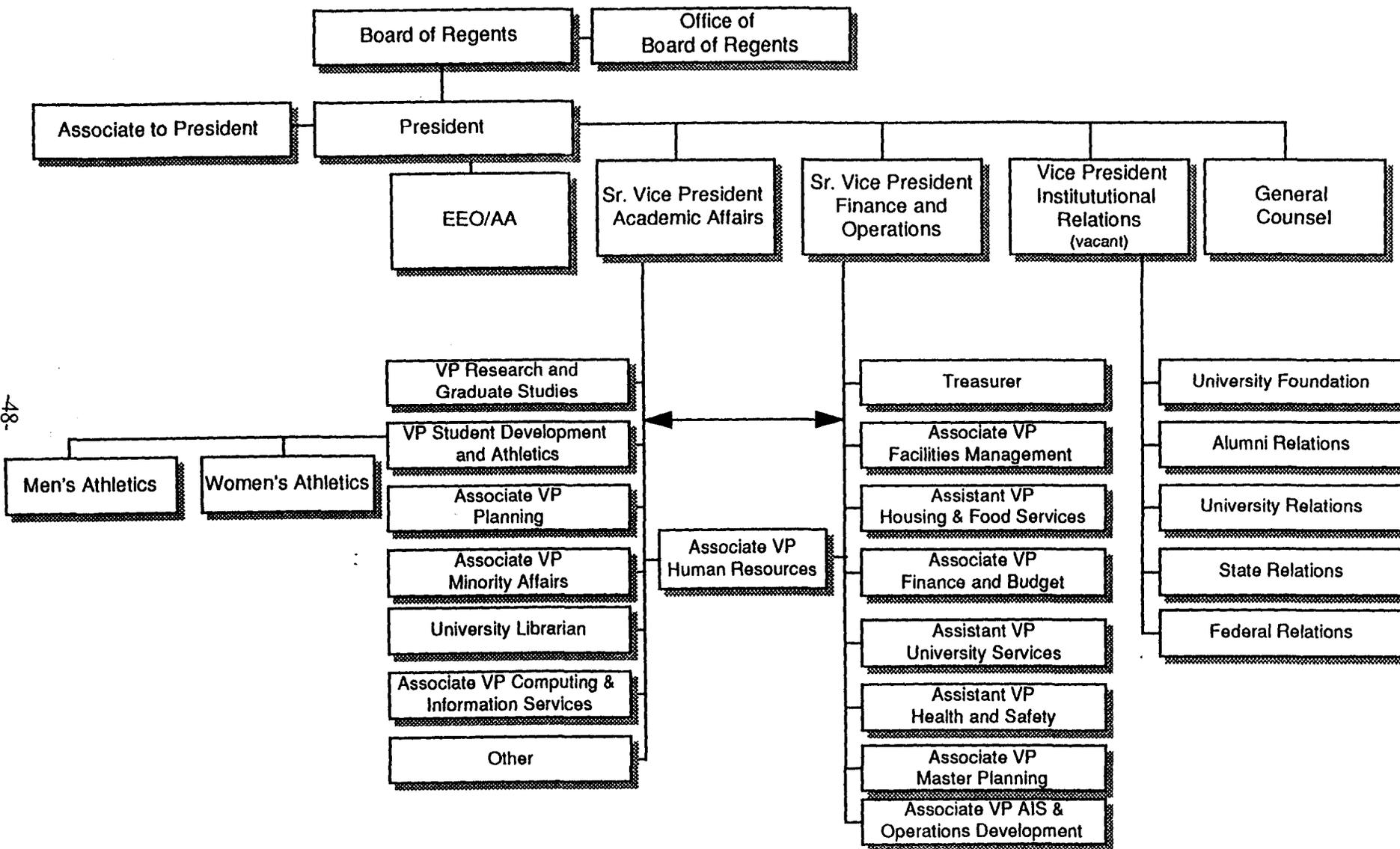


Figure 4
Organizational Structure for University of Minnesota System



As a result of discussions in the fall of 1995, the Educational Planning and Policy Committee of the Board of Regents established some principal elements for the agenda to be followed by the Committee during academic years 1995-96 and 1996-97. The two major issues the Committee wished to pursue over this two-year period were: (a) the academic profile of the University and of its components; and (b) the planning and implementation decisions being undertaken to sharpen this profile, and to sustain it. To address these two interrelated issues, the Committee has been presented with three types of presentations: (a) description of "footprints" of academic programs, and on how they are perceived. Included in this type of presentation was an evaluation of research doctorate programs in the arts and sciences by the National Research Council; (b) collegiate descriptions of programs, strategic directions, areas of emphasis and deemphasis; and (c) planning and implementation of plans by campus or provostal areas.

The following calendar of activities during 1995-96 was proposed by the Committee:

- November 1995: Carlson School of Management
Academic Report Series Rankings of Research Doctorate Programs
by the National Research Council
- December 1995: College of Education and Human Development
International Programs
Digital Media Center
- January 1996: Student Development and Athletics: Plans and Strategies
Status of the University Academic Profile: Discussions
Health Sciences: Profile and Strategies
- February 1996: Report on NIH: University of Minnesota Agreement and Grant
Management
- March 1996: College of Liberal Arts on the Twin Cities Campus
Review of Implementation of the Semester System
- April 1996: Institute of Technology
ROTC on the University of Minnesota Campuses
Status of the University Academic Profile: Plans and Strategies
- May 1996: Law School
University of Minnesota and MnSCU: Cooperative programs in
Rochester
- June 1996: Outreach programs: University College/Continuing Education and
Extension
College of Natural Resources
- July 1996: Programs for orientation of new students
Review of outreach activities: extension service, museums

Faculty

9. It employs a faculty that has earned from accredited institutions the degrees appropriate to the level of instruction offered by the institution.

Results summarized in Table 62 in Chapter XIII: Faculty describe in detail the characteristics of faculty at the University of Minnesota, as well as the total full-time faculty on the Twin Cities campus. Of the 3,198 full-time faculty on the Twin Cities campus as of the beginning of fall quarter 1995, 65 percent had completed a Ph.D. and another substantial percent had completed other doctoral degrees (e.g., D.V.M., M.D., J.D.). The percentage of faculty who had completed a Ph.D. at the time of the 1986 Accreditation Review was also 65 percent.

In addition to the full-time faculty referred to above, another 336 individuals are employed in various part-time faculty positions, most of whom teach credit and non-credit courses through Continuing Education and Extension/University College (CEE/UC). Credit instruction provided through CEE/UC is used by students to complete bachelor's degree programs in one of the collegiate units as well as the baccalaureate programs offered through the Twin Cities Higher Education Partnership.

10. A sufficient number of the faculty are full-time employees of the institution.

As indicated above, there were 3,198 full-time faculty on the Twin Cities campus as of fall quarter 1995. Most of these were involved to varying extents in teaching. When looking at the number of faculty who taught at least one course during the 1994-95 academic year, there were 1,282 professors, 749 associate professors, 678 assistant professors, and 112 instructors. Those full-time faculty not involved in the institution's instructional programs are involved in overall institutional administration, research, and outreach and public service activities.

Results from the most recent analysis of data provided through the Course Inventory indicates that, for the three quarters during the 1993-94 academic year, 50 percent of the lecture course sections at the 1-xxx level (including all language, composition, and mathematics course sections), 86 percent at the 3-xxx and 5-xxx level, and 98 percent at the 8-xxx level on the Twin Cities campus were taught by tenured and tenure-track faculty. As is true for other large research institutions, a significant percentage of the instruction in beginning level courses is provided by teaching assistants.

11. Its faculty has a significant role in developing and evaluating all of the institution's educational programs.

Faculty are involved in the development and evaluation of the institution's educational programs in five primary ways: departmental and collegiate curriculum committees; the Senate Committee on Educational Policy; the Council on Liberal Education; special faculty advisory committees for programs developed as part of the Twin Cities Higher Education Partnership; and the ongoing program review process. Each of the above is briefly described below, and more detailed information about each process is available for review.

Departmental and Collegiate Committees

Each department and collegiate unit has a curriculum committee that addresses curricular issues within the unit. Although some units include membership from outside the institution and most include student representatives, the majority of members are the institution's tenured and tenure-track faculty. These committees will devote considerable time during the 1996-97 academic year in changing from a quarter to a semester curriculum.

Senate Committee on Educational Policy

The Senate Committee on Educational Policy (SCEP) is concerned with all matters that influence the quality of education at the University of Minnesota. It deals primarily with those affairs which affect educational policy and procedures on a University-wide basis. During the 1995-96 academic year, it has devoted much of its effort to analyzing grade trends and in suggesting criteria to be used in guiding the transition to the semester system. SCEP is composed of 10 faculty/academic professional members, five students (including one from a coordinate campus), and *ex officio* representation as specified by vote of the Senate.

The duties and responsibilities of SCEP are as follows:

- To consult with and advise the president and vice presidents on all matters of educational policy and to recommend to the Senate such policies on educational issues as it deems appropriate and necessary.
- To recommend to the Senate policies on the extension of the research, teaching, and service resources of the University to the people of the State of Minnesota at large and to advise the president and vice presidents with respect to these matters.
- To formulate policies governing calendars.
- To develop policies concerning special and continuing cultural activities in cooperation with appropriate academic units and campus organizations, and to foster heightened cultural awareness on campus through such activities and events as it deems appropriate.
- To consult with the Vice President for Academic Affairs on all matters of educational development and on all proposals related thereto.
- To recommend to the Senate, and the president and vice presidents policies concerning University programs offered for students of especially high ability and achievement.
- To recommend to the Senate policies on international education and to advise the president and vice presidents on the operation of international education policies.
- To make recommendations to the Senate with respect to Continuing Education and Extension/University College and its relationship to the total academic program of the University and to advise the dean of Continuing Education and Extension/University College.
- To review undergraduate group distribution requirements and all proposals related to the core curriculum and to examine issues related to duplication of courses between colleges, the proliferation of courses that meet the group distribution requirements, and cross-collegiate cooperation.

- To receive reports on the quality and effectiveness of undergraduate education, and to foster improvement of teaching effectiveness and faculty evaluation and recognition of excellent teaching.
- To advise the Vice President for Student Development and Athletics on the ROTC program and relations between the University and the Department of Defense and to recommend to the Senate policies on University-ROTC relationships.
- To review campus services with respect to compliance with state and federal laws regarding admissions, records, and financial aid, and to advise administrative offices and, when appropriate, the Senate, on issues concerning the offices dealing with such services.
- To maintain contact with the coordinate campuses through the exchange of minutes.
- To recommend to the Senate Consultative Committee such actions or policies as it deems appropriate.
- To submit an annual report to the Senate.

Council on Liberal Education

The previous All University Council on Liberal Education was dissolved in the 1980s, but has been replaced by campus specific committees to address liberal education guidelines. In May 1991, the University of Minnesota, Twin Cities Assembly approved the Final Report of the Task Force on Liberal Education, a comprehensive plan for the liberal education of undergraduates on the Twin Cities campus. In January 1992, the Vice President for Arts, Sciences, and Engineering appointed faculty, staff, and students to the Council on Liberal Education (CLE), which is charged with the responsibility of implementing the campus-wide liberal education requirements. The document *University of Minnesota, Twin Cities Council on Liberal Education*, (revised July 1995) outlined the policies and procedures governing the implementation of the liberal education requirements for students on the Twin Cities campus of the University of Minnesota.

CLE relates to academic units in several ways. The Council decides policy and oversees the implementation of the liberal education requirements. The Council regularly invites faculty from all Twin Cities academic units to submit courses through their units to meet the requirements and evaluates course proposals for liberal education requirements. CLE monitors registration for liberal education offerings and helps academic units ensure access. Finally, CLE has delegated to undergraduate colleges the authority to act on petitions to change from collegiate to liberal education requirements, but has retained authority to act on petitions to change from campus liberal education to collegiate requirements, to waive specific Twin Cities liberal education requirements, and to apply transfer courses to these requirements.

CLE also works closely with the Office of the Registrar and the Office of Admissions. The Registrar's Office, with direction from CLE, places a liberal education tracking flag on each student under the liberal education requirements when the student enters a Twin Cities baccalaureate program, it also determines how courses taken prior to matriculation apply to the liberal education requirements and arranges entry of approved courses into the Academic Progress Audit System (APAS), which maintains degree audits for each student. After a student matriculates, CLE can change a student's status in response to petitions.

Twin Cities Higher Education Partnership.

On January 21, 1993, the University of Minnesota, the Minnesota Community College System, the Minnesota Technical College System, the State University System, and the Minnesota Higher Education Coordinating Board agreed to commit their organizations to the development of an effective and efficient Higher Education Partnership in the Twin Cities area. The partnership agreement evolved from a long series of discussions among the state's various providers of public higher education, guided largely by the MSPAN I and II reports, briefly described in Chapter II of this report.

The partnership agreement recognized that the educational needs of students and employers regionally, nationally, and globally are changing rapidly and continually. It underscores the need to develop collaborative programs that are responsive to changing educational needs and student populations, with a particular emphasis on applied, career-oriented education at the baccalaureate level. It also recognizes that we have entered a period of tight fiscal constraints in which improved collaboration and responsiveness are more critical than ever in meeting our obligations to provide quality education while making the best use of available resources.

Special care has been taken to ensure that program specifications are appropriately channeled through all necessary review, approval, and certification process. For each degree program, a faculty committee appointed by the Senior Vice President for Academic Affairs is responsible for developing the curriculum and for monitoring its implementation and evaluation. Programs are approved subsequently by appropriate bodies within MnSCU and by the University's Board of Regents. The overarching consideration in these initiatives is that the University of Minnesota recognize and prepare for the growing demand for a new type of education that blends appropriate levels of the "how" and the "why" of knowledge, and that the institution infuses efforts with all necessary structural and procedural integrity.

Program Review Process

Although neither the Board of Regents nor the University Senate has a formal systemwide policy that governs the review of all existing programs, the University of Minnesota's practice has been to establish review processes for existing programs that are proper to each campus. For the Twin Cities campus, the review of academic programs is linked to both the external accreditation of certain programs and the approximately every ten-year review cycle of graduate programs. Copies of those program reviews will be available for review during the site visit. Programmatic accreditation processes by external accrediting bodies typically include a significant involvement of faculty in the review of particular academic programs, and the internal Graduate School Program Review process includes the significant involvement of University faculty.

In addition to the on-going reviews as part of accreditation or graduate program review, periodic specification of criteria for program review occurs as part of the broader institutional planning effort and is an outgrowth of faculty members' efforts. Typically, these broadly defined criteria have been developed by central administration with widespread consultation with faculty. The most recent example of criteria for program review were those specified as part of *A Commitment to Focus*:

- Quality of the program refers to the level of excellence aspired to and currently provided by the academic program. This measure is ultimately a question of how well the values for which the University stands are expressed in the activities of the program--in free inquiry, effective learning, and useful service to the citizens of

Minnesota. The outcomes of research and discovery, teaching and learning, and outreach and public service must be considered--the professional standing of our scientists, scholars, and artists; the impact of their work on their disciplines or fields, and/or on our society; the success of our students as students and in their personal and professional lives; the satisfaction of those served by the University.

- Centrality is evaluated in terms of the program's contribution to the mission of the University of Minnesota. Centrality represents a program's contribution to a coherent whole which helps to sustain and stimulate related work elsewhere in the University. With respect to instruction, centrality also addresses the degree to which a program is an essential component of a challenging education at the undergraduate level; at the graduate and professional level, centrality extends this commitment to an expansion and deepening of knowledge, and to furthering its utilization for society's welfare.
- Comparative advantage is about the unique characteristics of the program that make it particularly appropriate to this University. It is not sufficient that programs meet an important local or national need, or that they be unique within the state.
- Efficiency and effectiveness focus on the use of resources to produce desired results. Efficiency concerns the use of resources, and whether they achieve desired outcomes in a cost-effective manner. Effectiveness concerns the degree to which agreed-upon and desired results are achieved.
- Demand includes information about the need for those services provided by the program, as well as the actual use of services by constituencies to be served by the University. Demand can be measured in many ways, including number of applications, quality of acceptances, services performed in support of other programs, degrees awarded, instruction of students or research undertaken for the solution of pressing problems of society, or expected employment opportunities for graduates of occupational preparation programs.

Educational Programs.

12. It confers degrees.

The University conferred its first degrees in 1873. Most collegiate units on the Twin Cities hold their own commencement ceremonies; there have been recent efforts to hold one ceremony for the campus as a whole. Since 1973, there have been over 350 such ceremonies at the University of Minnesota, for an overall degree production of 494,264 through June 1995 across all collegiate units.

13. It has degree programs in operation, with students enrolled in them.

Currently, students are enrolled in virtually all of the 658 academic degree programs referred to in item 2 above across the four campuses of the institution. The degree programs range from accounting to zoology, and present students at all degree levels a wide range of choice that is unavailable in other higher education institutions in Minnesota. The enrollment on the Twin Cities campus for fall quarter 1995 was 36,995, 64 percent of whom were enrolled at the undergraduate level and 36 percent at the graduate/professional level. In addition to the 498 degree programs currently available to new students on the Twin Cities

campus and included in the Academic Program Inventory, the institution enables students who enrolled in programs that have since been discontinued to complete those degree programs. Efforts are currently underway to simplify the internal tracking system for those numerous degree programs that are no longer available to new students, and to establish specified time periods for students to complete degree programs that are being phased out through the institution's internal planning, budgeting, and evaluation processes.

14. Its degree programs are compatible with the institution's mission and are based on recognized fields of study at the higher education level.

The tripartite mission of the University of Minnesota suggests that an array of degree programs would be available on the Twin Cities campus, but also suggests that graduate and professional degree programs would play a prominent role. Of the 498 degree programs available on the Twin Cities campus, 32.1 percent are undergraduate degrees, 40.2 percent are master's degree programs (some of which are terminal degrees and others of which lead to a Ph.D. degree), 1.0 percent are professional degrees, and another 23.3 percent are research-oriented doctoral degrees. As part of the changes initiated by *A Commitment to Focus*, associate degree programs are no longer available in any collegiate units on the Twin Cities campus.

An examination of the 498 degree programs available on the Twin Cities campus indicates that all have been assigned codes according to the nationally recognized IPEDS coding scheme.

Since the last Accreditation Review in 1986, the number of degree programs has changed as summarized below:

	1986		1996	
	Twin Cities	Twin Cities	Twin Cities	Systemwide
Associate	2	--		16
Baccalaureate	155	160		278
Master's	162	200		214
Professional	5	5		6
Doctoral	119	116		116
Other	18	16		17

Especially at the graduate level, new academic programs developed and implemented in the last decade reflect the growing emphasis on interdisciplinary fields of study. The following list is illustrative of the interdisciplinary degree programs that recognize emerging fields of study in higher education: Ph.D. in Neuroscience, M.S. in Chemical Physics, M.S. and Ph.D. in Health Informatics, M.S. and Ph.D. in Conservation Biology, Ph.D. degree in Biomedical Science, and M.A. and Ph.D. in Rhetoric and Scientific and Technical Communication.

An analysis of the numbers of graduates from doctoral and master's programs indicates that the University of Minnesota ranks fourth nationally in terms of the number of doctoral degrees awarded, and ranks 24th in terms of the number of master's degrees.

Given the land-grant and outreach aspects of the institution, it engages in collaborative efforts with other institutions to deliver some of its programs and specific courses to students who might not otherwise have access to the institution. The May 1994 report to the Board of Regents *Report on Collaborative Efforts with Other Higher Education Systems: A Representative Overview* describes several of those collaborative arrangements.

15. Its degrees are appropriately named, following practices common to institutions of higher education in terms of both length and content of the programs.

The Academic Program Inventory indicates the names of all degree programs available to students at the University of Minnesota. The specific course requirements for each of those academic programs are described in the collegiate bulletins and departmental handbooks available in printed form in several locations on campus. As part of the campus efforts to include descriptions of all academic programs on the World Wide Web, descriptions are now more easily accessible to current and prospective students.

The policies and procedures to be followed in naming new academic programs and changing the names of existing academic programs are governed by policies prepared by the Office of the Senior Vice President for Academic Affairs. The most recent memorandum on the topic, dated January 1994, is available for review. Following endorsement by the Office of the Senior Vice President for Academic Affairs, changes in names of academic programs are submitted for approval by the Board of Regents as part of the Senior Vice President's Monthly Report to the Educational Planning and Policy Committee.

The Academic Program Inventory indicates the length (in credits) of each of the institution's academic programs. The following is a summary of the range in credits for baccalaureate, master's, professional, and doctoral programs available on the Twin Cities campus.

<u>Program</u>	<u>Credits Required</u>
Baccalaureate	180-244
Master's	44-126
Professional	Varies widely by school
Doctoral	54-140

Several efforts in recent years have addressed issues relative to the length of baccalaureate degree programs. Although most of the baccalaureate programs on the Twin Cities campus are 180 credits in length, there are several programs that have credit requirements that exceed the 180 credit length. In many cases (e.g., programs in several engineering fields) program length is determined in part by curricular requirements of external program accrediting bodies. In certain fields, recent developments in particular professional areas have recognized the need to change the degree awarded (e.g., at the time of the last accreditation review the undergraduate degree in architecture was a five-year program that required 244 credits; now the first degree that students receive is a professional master's degree that recognizes the effort beyond the baccalaureate degree.)

16. Its undergraduate degree programs include a coherent general education requirement consistent with the institution's mission and designed to ensure breadth of knowledge and to promote intellectual inquiry.

Prior to the mid-1980s, all undergraduates on all campuses of the University of Minnesota were required to complete liberal education distribution requirements as adopted in 1970 by the University Senate in an all-University Policy on Liberal Education. The four distribution categories were: Communication and Symbolic Systems; Physical and Biological Sciences; Man and Society; and Artistic Expression. The minimum requirements in the four categories were ten courses (40-50 credits) distributed among all four categories with no fewer than two courses (8-10 credits) in any one category.

When the all-University Council on Liberal Education was abolished, it was replaced by campus specific policies on liberal education requirements. The Twin Cities Task Force on Liberal Education submitted its report *A Liberal Education Agenda for the 1990s and Beyond on the Twin Cities Campus of the University of Minnesota* on May 6, 1991. In addition to specifying requirements for new entering freshmen, the University of Minnesota has been involved in the creation of articulation councils to coordinate liberal education requirements and prerequisites for majors to facilitate transfer to the University of Minnesota from other institutions in Minnesota.

The new liberal education curriculum included two fundamental changes: (a) a common set of liberal education requirements and courses for all undergraduate students on the Twin Cities campus; and (b) faculty in colleges on the Twin Cities campus were expected to contribute to the new curriculum. The Task Force recommended a Council on Liberal Education (CLE) for the Twin Cities campus and charged it with responsibility for approving courses that satisfy three major liberal education requirements:

Diversified Core Curriculum containing a breadth requirement of

- Physical and Biological Sciences -- 3 courses
At least on course with a laboratory or field experience designed to introduce the intellectual basis of an experimental science in each of these two broad fields of science.
- History and the Social Sciences -- 3 courses
Distributed across the several social sciences but including one course emphasizing "the historical perspective" as offered by a number of departments.
- Humanities and the Arts -- 3 courses
Distributed across at least two of three categories: literature, philosophy, and visual or performing arts.
- Mathematical Thinking -- 1 course

Designated Themes of Liberal Education consisting of six courses (or 5 courses if one includes an approved practicum) distributed across four themes:

- Cultural Diversity
- International Perspective
- Citizenship and Public Ethics
- Environment

Writing Skills consisting of

- One formal composition or rhetoric course
- Four writing intensive courses

These three components of the new liberal education requirements have been implemented in two phases. In the first phase, the diversified core curriculum and the designated theme requirements were put in place. The implementation of the writing skills requirement, expected to be effective one year later, has not yet occurred because of budgetary constraints. In the interim, the current collegiate composition requirements remained in effect.

The following five policy guidelines were developed to guide the process of course development for courses to be included in the liberal education curriculum:

- Courses in the liberal education curriculum should be of high quality, offered frequently and predictably, and of sufficient number to facilitate the timely academic progress of undergraduate students. (In order to balance the desire for a common educational experience in the diversified core and the need for a sufficient number of opportunities for students, CLE aimed to approve a number of courses that provides between 125 and 150 percent of the anticipated demand. To assist CLE in assessing the adequacy of the opportunities available to students, units were asked on the submission form to specify which quarters each year a course normally would be offered.)
- Proposals of courses from all instructional units on the Twin Cities campus, including those in professionals schools or colleges that traditionally have not contributed to liberal education, were strongly encouraged. (The rubric "diversified core" came from the notion of the Task Force, subscribed to by CLE, that the number of courses approved at any one time should be smaller than at present, i.e., a core, but "... large enough to attract teaching commitments from a wide range of faculty from across the Twin Cities campus, offer students meaningful choice, and meet overall student demand" -- i.e., diversified. In an effort to balance these two objectives, in its review of proposals CLE paid attention to the criteria, the willingness of the unit to offer the course frequently and predictably, and the size and mission of the instructional unit.)
- Courses at several instructional levels were necessary and encouraged. (Many of the courses admitted to the diversified core were expected to be at the "lower division" (1-xxx) level. However, the Task Force urged that about one-third of the diversified core be taken after a student has reached the "upper division" stage. Designated theme courses included opportunities at the 1-xxx, 3-xxx, and 5-xxx levels. Students will satisfy this requirement with a combination of courses in the diversified core, the major, and electives.)
- CLE strongly encouraged and favored courses that serve multiple purposes in liberal education as a means of reducing the impact of these requirements on the credits necessary and the length of time taken to complete a baccalaureate degree. (The diversified core and the designated theme requirements are not mutually exclusive. Several combinations were possible that instructional faculties kept in mind when preparing proposals: (a) a diversified core course could be approved for one of the designated themes, and satisfy both requirements simultaneously, e.g., history and cultural diversity or physical science and environment; (b) a course not in the diversified core could be approved for two designated themes, e.g., international perspectives and cultural diversity or environment and citizenship and public ethics; (c) a practicum could be a part of a designated theme course, including designated theme courses that are also admitted to the diversified core, with the effect of reducing the number of required designated theme courses from six to five; and (d) both diversified core and designated theme courses could be proposed as writing intensive.)

- CLE, consistent with the recommendations of the Task Force, approved courses in the diversified core and the designated themes for a fixed period of time. (The standard approval period was five years. However, in the initial round of review, courses were assigned, on a random basis, approval for three to five years to begin a staggered rotation in reapproval of courses. CLE intends that the liberal education curriculum be reevaluated and renewed on a regular schedule, and is currently engaged in a discussion of what course evaluative procedures will be.)

Course credit distribution

A recent analysis of the distribution of courses by credit module for courses offered at least once since 1989-90 (N=11,745 total) indicates that slightly less than half (42.3%) of the courses award four credits for successful completion of the course. The results for each collegiate unit are contained in Table 2 below, and will provide useful baseline information for the transition to the semester system. These data are particularly timely, since the institution is engaged in discussion about what should be the "standard" number of credits for most courses, especially for those courses used to fulfill liberal education requirements.

Table 2
Course Distribution by Credit Module

Area College	Credits					
	1 %	2 %	3 %	4 %	5 %	Other %
Academic Affairs						
Graduate School	11.1	5.6	13.9	10.2	2.8	56.5
Student Development and Athletics	21.2	33.3	12.1	0.0	0.0	33.3
Academic Health Center						
Dentistry	21.9	14.9	8.6	3.5	1.1	50.0
Medical School	10.1	6.4	19.0	11.8	4.7	48.1
Nursing	2.4	10.2	33.1	18.1	7.1	29.1
Pharmacy	10.7	22.1	28.9	8.1	2.0	28.2
Public Health	4.8	11.4	50.5	17.3	0.7	15.2
Veterinary Medicine	9.9	9.3	8.7	9.0	3.9	59.2
Arts, Sciences, and Engineering						
Biological Sciences	8.5	4.9	12.5	32.6	21.9	19.6
General College	1.0	3.5	5.6	39.4	34.3	16.2
Institute of Technology	5.0	4.3	24.3	49.9	4.5	11.9
Liberal Arts	3.1	6.0	7.9	62.8	11.2	9.1
University College	8.3	0.0	0.0	0.0	0.0	91.7
Professional Studies						
Agricultural, Food, and Environmental Sciences	7.9	9.9	19.9	36.8	7.0	18.6
Architecture and Landscape Architecture	0.0	1.5	5.8	50.4	1.5	40.9
Education and Human Development	6.6	3.4	47.4	17.8	1.3	23.6
Human Ecology	1.0	4.7	28.2	48.8	6.8	10.4
Humphrey Institute of Public Affairs	4.1	2.4	67.5	20.3	0.0	5.7
Law School	2.8	41.0	31.6	5.2	0.0	19.3
Management	0.5	2.1	1.3	84.5	1.3	10.2
Natural Resources	6.4	15.8	30.2	22.3	6.9	18.3

17. It has admission policies and practices that are consistent with the institution's mission and appropriate to its educational programs.

At the time of the 1986 Accreditation Review, admissions requirements at the undergraduate level tended to be college specific for each of the undergraduate units on the Twin Cities campus. Since that time, considerable time and effort have been devoted to specifying preparation requirements and developing common admissions requirements for those units that admit students as freshmen. Grades, test scores, completion of prerequisites, and, in some instances, personal statements and counselor or teacher recommendations are considered. The following detailed description and discussion of admission policies and practices are appropriate, since it is essential in understanding ongoing changes in the institution's strategy for improving undergraduate education.

The statement of policy adopted by the Board of Regents and included in the "Mission and Policy Statement" of July 11, 1980, reads as follows:

"It is the policy of the University to provide equal educational access and opportunity to persons of every race and ethnic heritage, of both sexes, and of all religions and creeds, and to treat fairly all individuals who are competing for educational opportunity. Furthermore, the University will maintain affirmative action admission programs that: (a) promote an ethnic and cultural diversity that will enrich the University's campus environment and educational programs, and (b) increase the representation of minority groups at the highest professional levels."

One aspect of *A Commitment to Focus* reflected a growing interest in changing somewhat the composition of the student body at the University of Minnesota, especially on the Twin Cities campus. That proposal focused on reducing the number of undergraduate to graduate students from the ratio of 3.9 to 1 in 1986 to approximately 3.5 to 1. For fall quarter 1995, the ratio for the Twin Cities campus was 2.6 to 1. The actions taken to change the composition of the Twin Cities campus are discussed in greater detail in subsequent sections of this report.

Following reports by both internal and external review committees, a 1992 report titled *Twin Cities Admission Planning: The 1990s and Beyond*, jointly prepared by the Vice President for Student Affairs and the Vice Provost for Arts, Sciences, and Engineering recommended changes in admissions structures and practices. The plan provided a detailed commentary and implementation timetable for each of five categories of concern: policy and authority, recruiting, applications and admission process, financial aid and housing, and orientation and student transitional programming.

The changes reflected concerns in President Hasselmo's *Initiative for Excellence in Undergraduate Education* that focused attention on the question "Who should our students be--and why?" A more specific statement by President Hasselmo was as follows:

"The University must provide information that is concise and relevant, administering an admissions process that, for the student and the University, is cost efficient, responsive, and simple. The process must select students who are prepared and able to perform successfully at the University."

Several critical assumptions served as the foundation for the plan:

- First, the faculty of the colleges are responsible for setting admission standards and thus shaping the nature of the student body.
- Second, enrollment management policies for the campus and all of its colleges are the responsibility of the Provost of the Twin Cities campus. (The organizational structure has changed recently to a three provost model.)
- Third, the Office of Admissions is responsible for implementing the admissions standards established by the faculty of the colleges and the enrollment management policies. The Office of Admissions plays a critical role in attaining University goals by recruiting and processing admissions for a student body of appropriate size, characteristics, and preparation level.
- Fourth, in order to significantly improve the admissions process, application processing and recruitment must become centralized in the Office of Admissions. This has occurred for new freshmen students, and the process is now centralizing admissions processes for new transfer students.
- Fifth, the hiring of a new Director of the Office of Admissions is critical to the success of these efforts; a new director was hired in 1993. The Office has assumed part of the functions currently performed by the colleges, such as reviewing marginal applications and coordinating recruitment activities.

The criteria for admission to undergraduate units on the Twin Cities campus are described in the *Undergraduate Application Booklet/1996-97*. The Office of Admissions reviews the following to determine the applicant's potential for academic success: completion of high school courses, test scores, high school rank percentile, and patterns of coursework and performance. All of the above factors are routinely considered as part of the admissions process. Certain other factors are considered for applications undergoing individual review. Students are automatically admitted as freshmen if they: submit their complete application, including all test scores and transcripts and a \$25 application fee before the application deadline; complete the high school course preparation requirements; and meet the ACT or SAT Aptitude Rating standards specified in the admissions materials.

The admission formulas below indicate how ACT or SAT "Aptitude Rating" are calculated using high school rank percentile and ACT or SAT test scores. If an Aptitude Rating falls at or above the number indicated for the college that a student plans to enter, she/he will be admitted automatically, provided she/he also meets other admission standards. If an aptitude rating falls below the number indicated, the application is reviewed through an individual review process.

- **AAR** (ACT Aptitude Rating--for students who took the ACT):
High school rank %ile + (2 x ACT composite score)
- **SAR** (SAT Aptitude Rating--for students who took the SAT *before April 1, 1995*):
High school rank %ile + (SAT verbal/10 + 10 + SAT math/10)
- **RSAR** (RSAT Aptitude Rating--for students who took the SAT *on or after April 1, 1995*):
High school rank %ile + (SAT verbal/10 + SAT math/10)

**For the Colleges of Agricultural, Food, & Environmental Sciences;
Human Ecology; Liberal Arts; and Natural Resources**

Minimum AAR: 110
Minimum SAR: 160
Minimum RSAR: 170

For the Institute of Technology

Minimum AAR: 130
Minimum SAR: 185
Minimum RSAR: 195

**For the Carlson School of Management (Preferred Admission; the first
freshman class will be admitted for fall 1996)**

Minimum AAR: 135
Minimum SAR: 190
Minimum RSAR: 200

The booklet referred to above also describes the somewhat more complicated process used for the admission of transfer students (those students who have completed more than 39 previous college credits). The basis for admission for new freshmen and transfer students is also contained in collegiate bulletins. As part of the continuing effort to centralize admissions on the Twin Cities campus, the Office of Admissions continues to work with collegiate units in the greater standardization of policies and procedures for transfer students.

In addition to the overall requirements for admission to colleges on the Twin Cities campus, there are more specific requirements for admission to majors that fall into two broad categories: majors with no admission or application criteria beyond requirements (some require introductory coursework); and majors requiring minimum GPA, along with prerequisite courses and/or other admission criteria (either non-competitive in which all students meeting minimum admission criteria are admitted, or competitive in which a limited number of students are admitted from a pool of applicants, all of whom meet minimum admission criteria).

Recommendations from the Special Committee on Unified and Increased Preparation Standards were approved in 1987 and took effect for freshmen entering fall 1991. The specific course-based requirements applied to all students entering the Duluth, Morris, and Twin Cities campuses: four years of English, three years of mathematics, including one year each of elementary algebra, geometry, and intermediate algebra; three years of science, including one year each of biological and physical science; two years of a second language; and two years of social studies, including U.S. history.

The newly adopted requirements were proposed by an Ad Hoc Committee on Joint Preparation Requirements, composed of five representatives from the University of Minnesota and three representatives from the Minnesota State Universities. The University of Minnesota's requirements went into effect for incoming freshmen in fall 1991; the requirements for the Minnesota State Universities began in fall 1994. At its meeting on February 16, 1995 the University Senate adopted the "Joint Preparation Requirements for the Minnesota State Universities and the University of Minnesota" following the recommendation of the Senate Consultative Committee and the Senate Committee on Educational Policy.

The new requirements differ from previous University of Minnesota requirements in the specification of geography in the social science category and the inclusion of one year in the arts are as follows:

- English -- Four years, including writing, literature, and speech.

Within the writing component, students may elect work in composition, creative writing, journalism, or research writing. Literature may include both American and world literature; speech may include both public speaking and debate.

- Mathematics -- Three years consisting of two years of algebra, one of which must be intermediate or advanced algebra, and one year of geometry.
- Science -- Three years, including at least one course each in the biological and physical sciences, and all three units to incorporate significant laboratory experience.

The biological and physical science requirements would most commonly be met by courses in biology, chemistry, and physics. Other courses could include advanced biology, human anatomy and physiology, botany, zoology, geology, and advanced chemistry and physics.

- Social Studies -- Three years, including one year each of geography and American history.

Geography need not always be taught as a full-year course, and may in fact be incorporated in a significant way into other studies; transcripts should indicate specifically which courses meet the geography requirement.

(Geography is increasingly important to our understanding of global issues; its importance has been recognized by the National Goals Task Force, which is currently developing national geography standards. We support the addition of courses in geography to the high school curriculum.)

- World Language -- Two years of a single second language.

Language courses may include both those traditionally taught in high schools (for example, Spanish, French, German), as well as those less frequently taught.

- Arts -- One year in the visual or performing arts.

It is expected that all arts courses (including band and chorus) will include instruction in the history and critical interpretation of the art form. Courses in the arts should offer students the opportunity to experience the art directly as creators/performers and as critical, informed observers.

Additional study in mathematics and science is highly recommended; some divisions in specific institutions require four years of each for admission.

Students are also strongly urged to develop skills in using computers.

Associate deans in the Council of Undergraduate Deans indicated that it would be difficult to implement the new requirements too quickly, and suggested that the incoming class for fall quarter in the year 2000 be the first to be held to the new standards since the date ties in

with University 2000, and high schools will have ample time for implementation. Efforts are underway internally to consider how the geography requirement will be monitored by the Admissions Office, since this requirement will not necessarily be fulfilled through a single course, but may be met by a geography component in several other courses.

As part of the implementation of the preparation requirements, the Office of Admissions developed a system for determining if students had met the high school preparation requirements. As the results in Table 3 below indicate, 84.4 percent of new freshmen for fall quarter 1995 had met all of the preparation requirements, compared with 69.6 percent for fall quarter 1991. An estimated 17 percent had met all of the course specific requirements in 1986 prior to the implementation of the new admission requirements.

The effects of specifying preparation requirements have been dramatic in recent years, as the comparisons between 1991 and 1995 suggest in Table 3 below.

Table 3
Percentages of New High School Freshmen Enrollees
on the Twin Cities Campus Who Meet Course Specific
High School Preparation Requirements^a

Course Requirement	<u>Fall 1991</u> %	<u>Fall 1995</u> %
English	92.7	96.5
Elementary algebra	98.4	99.4
Geometry	95.2	97.8
Intermediate algebra	92.9	96.5
Satisfied all mathematics requirements	--	97.0
Biological science	94.7	97.6
Physical science	97.1	98.9
Satisfied all science requirements	--	94.5
Second language	86.8	94.3
Social studies	99.4	99.7
U.S. history	99.4	99.8
Satisfied requirements in all areas	69.6	84.4

^aSource: New Student Characteristics Fall Quarter 1991 and New Student Characteristics Fall Quarter 1995, Office of Admissions.

Efforts are underway through the College of Education and Human Development and the Office of Admissions to support and accommodate the implementation of the Minnesota High School Graduation Standard. Beginning with the graduating class of 2000, all Minnesota public schools will phase in statewide standards for earning a high school diploma. To qualify for a high school diploma, the student must have demonstrated both the basic requirements and the required profile of learning listed below:

- Students graduating in 2000 and beyond must demonstrate basic competency in the skills of:
 - reading
 - mathematics
- Students graduating in 2001 and beyond must also demonstrate basic competency in the skills of:
 - writing
 and basic knowledge of fundamental concepts from:
 - science
- Students graduating in 2002 and beyond must also demonstrate basic knowledge of fundamental concepts from:
 - government
 - physical health and safety
 - geography

The required profile of learning for students graduating in 2002 and beyond must include demonstrated record of academic work, with achievement scored against a high standard in the following elements:

- Understand what they read, hear and see. (Comprehending, interpreting, and evaluating information received in English through reading, listening and viewing.)
- Write and speak effectively. (Writing and speaking in English clearly for academic, and technical purposes with a variety of audiences.)
- Develop artistic pursuits. (Understanding the processes and meaning of artistic expression.)
- Know how and when to use math. (Applying mathematical concepts to solve problems.)
- Gather and use information. (Applying methods of inquiry needed to conduct research, draw conclusions, and communicate and apply findings.)
- Understand the world through science. (Understanding and applying scientific concepts in natural and human-made environments.)
- Understand interactions between people, their world and their cultures. (Understanding how principles of interaction and interdependence operate in societies and cultures.)
- Make informed decisions. (Applying informed decision-making processes to promote personal growth and the well-being of society.)
- Know how to manage a household or business. (Understanding the effective management of resources in a household, business, community, and government.)
- Learn another languages. (Optional. Communicating in a language other than English.)

The University of Minnesota maintains important responsibilities for helping to improve the achievement of students in the state's K-12 school system. As part of President Hasselmo's K-12 Initiative, University faculty and staff have undertaken important new initiatives to: (a) strengthen the training of teachers and other educational leaders; (b) increase the organized transfer of research knowledge and technical assistance to improve teaching and learning programs for students; (c) increase the diversity of teachers and school leaders; and (d) improve educational policies and practices throughout Minnesota. Most of these initiatives are detailed in educational policies and practices throughout Minnesota, and are detailed in a periodic College of Education and Human Development publication, *Pre-Kindergarten through 12th Grade: Inventory of University Programs* (Center for Applied Research and Educational Improvement, 1994).

In addition, the University of Minnesota continues to support direct reform initiatives to improve educational achievement and school outcomes established by the Legislature and the Department of Children, Families and Learning. One important example of these reform initiatives is the Graduation Rule which is comprised of two broad components: (a) Basic Requirements Tests to insure that students possess the skills considered essential for high school graduation (minimum competency tests); and (b) advanced, high standards measures in many areas of academic competence and artistic expression through the Profile of Learning. The Graduation Rule's Profile of Learning is most relevant to issues of preparation and admission to colleges and universities. The Graduation Rule is currently in an experimental stage of development, with implementation expected by 2002. Thus, the complete implications of the Graduation Rule for practices in higher education are not likely to materialize for several years.

The University of Minnesota will continue to support the state's effort to improve graduation standards and the preparation of students for postsecondary education. The University continues to work with other educational institutions and agencies to improve standards and student achievement. Faculty in the College of Education and Human Development, for example, have worked with the Minnesota Department of Education and local school districts to develop assessments for the Basic Requirements of the Graduation Rule, and to develop and pilot assessments in various areas for the Graduation Rule's Profile of Learning. Furthermore, faculty are working with Continuing Education and Extension/University College to organize offerings to help teachers and other educational personnel prepare students to meet these new standards.

The University uses admission procedures that allow us to consider students from both traditional and nontraditional high school backgrounds. Normally, the Admissions Office uses a combination of high school percentile rank and college entrance test scores along with completion of the high school preparation requirements to make freshman admission decisions. However, there is also a parallel individual review procedure that is a routine part of the admissions process. Individual review helps to ensure that we do not overlook those students with strong academic potential who do not meet the standard freshman admission profile (e.g., students from nontraditional schools or schools that do not rank, home-schooled students, students from disadvantaged backgrounds, or students with GEDs in place of a high school diploma), or students who present special achievements in a variety of areas.

Admissions staff have participated in several workshops offered by the Minnesota Department of Education to offer feedback on the proposed graduation standards and their impact on students preparing for admission to the University of Minnesota. The Admissions Office has focused on the development of a reporting mechanism that would serve the needs of the competency-based graduation standards while still allowing the University to make reliable and efficient admissions decisions based on more traditional

academic performance indicators and completion of the required preparation standards. Based on progress to date, the institution is confident that continued collaboration between the University, other higher education systems, and the Department of Children, Families and Learning (formerly the Department of Education) will result in a reporting system that meets the needs of the secondary and post-secondary education sectors and most importantly, the students and their families.

Table 4 below shows the previous college experience of new freshmen and new transfer students entering the Twin Cities campus for fall quarter 1995. As the results indicate over a third of new freshman had some college credits on entry and a quarter of new transfer students had University of Minnesota degree credits.

Table 4
Previous College Experiences of NHS and NAS Students
Fall Quarter 1995

	NAS ^b		NHS ^b	
	N	%	N	%
Total	2235		4356	
Had some college credit	2235	100.0	1523	35.0
Had U of M credits	550	24.6	632	14.5
Had U of M CEE credits	432	19.3	514	11.8
Were U of M PSEO students ^a	8	0.4	34	0.8
Had MN comm college credits	718	32.1	223	5.1
Had MN state U credits	228	10.2	52	1.2
Had MN priv coll credits	211	9.4	49	1.1

^aPSEO is Postsecondary Education Options Act -- students flagged as program participants at the U of M.

^bCategories in table are not mutually exclusive and do not sum.

Source: Office of Planning and Analysis, February 19, 1996

A detailed description of specific admissions requirements is contained in the document *Summary of Admission Requirements; University of Minnesota-Twin Cities Undergraduate Majors*. Given the nature of graduate and professional programs, the criteria used for making admissions decisions varies across degree programs and degree levels. The specific criteria used for admission to professional and graduate programs are described in the bulletins for each of the professional schools and the Graduate School.

18. It provides its students access to those learning resources and support services requisite for its degree programs.

On the Twin Cities campus of the University of Minnesota, there is a vast array of programs and student support services to assist students in selecting degree programs, to enable students to be successful in those programs, and to facilitate the completion of those academic programs. The programs and services that are imbedded within each of the collegiate units are described in detail in each of the collegiate bulletins. In addition to the

on-going programs and services, most collegiate units develop additional programs, evaluate them, and then fold them into the regular programs and services as budgets permit. Several new programs and services for students, such as the Faculty Mentor Program in the College of Liberal Arts, block registration in the Institute of Technology, and Residential College are described elsewhere in this report.

In addition to collegiate programs and services, there are numerous campus-wide programs and services that are available to students as part of the efforts of the Vice President for Student Development and Athletics, the Senior Vice President for Academic Affairs, and the Associate Vice President for Minority Affairs. More detailed descriptions of programs and the frequency with which they are used by students are available for review. Several of the Twin Cities programs that are especially critical for student success (e.g., Office for Minority and Special Student Affairs) are described in more detail elsewhere in this report.

The following programs and services are listed in the Student/Staff Directory, in other materials made available to students on campus, and through the World Wide Web.

- Academic Counseling, Intercollegiate Athletics
- Academic Honors Programs
- Office of Admissions
- Office of Advanced High School Student Services
- African American Learning Resource Center
- Africana Student Cultural Center
- Center of American Indian and Minority Health
- American Indian Learning Resource Center
- American Indian Student Cultural Center
- Asian American Student Cultural Center
- Asian/Pacific American Learning Resource Center
- Department of Men's Intercollegiate Athletics
- Department of Women's Intercollegiate Athletics
- University of Minnesota Bookstores
- Boynton Health Service
- Office of the Bursar
- Bus Service Information
- Career Development Center
- Chemical Awareness Promotion Through Peers
- Chicano/Latino Learning Resource Center
- University Child Care Center
- Council for Health Interdisciplinary Participation (CHIP)
- University Community Building Project
- Computing and Information Technologies
- Department of Concerts & Lectures
- Copies on Campus
- University Counseling & Consulting Services
- Disability Services
- Escort Service
- Film Society, University of Minnesota Film Center
- Gay, Lesbian, Bisexual, Transgender (GLBT) Program Office
- Global Campus
- Goldstein Gallery
- Graduate & Professional Student Assembly (GAPSA)
- Graduate Assistant Office
- Council of Graduate Students
- International Study and Travel Center

- KUOM (Radio K)
- La Raza Student Cultural Center
- Learning and Academic Skills Center
- LUMINA (University Libraries)
- Minneapolis Student Unions
- Minority & Special Student Affairs
- Katherine E. Nash Gallery
- Department of Recreational Sports
- St. Paul Student Center
- Sexual Violence Program
- Office of Student Activities
- Student Advocate Service
- Minnesota Student Association (MSA)
- Student Dispute Resolution Center
- Student Diversity Institute
- Student Employment Center
- Office of Student Financial Aid
- Student Judicial Affairs
- University Student Legal Service
- Undergraduate Research Opportunities Program (UROP)
- Frederick R. Weisman Art Museum
- Minnesota Women's Center

Having an array of student services/programs available to students on the Twin Cities campus does little good if the necessary steps have not been taken to insure that students know about the availability of the services. One of the efforts of the University Community Building Project, sponsored initially in part by a grant from the Fund for the Improvement of Postsecondary Education, is an official campus calendar and survival guide, called the *Gopher Guide* that contains information regarding programs, services, activities, and events available for students on the Twin Cities campus.

Finances

19. It has an external financial audit by a certified public accountant or a public audit agency at least every two years.

The financial statements for the University of Minnesota system (the University of Minnesota is considered to be a multi-campus system with campuses in Crookston, Duluth, Morris, and the Twin Cities) are audited annually by a certified public accountant, whose report appears in the University of Minnesota Annual Report.

The *1995 Annual Report* includes an unqualified opinion by the external auditors Coopers and Lybrand: "In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of the University of Minnesota as of June 30, 1995, and the consolidated changes in fund balances and current revenues, expenditures, and other changes for the year then ended in conformity with generally accepted accounting principles."

For those assets, liabilities, and fund balances that can be disaggregated to the campus, detailed information for the Twin Cities campus is available for review.

20. Its financial documents demonstrate the appropriate allocation and use of resources to support its educational programs.

Responsibility for administering the financial resources of the University rests with the President, the Senior Vice President for Academic Affairs, and the Senior Vice President for Finance and Operations.

The most recent biennial budget is available for review, and University Archives maintains a complete historical set of budgets and budgetary information for collegiate units. Financial resources are documented and available to the public in the University of Minnesota Annual Report.

21. Its financial practices, records, and reports demonstrate fiscal viability.

The *1995 Annual Report* indicates total assets for 1995 of \$2,549,716,000, compared to assets of \$2,478,022,000 for the previous year. Table 5 below, summarized from the *1995 Annual Report*, indicates current fund revenues, expenditures, and other changes between 1995 and 1994.

Although the institution's overall financial statement reflects sound financial strategies, there have been recent, highly publicized examples of arenas in which the institution's financial practices need closer scrutiny and tighter financial accounting procedures to insure that public funds are allocated according to existing state and federal guidelines. A recent example of criticism focused on the institution's grants management practices.

The University of Minnesota received a letter in August 1995 from the National Institutes of Health (NIH) indicating serious concerns about the University's grants management and stating that they intended to place the institution in a category called "exceptional organization" effective immediately. This administrative action by the NIH reflected past problems previously identified by the University and was not the result of any new events. The purpose of this action was to enter into a jointly developed agreement between the NIH and the University, to bring about additional changes in grants management process and procedures.

As a part of their action, the NIH has removed -- effective October 1, 1995, for at least one year -- the expended authorities provision for the University, which streamlines approvals for certain cost-related items and allows a certain amount of local administrative flexibility. The NIH made it clear, however, that they did not intend to take any action that would impact the ability of University of Minnesota faculty to receive continued research funding from that agency. The University was not placed on probation, there were no sanctions, and there was no issue of scientific misconduct. The NIH took this action in order to work cooperatively with the institution, as a part of their own re-engineering, to produce a model for grants management for other research universities. The University had been engaged in an intensive effort to improve grants management. The action was the beginning of a process of cooperation to develop new procedures to remedy certain problems related to grants management which had previously been identified by the University.

The University of Minnesota entered immediately into negotiations with the NIH to develop a plan for corrective action that will ensure compliance with federal grants administration law, regulations and policies. The areas designated for review included:

Table 5

Consolidated Statement of Current Funds Revenues, Expenditures, and Other Changes
(in thousands)

		1995	1994
Revenues	Tuition and fees	\$199,699	\$188,369
	Federal appropriations	16,975	17,418
	State appropriations	462,866	443,442
	Federal grants and contracts	235,701	222,192
	State grants and contracts	29,072	23,989
	Other government grants and contracts	4,286	4,029
	Private gifts, grants, and contracts	198,000	180,839
	Endowment income	9,009	19,824
	Investment income	24,295	11,343
	Realized gains (losses) and adjustments to market value, net	2,504	(7,918)
	Sales and services of educational activities	89,110	77,687
	Sales and services of auxiliary enterprises	134,352	124,361
	Sales and services of hospital and medical clinics	331,712	322,920
Total revenues		1,737,581	1,619,495
Expenditures and mandatory transfers	Education and general		
	Instruction	395,515	367,261
	Research	309,150	293,228
	Public service	948,107	83,185
	Academic support	149,095	134,362
	Student services	48,434	46,194
	Instructional support	103,552	72,634
	Operation and maintenance of plant	93,299	89,065
	Scholarship and fellowships	1,265,641	1,249,831
	Education and general expenditures	1,265,641	1,149,831
	Mandatory transfers for		
	Principal and interest	6,236	2,268
	Loan fund matching grant	176	99
	Total education and general	1,272,053	1,152,198
	Auxiliary enterprises		
	Expenditures	124,794	118,326
	Mandatory transfers for		
	Principal and interest	959	1,024
	Renewals and replacements	144	272
	Total auxiliary enterprises	125,897	119,622
	University hospital and medical clinics		
	Expenditures	328,040	319,685
	Mandatory principal and interest transfers	12,111	10,812
	Total University hospital and medical clinics	340,151	330,497
Total current expenditures and mandatory transfers		1,738,101	1,602,317
Other transfers, additions (deductions)	Excess (deficiency) of restricted additions over expenditures	14,467	(3,110)
	Refunded to grantors	(1,214)	(197)
	Nonmandatory transfers	(3,149)	(34,763)
Total other transfers, additions, (deductions)		10,004	(38,070)
Net (decrease) increase in fund balances		\$9,484	\$(20,892)

- The initiation of an audit or the expansion of the present ongoing audit by an external accounting firm to determine if any material weaknesses exist in institutional systems that support research projects.
- A review of the current effort reporting system to determine its compliance with federal requirements.
- Implementation of procedures for reporting program income (i.e., income generated as a result of funded grant activities) and for accurately completing the "other support" section of NIH grant applications.
- A review of the reporting of NIH-supported inventions through a system that the NIH will be operating through the World Wide Web.
- Review of the accounting system mechanisms for providing faculty and staff with the current status of grant funds, and review of internal controls to ensure proper allocation of funds among projects.
- Review of the adequacy of the University's Conflict of Interest Policy as governed by federal regulations.
- Establishment of a written Code of Conduct to be signed by faculty and staff of policies and procedures relating to compliance.

In addition, effective October 1, 1995 and for a period of one year, the NIH removed the University's privilege of authorizing certain actions in managing grants. Previously, the Office of Research and Technology Transfer Administration (ORTTA) was authorized to review and approve selected transactions, such as beginning project expenditures before the award start date, and carryover of funds. However, effective October 1, 1995 for all grants supported by FY 1996 funds, such requests must be reviewed and endorsed, if appropriate, by ORTTA, and then submitted to the awarding NIH institute for final approval. The specific approvals affected by this ruling included:

- No-cost extensions of the final budget period of up to 12 months.
- Project expenditures for costs incurred within 90 days prior to the start date of an award.
- Carryover of unobligated balances at the end of the budget periods.
- Expenditures for general purpose equipment (including computer hardware over \$500, and scientific equipment over \$1,000) that was not previously budgeted and approved.
- The disposition of grant income for research purposes not specifically related to the objectives of the grant.

The NIH conducted a site visit in November 1995, and released their "NIH Administrative-Management Site Visit Report" in February 1996. The focus of the site visit was to review the institution's efforts in recent months and determine progress made and what remains to be done to correct previously noted deficiencies. The site visit team noted in their report that "the University recognizes that it has problems and has made a strong commitment and a genuine attempt to correct past deficiencies and to develop systems that, in addressing the legitimate University of Minnesota agenda, might also serve as a model for others." Numerous strengths, weaknesses and recommendations were outlined in the report, including a follow-up site visit in approximately six to nine months from the date of the initial site visit.

Public Information

22. Its catalog or other official documents includes its mission statement along with accurate descriptions of

- its educational programs and degree requirements;
- its learning resources;
- its admissions policies and practices;
- its academic and non-academic policies and procedures directly affecting students;
- its charges and refund policies; and
- the academic credentials of its faculty and administrators.

The institution's publications provide accurate descriptions of its programs, policies, and charges. Because individual colleges each publish separate bulletins, the information is available in numerous different publications, all of which are governed by general publications policies of the institution. The amount of detail about institutional mission varies by the nature of the publication, of course. Each college produces every few years a catalog describing its programs and policies. The preparation of collegiate bulletins is the responsibility of Communications and Publications. All interested persons have ready access to these catalogs at several locations on campus, as well as to other publications describing University activities and procedures. During the past year as part of the campus' utilization of the World Wide Web, most of the collegiate bulletins have been made accessible to students through this new technology so that students have more convenient access to information on all educational programs and degree requirements. Copies of all collegiate bulletins and a demonstration of access through the World Wide Web are available for review.

A review of the most recent bulletins indicates that the bulletins and other documents provide information about each of the above mentioned items, with the possible exception of a concise description of the mission of the University of Minnesota and descriptions of the academic credentials of faculty and administrators.

Plans are underway to include the new institutional mission statement in relevant publications when they are next revised as part of the periodic revision of collegiate bulletins of collegiate units on the Twin Cities campus. The institutional mission statement will complement the existing collegiate mission statements that are now included in collegiate bulletins. The publication cycle is staggered, so that not all collegiate bulletins are revised during the same year. In addition to the collegiate bulletins, the *Viewbook* that is sent to prospective students is being revised to incorporate the new mission statement. The schedule below indicates the dates for publication of new bulletins that will include the most recently approved mission statement, that will inform interested students of the timing of the transition to a semester system, and that will include additional information on institutional and programmatic accreditation agencies.

Bulletin	Tentative Publication Date
• Agricultural, Food, and Environmental Sciences	8/96
• Allied Health Programs	9/97
• Architecture and Landscape Architecture	7/96
• Biological Sciences	10/97
• Dentistry	8/97
• Education and Human Development	6/96
• General College	4/97
• Graduate School	9/96
• Human Ecology	6/96
• Institute of Technology	6/97
• Law School	5/97
• Liberal Arts	7/96
• Management	8/96
• Medical School, Twin Cities	5/97
• Natural Resources	3/96
• Nursing	2/96
• Pharmacy	9/97
• Public Health	9/96
• ROTC	6/97
• University College	1/96
• Veterinary Medicine	9/97

A new policy statement has been developed by the Director of University-Wide Publications Policies and Standards concerning the inclusion of the institution's mission statement in University-wide publications other than bulletins and materials for prospective students. The mission statement for the University of Minnesota will be made available to the public in three forms: (a) a long form for use in collegiate bulletins and selected other publications; (b) a medium length version recommended for inclusion in many other publications; and (c) a one-sentence version suggested for inclusion in more general publications and in cases of severe space limitations. The use of three versions of the statement is consistent with institutional practices regarding the equal opportunity statements to be included in various publications.

Although it is possible for a student to determine the specific academic credentials of a particular faculty member, until recently it has not been particularly easy for all students to obtain the information. Bulletins list the names and ranks of faculty, some bulletins indicate the institution from which faculty received their highest degrees, and other documents indicate the names and titles of administrators. The academic personnel database contains information on the degrees received and the institution from which faculty members and administrators have received their degrees, but that data base is not accessible to students. As part of the development of departmental, collegiate and campus information to be included in the World Wide Web, faculty members and administrators are including not only information on degrees received from which institutions, but also lists of publications that are used by students to select advisers and courses taught by faculty with particular interests.

23. It accurately discloses its standing with accrediting bodies with which it is affiliated.

A review of the collegiate bulletins indicates that academic programs disclose the institution's standing with the numerous specialized bodies with which it is affiliated. In addition, individual collegiate and program specific publications are careful to reflect the accreditation status of those units with respect to various specialized accrediting agencies. Collegiate "fact sheets" also typically include a listing of the accredited programs in the college.

Programmatic Accreditation

The list of units/programs for which specialized accreditation occurs and dates of most recent and next accreditation was prepared in May 1992 for presentation to the Educational Planning and Policy Committee of the Board of Regents and updated in preparation for campus accreditation by the North Central Association of Colleges and Schools, Commission on Institutions of Higher Education. Specialized accreditation processes occur for the following units/programs:

<u>Twin Cities Campus Unit/Program</u>	<u>Accreditation Agency</u>	<u>Date of Last Accreditation</u>	<u>Expected Date of Next Accreditation</u>
• College of Architecture and Landscape Architecture-Architecture	National Architecture Accreditation Board (NAAB)	1992	1997
• College of Architecture and Landscape Architecture-Landscape Architecture	Landscape Architecture Accreditation Board	1993	1996
• Law School	American Bar Association of Legal Education and Admissions to the Bar	1995	2002
• Carlson School of Management (BSB and MBA) also Accounting Department	American Assembly of Collegiate Schools of Business (AACBS)	1990	2000
• School of Dentistry	Commission on Dental Education	1992	8-10 years
• Pharmacy-B.S.	American Council on Pharmaceutical Education	1990	1996
• College of Pharmacy-Pharm.D.	American Council on Pharmaceutical Education	1990	1996
• Pharmacy-Residency Programs in Hospital Pharmacy	American Council on Pharmaceutical Education (ACPE)	1990	1996
• Public Health-MPH	Accreditation Council on Education for Public Health	1993	2000
• Public Health-Master of Healthcare Administration	Accrediting Commission on Education for Health Services Administration	1995	2002
• Public Health-Preventative Medicine (accredited through the Medical School)	Liaison Committee on Medical Education	1990	1997
• Public Health-Master of Science/Ph.D.	Accreditation Council on Education for Public Health	1993	2000

• Dentistry-DDS	Commission on Dental Education	1992	8-10 years
• Dentistry-Advanced Programs	Commission on Dental Education	1992	8-10 years
• Dentistry-Dental Hygiene	Commission on Dental Education	1992	8-10 years
• TC Medicine-M/D.	Liaison Council of Medical Education	1990	1997
• TC Medicine-Physical Therapy	Liaison Council of Medical Education	1991	5-7 years
• TC Medicine-Occupational Therapy	Liaison Council of Medical Education	1994	2001
• TC Medicine-Medical Technology	Liaison Council of Medical Education	1994	2001
• TC Medical-Graduate Medical Education (Umbrella Organization covers 30-35 disciplines)	Varies by program	Varies by program	Varies by program
• Veterinary Medicine-DVM	American Council of Veterinary Education	1992	1999
• Nursing-BS	National League for Nursing	1992	2000
• Nursing-MS	National League for Nursing	1992	2000
• Nursing-Midwifery Program	American College of Nurse Midwives	1994	2002
• College of Natural Resources-Forestry, Urban Forestry	Society of American Foresters	1985	1996
• College of Natural Resources-Wood Science and Technology	Society of Wood Science and Technology	1991	1996
• College of Natural Resources-Forest Products Marketing	Society of Wood Science and Technology	1991	1996
• College of Natural Resources-Production Management	Society of Wood Science and Technology	1991	1996
• HHH Institute of Public Affairs-Planning Program	Planning Accreditation Board sponsored jointly by the American Institute of Certified Planners and the Association of Collegiate Schools of Planning	1993	1998
• College of Human Ecology-Food Science	Institute of Food Technologists (Approved for Scholarship)	1990	1995
• College of Human Ecology-Nutrition Coordinated Program	American Dietetic Association	1987	1996
• College of Human Ecology-Dietetic Internship for Graduate Students	American Dietetic Association	1989	1999
• College of Human Ecology-Nutrition Undergraduate Program	American Dietetic Association	1988	1998

• College of Human Ecology- Marriage and Family Therapy Program	Commission on Accreditation for Marriage and Family Therapy	1991	1996
• College of Human Ecology- Interior Design Program	Foundation for Interior Design Education and Research	1992	1996
• College of Human Ecology- Master of Social Work	Council on Social Work Education	1990	1996
• College of Education and Human Development	National Council for the Accreditation of Teacher Education (NCATE)	1994	1999
• College of Education and Human Development-Recreation, Park and Leisure Studies	Council on Accreditation sponsored by the National Recreation and Park Association	1990	2000
• College of Education and Human Development-School Psychology	American Psychological Association (APA)	1991	1996
• College of Education and Human Development-Counseling and Student Personnel Psychology	American Psychological Association (APA)	1993	1998
• College of Agriculture-Agricultural Engineering	Accreditation Board for Engineering and Technology (ABET)	1990	1996
• College of Agriculture-Food Science	Institute of Food Technologies (IFT) (Approved for Scholarship)	1990	1995
• College of Agriculture-Nutrition Coordinated Program	American Dietetic Association (ADA)	1987	1996
• College of Agriculture-Dietetic Internship for Graduate Students	American Dietetic Association	1989	1999
• College of Agriculture-Nutrition Undergraduate Program	American Dietetic Association	1988	1998
• College of Liberal Arts- Communication Disorders Department	Educational Standards Board of the American Speech, Language and Hearing Association	1990	1996
• College of Liberal Arts- Counseling Psychology Program	American Psychological Association (APA)	1991	1996
• College of Liberal Arts- Clinical Psychology Program	American Psychological Association (APA)	1995	2000
• College of Liberal Arts-School of Journalism and Mass Communication	Accrediting council on Education in Journalism and Mass Communications (ACEJMC)	1989	1996
• College of Liberal Arts-School of Music	National Association of Schools of Music	1990	2000
• College of Liberal Arts-Department of Theatre Arts and Dance	National Association of Schools and Theatre	1994	2004

• College of Liberal Arts-Dance Program	National Association of Schools of Dance	1991	1997-98
• Institute of Technology-Agricultural Engineering, Extractive Metallurgical Engineering	Accreditation Board for Engineering and Technology, Inc. (ABET)	1993	1996
• Institute of Technology-Aerospace Engineering and Mechanics, Geological Engineering	Accreditation Board for Engineering and Technology, Inc. (ABET)	1993	1996
• Physical Therapy (Physical Medicine and Rehabilitation)	Commission on Accreditation in Physical Therapy Education	1991	1998
• Institute of Technology-Chemical Engineering and Materials Science, Civil Engineering, Electrical Engineering, Materials Science and Engineering, Mechanical Engineering	Accreditation Board for Engineering and Technology, Inc. (ABET)	1995	2000

In terms of internal communication, the vehicle for communicating the status of accreditation processes for academic programs is the Educational Planning and Policy Committee of the Board of Regents. Relevant actions are included in the Senior Vice President's Monthly Report.

24. It makes available upon request information that accurately describes its financial condition.

Being a public institution, the University's financial records are widely publicized and readily available. Its financial and investment reports are reviewed in detail by the Board of Regents and become public documents and are distributed to the press and to various state agencies, and to any citizen upon request.

The *1994 Investment Report* is the most recent summary document that contains information about the fiscal health of the institution. The report frames the presentation in the context of how the asset management program helps the University achieve excellence through diversity. The summary of the invested assets of the Regents as of June 30, 1994 was as follows:

Consolidated Endowment Fund	\$314,588,000
Long Term Reserves	\$177,669,000
Short Term Reserves	\$305,980,000
Separately Invested Funds	\$14,342,000
Invested Assets Related to Indebtedness	\$110,167,000
Total Invested Assets	\$922,746,000

Efforts have been undertaken during the past year to include statements in other materials, such as college catalogs, viewbooks, and the World Wide Web about how the public can obtain information about the financial status of the University of Minnesota.

B. EVALUATIVE CRITERIA

This section highlights more detailed discussions that occur elsewhere in this report concerning how the institution has addressed the five criteria established for accreditation by the North Central Association of Colleges and Schools, Commission on Institutions of Higher Education.

Although the Advisory Committee considered using the five evaluative criteria as the basis for structuring the entire self-study report, it chose to use another framework to focus attention on significant current issues on campus and to make a clearer connection between the self-study and the University 2000 strategic planning process.

The discussion of each of the collegiate units and the evaluation and description of activities and accomplishments in each of the six strategic areas present the "patterns of evidence" in support of accreditation.

Criterion One: The institution has clear and publicly stated purposes consistent with its mission and appropriate to an institution of higher education.

The University's mission, "to serve the people of the State, wherever they may be, through teaching, research, and public service," continues to be consistent with the land-grant character of the University of Minnesota. The development of a comprehensive set of institutional-level critical measures reflects the need to describe the institution's performance and aspirational goals in each of the three aspects of its mission.

The 1991 session of the Minnesota Legislature enacted, for the first time, a definition of the missions of the various state public higher education components. Minnesota Statute 135A.052 now reads, in part, "the University of Minnesota shall offer undergraduate, graduate, and professional instruction through the doctoral degree, and shall be the primary state supported academic agency for research and extension services." Similar definitions were enacted for the other state systems. The principal value lies in the research and extension definition, and in the fact that only the University of Minnesota clause includes doctoral-level instruction.

Given the recent merger of the three other systems of public postsecondary institutions in Minnesota (i.e., technical colleges, community colleges, and state universities), the University's research and outreach capabilities have taken on increased importance in distinguishing it from the other system (the Minnesota State Colleges and Universities; MnSCU) of public higher education in Minnesota.

Periodically, the University of Minnesota revises its mission statement to establish new priorities and guide its activities. When that occurs, the Board of Regents is heavily involved in the process, from discussing aspects to be changed to formally approving a new statement. Members of the University community also comment on draft documents, so that a final document reflects its priorities. The University's formal planning process then directs the University's actions to address stated purposes and then establishes procedures to assess success in meeting stated institutional goals. The process that led up to *University 2000: Mission, Vision and Strategic Areas*, approved by the Board of Regents on January 14, 1994, serves as the framework for the institution's strategic planning into the 21st Century.

The University of Minnesota has a history of extensive consultation processes that connect faculty, staff, and students with the institution's central and collegiate administration. The University Senate, which is system wide, and the Twin Cities Campus Assembly are the two primary formal structures to insure that consultation contributes to the institution's decision making processes.

Earlier in its history, the University did not consistently emphasize its uniqueness. In the 1970s it tried to do everything--to meet the demand for undergraduate education in a growing metropolitan community that then numbered about two million, to compete with the top public and private universities for federal research money and for the best young faculty, and to develop a network of services that extend throughout the State. These actions led to confusion within the institution about faculty and staff activities, to the public's perception that the University was not clearly focused, and to entering students who were poorly prepared to take advantage of the rich opportunities available to them on the Twin Cities campus.

At a time when national and local constituencies are questioning numerous facets of higher education, it is even more important than ever that constituencies both within and outside the institution have an understanding of the missions of teaching, research, and service. Faculty, staff and students all need to have a grasp of what it means for an institution to be a land-grant institution for the 21st Century. And external constituencies need more awareness of the outreach and service outcomes of a research institution, and how the institution's research activities play a vital role in those outcomes.

The institutional vision *A Commitment to Focus* remains an important foundation for the current planning process as articulated in University 2000. An important difference, however, is that University 2000 was grounded in an extensive set of discussions with those publics served by the University of Minnesota. That process clearly suggested some areas in which the institution needed to improve its performance. A similar consultation process has been used in developing a set of institutional-level critical measures.

Concerns about the size of the institution and the ratio of undergraduate to graduate students, some of which were noted in *A Commitment to Focus*, resulted in an agreement with the Minnesota Legislature to reduce undergraduate enrollments. Statistics reported elsewhere indicate the magnitude of those enrollment changes in the past decade. Whereas in the past the institution had a somewhat fragmented approach to thinking about enrollment management issues, those issues are now the primary focus for the Enrollment Management Committee chaired by the Associate Vice President for Planning, and are connected closely to the collegiate units' strategic plans. The same coordination that has occurred for new freshman admissions needs now to follow a similar strategy in thinking about students who transfer into the institution. In recent years, about one-third of the new undergraduate admissions were transfer students and approximately half of the institution's baccalaureate graduates entered as transfer students.

The institution's overall strategic plan outlined in University 2000 established six key strategic areas to guide the institution into the 21st Century, and the recently developed institutional-level critical measures have established institutional and campus performance goals and outlined new initiatives to achieve those institutional goals. The proposed organizational changes announced in March 1996 reflect the need for additional focusing of the institution's priorities.

The institution's overall mission and associated goals translate into collegiate mission statements and goals for academic programs at the undergraduate and graduate and professional level. Those programs are described in an array of written materials, and in

information available through the World Wide Web. Linkages to collegiate information available on the World Wide Web are noted in Chapter V: Collegiate Overviews, Plans, Actions, and Concerns. The University's educational programs are diverse. It offers degrees in 172 areas at the baccalaureate level, 200 at the master's level, and 121 at the doctoral level. The University offers professional degrees in many fields (e.g., medicine, dentistry, law, business, veterinary medicine, pharmacy, nursing, and public health).

Several new practitioner-oriented master's programs have been developed in recent years in response to studies conducted in the 1980s by the Minnesota Higher Education Coordinating Board that pointed to the need for such programs for working adults in the seven-county metropolitan area. Chapter V discusses those additional collegiate plans relative to master's programs. In addition to the new master's programs, the institution recently has developed four collaborative programs with community colleges in the Twin Cities area as part of the Twin Cities Higher Education Partnership, and continues to offer selected programs at the Rochester University Center, including several courses offered via distance education technology.

Results presented elsewhere in this self-study report describe the significant changes in the characteristics of undergraduates (e.g., high school rank, completion of a set of course-based preparation requirements) admitted to the colleges on the Twin Cities campus of the University of Minnesota. Whereas in the past, increasing enrollments were critical to the University, improving the quality of the undergraduate experience has been a driving force behind the University's actions during the last decade. The effects of the changes are reflected in an increase in the number of freshman applicants, an increase in the selectivity of freshman admissions, and numerous significant improvements in the quality of the undergraduate student experience.

There is an extensive and a diverse set of student services available to students, both centrally and in provostal areas and collegiate units. To a lesser extent, similar services are available to faculty and staff as well. The chapters on diversity and user friendliness, in particular, outline some of the ongoing ways in which the institution facilitates student progress. Issues of safety and health have increased visibility for an institution located in a large metropolitan area, and a comprehensive strategy is being used to identify remaining problematic areas. The institution continues its initiatives to address health and safety issues that affect not only students, but faculty and staff as well. Some of the specific initiatives are discussed in Chapter XIV: User Friendliness. Selected programs for undergraduate and graduate and professional school students are discussed elsewhere in this report, as are some of the special programs designed especially for an increasingly diverse student population. As the statistics suggest, however, retention and graduation rates for certain student-of-color subgroups have not yet improved substantially.

The University's service mission is achieved through the efforts of several units (e.g., the Minnesota Extension Services, Continuing Education and Extension/University College, the Center for Urban and Regional Affairs, the Humphrey Institute for Public Affairs) as well as efforts coordinated by the Graduate School and other collegiate units. The discussion of the institution's accomplishments in this mission area are highlighted in Chapter IX: Outreach as well as in discussion within Chapter V: Collegiate Overviews, Plans, Actions, and Concerns.

Sections of various publications have been excerpted elsewhere in of this self-study report, and available publications will be assembled for review by site visitors. Although the institution has made rapid progress in connecting to the "information highway," it is fair to say that no one fully realizes the potential for electronic communication about the institution's mission and academic programs. More so than ever before, customers of

various types will be using the World Wide Web to begin to form impressions about the institution, and whether or not they are inclined to participate in the institution's educational offerings.

The University of Minnesota has a long history of viewing tenure as the basis for protecting the freedom of inquiry that is a foundation of the modern university. Although there are appropriate concerns about the lack of institutional flexibility in an institution that has a high percentage of tenured faculty, discussions currently underway on campus about the future of tenure also express concerns about academic freedom. The University of Minnesota is not alone in this discussion of highly sensitive issues relative to the future of tenure. Site visitors are likely to be on campus at a time when those issues are at an especially critical point.

Criterion Two: The institution has effectively organized the human, financial, and physical resources necessary to accomplish its purposes.

The University's Board of Regents is the governing body of the University. One of the four at-large regents must be either a University student or have been graduated from the University within the past five years. The addition of a student as a voting member of the Board of Regents occurred in 1976; since then the other major change that occurred was in the process used to nominate and select members of Board of Regents.

Several significant changes in the University's governance and personnel policies included the new Senate constitution in 1982, a new tenure code in 1985, and new draft policies on conflict of interest and conflict of commitment. Currently under discussion is a reexamination of the tenure system at the University of Minnesota. The current discussion consists of a series of faculty-led discussions, some details of which were described in Chapter I.

The current administrative organization of the University of Minnesota includes the President, a chancellor for the University campuses at Crookston, Duluth, and Morris, and three provosts (i.e., Academic Health Center; Arts, Sciences, and Engineering; and Professional Studies) for the Twin Cities campus. Prior to July 1, 1995, the Vice President for Academic Affairs also served as the Provost for the Twin cities campus. Other vice presidential areas are: Vice President for Institutional Relations (currently vacant), Vice President for Finance and Operations, and Vice President for Student Development and Athletics. An extensive planning process facilitated the reorganization into three provostal areas, and some aspects of that transition remain incomplete.

The last decade has been a time of considerable administrative turnover at the University of Minnesota. Recent efforts of the Office of Human Resources have clarified the processes and procedures for administrative evaluation, portions of which are summarized elsewhere in this report.

The University's human resources are extensive: approximately 34,000 individuals across its four campuses and associated facilities. As of January 1996, the Twin Cities campus has 2,840 instructional faculty, 3,027 professional and administrative employees, 5,818 student academic employees, and 14,166 civil service employees. There are additionally 936 service and maintenance employees, and 4,054 hospital employees. Statistics in Chapter XIII: Faculty give a more detailed description of the faculty for the Twin Cities campus as a whole and for each of the colleges as well. Across all colleges, 47 percent of the faculty are professors, 29 percent are associate professors, 23 percent are assistant professors, and 2 percent are instructors (compared to 37 percent, 23 percent, 29 percent,

and 11 percent, respectively for 1985). Twenty-four percent of the faculty are women, compared to 20 percent in 1985. Of the faculty, 283 (9.2%) are people of color. Of the tenured and tenure-track faculty, 84 percent are tenured, compared to 50 percent in 1985. The mean age of the faculty is 50 years, the mean number of years at the University is 15.5.

A major change occurred since 1985 in the institution's organization of its personnel system. Starting in 1991, a process was begun to merge the separate academic and civil service personnel systems that had been in place for decades. All programs, services and policies and procedure are now part of the umbrella of the Office of Human Resources.

Several personnel and human resources issues affect faculty quality, productivity, and morale, and are being addressed as part of the Critical Measure: Faculty and Staff Experience. The University has continued to make progress in its hiring practices and has initiated new steps to retain faculty, especially women and faculty of color. More detailed discussion is contained in Chapter X: Diversity. The implementation of the Bush Faculty Development Program for Excellence and Diversity in Teaching, which is directed at new tenure-track faculty, has made important contributions in bringing diverse faculty into contact with resource teachers from across the campus. Efforts of the Commission on Women have served to improve the climate for women faculty on campus.

In an era in which the number of new faculty hires is not likely to increase, it will be even more critical to insure that the best faculty are hired, a strategy which is challenging because of faculty salary levels at the institution. In addition, there have been few attempts to develop programs for helping faculty explore new research topics, or for assisting faculty to move elsewhere in the institution.

The University's total budget (net revenue across all campuses) was \$1,023,982,000 in 1985-86, and was \$1,737,581,000 for 1995-96. State appropriations accounted for about 31 percent of the budget ten years ago, and is about 27 percent now. Gifts, grants and contracts are a major source of income (24%) along with hospital earnings (19%). Student tuition and fees were 11 percent of the income ten years ago, and are 12 percent now. The primary category for expenditures is "education and general expenses," which has increased from 67 percent ten years ago to 73 percent currently.

Chapter XIV: Infrastructure includes an overview of the several new buildings that have been constructed on the Minneapolis and St. Paul campuses. Approximately 80 percent of the assignable square footage is on the Minneapolis campus. Although this same space audit indicated an overall space deficit of only 2 percent, the quality of much of the space (especially classrooms and some laboratory areas) is poor. A recent study of classroom space, described in detail elsewhere in this report, was used to construct part of the Critical Measure: Facilities Infrastructure. Of the total space available, 33 percent is in buildings over 45 years old. Although funds have been spent on classroom renovation in recent years, increased funding is needed for both general renovation and provision of facilities for faculty to effectively use new technologies, such as microcomputers, in the classroom.

The University's Libraries is ranked fourteenth, in terms of total holdings for research libraries in the United States and Canada. The Libraries acquisition funding has improved from \$4.3 million ten years ago to \$6.6 million now. A change to the Library of Congress classification system and increased automation have improved service delivery systems, although faculty and students continue to express concerns about the level and quality of services provided.

Diverse educational programs are delivered through the 20 colleges on the Twin Cities campus, each of which is now administratively located in one of three provostal areas: Academic Health Center, Arts, Sciences, and Engineering; and Professional Studies. The section of the report on undergraduate education is an overview of important features of the experience of undergraduates on the Twin Cities campus, and highlights issues of continuing concern for the institution's undergraduate programs. Similarly, the section on graduate education describes the educational programs and curricula for graduate students, and discussed the need for increased attention to student life issues for graduate students.

In the last decade, the University of Minnesota has been successful in lowering the ratio of undergraduate to graduate students, but it has not been successful in improving the ranking of its core doctoral programs. As more detailed results in Chapter VII: Graduate and Professional Education indicate, it has slipped in its overall ranking based on the recently released National Research Council ratings of graduate programs.

As the institution plans for the future, it will be increasingly important to do so by developing and improving programs that simultaneously benefit faculty research and graduate education and undergraduate education. The Undergraduate Research Opportunities Program, initially suggested by the Task Force on the Student Experience, is an example of how such programs benefit both the instructional and research missions of the institution.

Through an extensive set of programs and activities, housed in the Office of Human Resources, the Office of the Senior Vice President for Academic Affairs, and the Office of Research and Technology Transfer, the University offers numerous opportunities to faculty to improve their teaching and research. For example, the University has several programs available to keep faculty current, although some of these options (e.g., sabbaticals and single quarter leaves) are underused. The University's sabbatical and single quarter leave programs provide development opportunities that are not always provided elsewhere.

A similar set of offices (e.g., Student Activities Office and the Student Development Center) within the Office of the Vice President for Student Development and Athletics provide extracurricular opportunities for students on the Twin Cities campus.

The past decade included numerous University initiatives to remove barriers to faculty research and to develop new programs to facilitate faculty research efforts, especially in interdisciplinary research arenas. Among the continuing accomplishments during the past decade are the following: the continuation with University funding of the Bush Sabbatical Program, initiated in 1981 with funding from the Bush Foundation; the use of special retention funds, beginning in 1983, to prevent the loss of the University's best research faculty; the initiatives taken to increase all faculty salaries to compensate for inflation losses; the actions taken in 1984 to enable the University to use the permanent endowment fund, together with funds from the Capital Campaign, to increase the number of endowed chairs; the increased use of indirect cost-recovery funds from sponsored research to facilitate faculty research (e.g., more funds to help with equipment needs); an improved patent office, now part of the Office of Research and Technology Transfer; and several new research institutes and centers (e.g., Institute for Human Genetics, Supercomputer Institute, Center for Advanced Feminist Studies), and the improvement in computing and information services that support faculty research.

Criterion Three: The institution is accomplishing its educational and other purposes.

The institutional-level critical measures provide the framework in which the institution defines its goals and measures its performance. On January 14, 1994, the Board of Regents approved the *University 2000 Mission, Vision, Strategic Directions, and Performance* statement. The resolution also initiated "the development, by the University's central and unit administration and in consultation with University and unit governance organizations, of critical measures and benchmarks for measuring institutional, campus, and unit performance in realizing the goals of University 2000." The institution's efforts to address how to present evidence that it is meeting its educational and other purposes demonstrate its commitment to clarifying its purposes, documenting its accomplishments, and bringing attention to areas in need of improvement.

Subsequent activities, coordinated by the Office of Planning and Analysis in the Office of the Senior Vice President for Academic Affairs led to the following:

- Preparation of a set of principles to guide the development and use of critical measures, including a statement of the purposes of such measures:
 - “To publicly confirm the institution’s success in reaching its stated goals and objectives;
 - To guide and facilitate institutional, collegiate, and support unit self improvement;
 - To serve as an important link between planning, performance, evaluation, and resource allocation, so that performance in a desired direction can be supported and rewarded through the budgeting process; and
 - To provide means for comparison with other similar institutions, in search of best practices for the accomplishment of institutional goals.”
- Review of previous recommendations, existing management reports, and unit planning documents, as well as external reporting requirements, to identify possible institutional-level critical measures.
- Conduct of numerous meetings within and outside the University of Minnesota to listen to suggestions for measures and reactions to proposed lists of critical measures and preliminary drafts of specific measures.

The need to submit a comprehensive plan to the North Central Association for the assessment of student academic achievement provided an opportunity to bring together into a comprehensive plan all of the diverse assessment activities already in place on the Twin Cities campus of the University of Minnesota. The institution's Assessment Plan (portions of which are contained in Appendix F) is imbedded within the overall set of institutional-level critical measures and identifies those areas where additional strategies might contribute to the overall goal of enhancing student learning and performance. Assessment of student academic achievement has been part of the fabric of the institution for several decades, although uniform attention to broadly defined outcomes at graduation has been lacking.

The institution has had in place for decades a Senate policy on the evaluation of teaching. Results summarized elsewhere in this self-study report show that students evaluate the instruction quite positively. In the last several years, the institution has reorganized its

internal faculty development programs to offer a wide range of programs and services for faculty in their role as teachers. The initiation of a year-long program for new tenure-track faculty, a core component of which are five-member groups led by an experienced teacher and scholar, has made a significant impact on developing a campus culture that values excellence in teaching. A parallel effort has been directed at doctoral students to insure that doctoral graduates have a core set of experiences to enable them to be as effective in teaching as in research.

There is less evidence, however, that the institution has made a concerted effort to focus more directly on students' educational needs and expectations, and to insure that students are engaged partners in the learning process, especially at the undergraduate level. The several initiatives described in Chapter VI: Undergraduate Education suggest several of the key areas that have been addressed to date. As the statistics on undergraduate admissions suggest, the institution has attracted a better qualified undergraduate student population than was true a decade ago, in part as a result of specifying a set of preparation requirements for admission.

Subsequent sections of this report include descriptions of characteristics of undergraduate and graduate students, and more detailed information can be readily available during the site visit. A concern expressed in the two previous accreditation processes was the tendency for the University to be less diverse in its student populations than is true for other large research universities. Information describing the current student populations suggests that progress has been made in this area of concern in the last decade. Currently, 74 percent of the Twin Cities undergraduates and 52 percent of the graduate students are from the State of Minnesota, compared to 88 percent and 50 percent, respectively, a decade ago. A similar concern was expressed about the relatively high percentage of faculty whose highest degree was from the University; statistics indicate an increased diversification of faculty as well.

Another continuing concern is the relatively low graduation rate for entering freshmen, a consequence of the complex interaction between entering students who often make a casual decision to enter the University of Minnesota, the low priority given to instructional programs and resources for lower division students, and other factors. These concerns are prominent in the institutional-level critical measures that recently have been approved by the Board of Regents. Over the past decade, about 20 percent of the institution's entering freshmen return for their sophomore year, but then substantial percentages leave in succeeding years. As a result of several specific programmatic changes as part of the President's Initiative for Undergraduate Education, the student experience is improving and retention and graduation rates are slowly improving.

The institution's Assessment Plan evolved out of a long tradition of student academic assessment. The plan built on what was already being done, albeit not in a coordinated, comprehensive fashion given the nature of a highly decentralized research institution. Through connections with the strategic planning process, the Assessment Plan provides a comprehensive system for collecting, reporting, and using assessment results to guide the improvement of student learning. The plan was developed to be consistent with the institution's mission in undergraduate and graduate and professional education, to be compatible with the institution's organizational structure, and to be realistic in terms of the available financial resources to implement new assessment activities.

The assessment of student academic achievement at entry is only a part of a comprehensive evaluation plan focused on student academic achievement and performance. Multiple purposes have been served by the existing assessment activities, ranging from the admission and placement of students, and from the evaluation of teaching to improve

instruction to the evaluation of academic programs. The following list specifies activities that were already in place when the comprehensive plan was submitted to North Central Association, and that will continue to be part of our comprehensive assessment plan focused on the student experience and post-graduation experience critical measures:

Undergraduate Students

- Extensive use of standardized tests of academic achievement (ACT and the SAT) and previous academic performance (high school rank and transfer grade point average) as the basis for admission to the University of Minnesota.
- Implementation, starting in 1991, of a new set of course preparation requirements for new freshmen starting at the University of Minnesota.
- Biennial participation, since 1989, in the CIRP Freshman Survey to obtain students' expectations concerning their academic achievement and performance.
- Mathematics placement testing for new freshmen to guide them and their advisers in the selection of the appropriate level of mathematics instruction.
- Periodic surveys of baccalaureate graduates to obtain their perceptions of academic outcomes of their undergraduate experiences.
- Occasional use of the ETS Major Field Assessment Tests in selected departments.
- Administration of the Watson-Glaser Critical Thinking Appraisal to incoming freshman fall 1990 as the basis for a follow-up study on critical thinking.
- Required completion of a Student Evaluation of Teaching instrument that includes an item asking for students' perceptions of how much they learned in the course.
- Quarterly grade reports for each course, department, and collegiate unit.
- Completion of senior projects/papers for selected undergraduate majors.
- Inclusion of student performance data in the undergraduate component of the academic program review process.
- Exploratory studies focused on the potential usefulness of the ACT COMP and the ETS Academic Profile.
- Collection of the test performance on the GRE, LSAT, MCAT, GMAT and other standardized tests taken by undergraduates applying to graduate or professional schools.

Graduate Students

- Varied usage of standardized tests, especially the GRE, and undergraduate grade point average as the basis for admission to graduate programs.
- Quarterly grade reports for each graduate course, department, and collegiate unit.
- Comprehensive written preliminary examinations in many doctoral programs.

- Required Student Evaluation of Teaching for all graduate courses.
- Periodic review by the Graduate School of all graduate programs, including a focus on students' academic achievements.
- Preliminary oral examination and final thesis defense in all doctoral programs.
- Plan B paper/thesis preparation and defense for master's students.

Professional Students

- Use of measures of academic performance, including standardized tests (LSAT, GMAT, MCAT) as the basis for admission decisions.
- Quarterly grade reports for each professional course, department and professional school.
- Performance evaluations as part of practicum, internship, student teaching, etc.
- Testing required for professional certification (e.g., nursing, law, education, etc.).

The proposed plan for the assessment of the student experience was presented at the June 1995 meeting of the Board of Regents and was approved at the July meeting of the Board of Regents. The strategy was endorsed at the May 1995 meeting of the University Senate, and implementation began in July 1995 with the creation of the Office of Planning and Analysis.

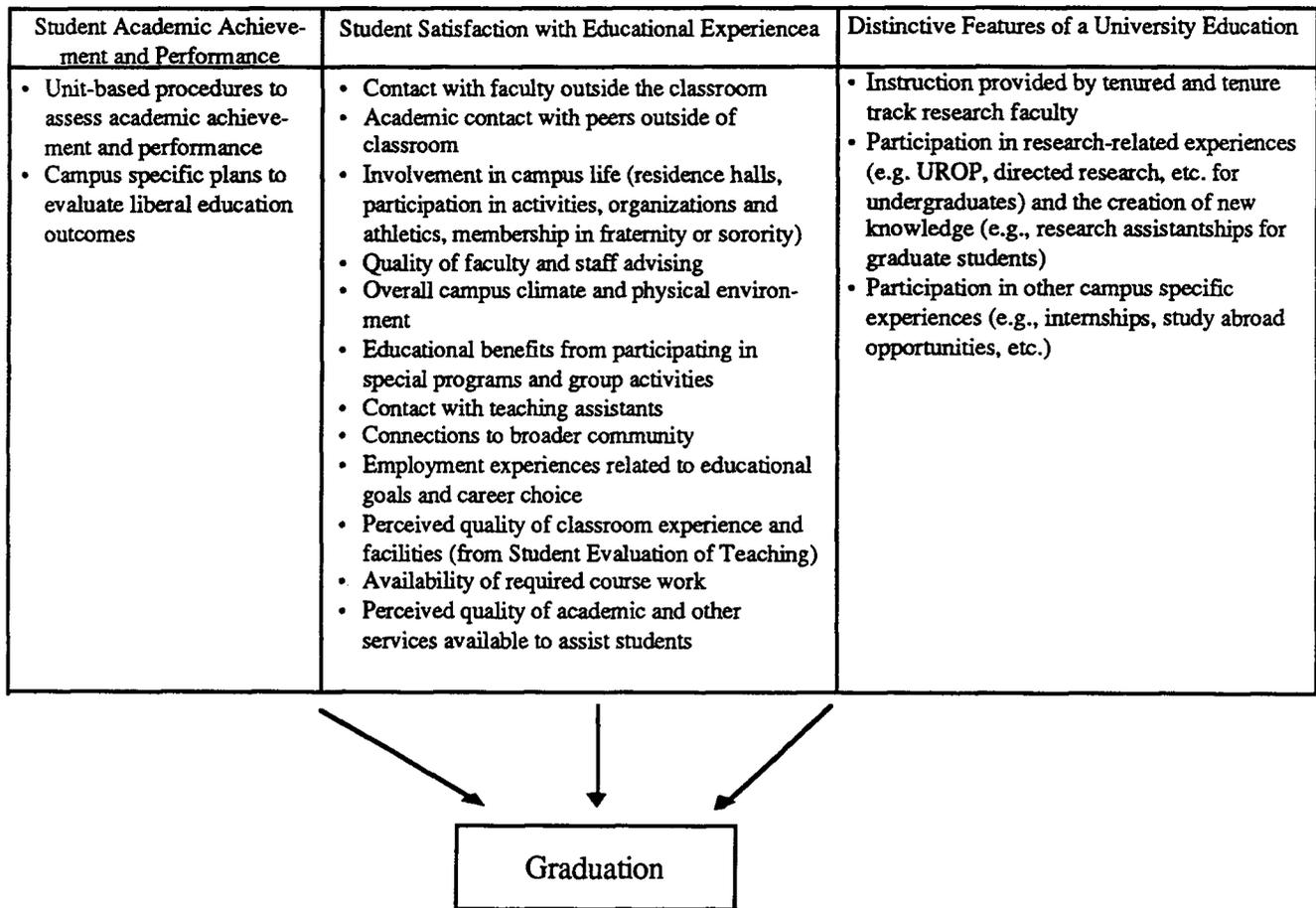
The three-part model depicted in Figure 5 below was endorsed by the University Senate and approved by the Board of Regents as the framework for measuring critical components of students' experiences at the University of Minnesota. For purposes of this discussion, only the column labeled Student Academic Achievement and Performance will be discussed, although elements of the other two components certainly are necessary to gain a more comprehensive picture of assessment activities related to student academic achievement and performance.

Colleges and departments are expected to assess learning outcomes and to use those results to improve teaching and facilitate student learning. Systematic assessment of student academic achievement at the unit level depends on more than course grades, since grades somewhat artificially restrict the definition of student academic achievement to what particular instructors decide is important as course outcomes. The assessment of student learning is an essential faculty responsibility that is taken seriously by faculty. At the same time, there is some concern that insufficient attention has been paid to assessing some of the broader educational outcomes, such as being able to communicate clearly and effectively, being sensitive to human diversity in its many facets, and being able to think critically.

The problem in identifying a campus-wide critical measure that addresses the question of student academic achievement and performance at the completion of a degree program is that the colleges on the Twin Cities campus include programs that differ considerably in the nature and level of expected student academic achievement and performance. The Twin Cities campus has many different undergraduate colleges that grant baccalaureate degrees, many professional schools, and hundreds of masters and doctoral programs.

Figure 5

Model for the Critical Measure of the Student Experience



For this reason, it was not possible to identify a single institutional-level critical measure of student academic achievement and performance. Constructing an artificial measure to serve across colleges and degree levels would have resulted in a "lowest common denominator" approach that would not be meaningful and could in fact lead to mediocrity, rather than excellence, across levels and units. Instead, a flexible, unit-based approach that focuses on student academic achievement and performance as defined by faculty within the unit will be pursued. At some future time, it might be possible to aggregate unit-based results into a critical measure for the Twin Cities campus of the University of Minnesota, but it is not feasible to do so now.

In a highly decentralized campus with several undergraduate collegiate units, finding common criteria to use in assessing whether or not all baccalaureate graduates from the University of Minnesota, Twin Cities campus, possess the "skills and abilities of college-educated adults" is problematic. It is probably fair to say that in many collegiate units and in most departments the judgment has been made based on evidence as recorded on the student's transcript that she/he has completed all of the requirements for a baccalaureate degree. Over time and with the support of the provosts and those who carry out the institution's program reviews, the institution can more squarely address issues of the skills and abilities of its baccalaureate graduates, so that faculty are as confident about undergraduates as they are about graduate and professional school graduates.

Recent efforts led by the Senate Committee on Educational Policy with the support of the Office of the Senior Vice President for Academic Affairs and the Provost for Arts, Sciences, and Engineering, will result in greater uniformity in grading systems used in various collegiate units on the Twin Cities campus. Proposed changes will lead not only to savings due to having only one system, but will result in a transcript that has consistent meaning for all students, regardless of their college of enrollment.

A continuing challenge is to establish a meaningful strategy for assessing liberal education outcomes in the transition from the quarter to the semester system, and in monitoring the implications of the implementation of the Minnesota Transfer Curriculum.

During the past several years information collected from currently enrolled students and recent graduates has suggested some significant problems for students attending the Twin Cities campus of the University of Minnesota. Chapter VI: Undergraduate Education discusses the initiatives and associated results from a focused effort to improve certain aspects of the educational experience. Several recent efforts (e.g., the Faculty Mentoring Program in the College of Liberal Arts, the Building Bridges effort as part of the University Community Building Project, and Residential College) all have contributed to increased contact between students and faculty and student-student contact surrounding educational issues. More needs to be done to facilitate increased interactions that facilitate student learning and achievement. On a campus where 83 percent of undergraduates are employed for pay while attending school, the challenge is particularly great.

Although no statistics are readily available, the impression is that higher education institutions are under invested in the use of its resources directed at the continuing development of its human resources. In the last decade, with the creation of the Office of Human Resources, the initiation of the Administrative Development Program, and the Faculty and Teaching Assistant Enrichment Program, more opportunities are now available. The pace of change in how higher educational institutions conduct their activities is likely to intensify, and it will continue to be critical that the institution devote resources to facilitating the mission related activities of its faculty and staff.

Criterion Four: The institution can continue to accomplish its purposes and strengthen its educational effectiveness.

Since the University enrolled its first collegiate class of some three hundred students in 1869, it has evolved into a complex institution with research, teaching, and service missions. An historical analysis of the institution reveals, however, that it has changed in response to societal needs and that planning has played a critical role in that process.

An analysis of planning activities during the 1980s and 1990s underscores the importance of formal planning processes in establishing clearly articulated institutional goals and in developing strategies for achieving those goals. Significant accomplishments during the last two decades include: the linking of budgeting and planning that began in 1979; initiating an early retirement program for faculty to reduce the number of tenured faculty, and the closing of units (e.g., the Library School, the Waseca campus) based on programmatic plans. The continuing success of that effort relies on University leadership that presents a vision for the University, such as that outlined in University 2000. That vision must be translated, however, by departmental units into the pursuit of excellence in each of their disciplines.

The University's future depends on long-term financial support. Analyses of the University's budget during the past decade indicated that 27 percent of the University's budget is provided by the state, compared to 31 and 34 percent 10 and 20 years ago,

respectively. The University has been successful in obtaining federal research funding in the last decade, but increasing that amount in the near future is likely to be very difficult. Analyses of trends in voluntary support point to individuals and corporations as important sources of flexible funding during the next decade. The University's Minnesota Campaign, which had only just begun at the time of the last self study, was an important step in that direction.

The institution's resource basis is changing and fragile, and proposed changes in how the State of Minnesota funds the University of Minnesota will have even more dramatic implications, if implemented. One component that is likely to be increasingly prominent is the linkage between institutional funding and performance. Although external constituencies historically have had performance issues as part of institutional funding discussions, a new era has begun in which greater specificity is being required. There is great danger that for an institution with research, teaching and outreach missions that only some of its traditionally valued activities will be the basis for performance funding. That is the challenge for a land grant institution. Within the institution, the continuing implementation of Responsibility Center Management must be monitored to track how it is affecting the institution's operations and priorities.

The identification of institutional priorities and linking those priorities with budgeting continues to evolve as a result of institutional strategic planning. That planning process was essential to the University's ability to deal with the financial constraints without seriously damaging the University's academic programs. Similar planning efforts are now being driven by the vision outlined in University 2000, and are adapting three-provostal model on the Twin Cities campus.

The institution is now poised to enter the 21st Century which will bring new challenges for how research institutions generate and disseminate knowledge for a range of consumers. The University of Minnesota is likely to face more competition from educational providers than has been true in the past.

Criterion Five: The institution demonstrates integrity in its practices and relationships.

In the past decade there have been several incidents and activities disclosed by the University of Minnesota that have called into question some of the institution's practices and relationships. Events in the mid-1980s surrounding the remodeling of Eastcliff resulted in major modifications in internal accounting systems so that expenses and budgets could be more closely monitored. More recently, the investigation related to ALG and the imposition of restrictions by the National Institute of Health all have been used as stimuli for the institution to develop better internal control procedures for all aspects of the institution's operations. Several of these developments are outlined in some detail, because they have been essential to regaining the trust of constituencies and to develop a stronger culture of accountability within the institution. The institution has used those difficult situations to build a better set of internal controls and practices to ensure that faculty, staff, and students demonstrate integrity in their relationships with each other and with external constituencies. New comprehensive audit procedures, new draft policies on conflict of interest and conflict of commitment, and major revisions in grants management practices are discussed elsewhere in this report.

The University of Minnesota interacts with other educational institutions and businesses and organizations in the Twin Cities area and beyond. Partnerships in delivering educational programs, such as those in the Twin Cities Higher Education Partnership, are

likely to be even more frequent in the future. Within the last several years, collaborative efforts with the Minnesota State Universities led to a new set of preparation requirements for students entering baccalaureate programs. Interactions among all systems, especially in the context of the Minnesota Transfer Curriculum, have made it easier for students to transfer between public systems in Minnesota. Coordinated efforts with the Department of Education and the K-12 system have forged new partnerships that will continue, especially in relation to the high school outcomes initiative.

Within the institution, there are several resources (e.g., Student Dispute Resolution Center, Student Ombuds Service, Conflict and Change Center) as well as standing Senate, Twin Cities and collegiate committees to address issues that engage students, faculty, and staff in conflict resolution. Within each of the employee categories, there are policies and procedures that describe the channels through which individuals are able to address grievances of various types. There are also programmatic activities to reduce the likelihood of certain events taking place. In the arenas of sexual harassment and violence in particular, a series of workshops and other events have been carried out in recent years to increase the sensitivity of faculty, staff, and students to issues of diversity, discrimination and harassment.

Recent revisions in the institution's statements relative to affirmative action and non-discrimination have resulted in a better-integrated perspective to guide the institution. Chapter XII: Diversity chronicles the institution's successes and continuing challenges to address issues of diversity, equity, and access to programs and services for all individuals. Those issues are critical within the institution, but are even more important in relationship to how the institution relates to the broader community, especially the seven-county metropolitan Twin Cities area.

CHAPTER IV

INSTITUTIONAL STRATEGIC PLANNING AND PERFORMANCE ASSESSMENT¹

Strategic planning was one of the three areas of focus in the 1986 Accreditation Review. The directions articulated a decade ago served as the background for the institutional initiatives in the last decade, and are reemerging now in addressing the challenges in the next decade. The strategic areas outlined in *University 2000*, the ongoing strategic planning process (especially the collegiate descriptions, evaluations and responses to issues noted in the previous site visit team report), and the broadly based consultation process that has resulted in the institutional-level critical measures all have served as the foundation for the self-study process and this report. This chapter is central in reviewing the evaluative and descriptive information about the collegiate units in Chapter V, and the subsequent chapters that address the institution's four core outcome areas and the five enabling factors that support those four outcomes.

The University of Minnesota, Twin Cities campus, is an urban public university, a land-grant institution, and a national and international research and graduate university. Each of these features implies certain responsibilities and obligations. The three missions are interrelated: the University cannot achieve excellence in undergraduate education and service to the State of Minnesota without strong faculty research and graduate education. None of these goals can be achieved if the University does not have a vigorous planning process to help it achieve its institutional goals. Underlying the University's approach to planning is a belief in the importance of public discussion of major programmatic choices, both inside and outside the University. The University is one of the major resources of this State; the State has made a substantial investment in its University and has received a substantial return on its investment. The planning process is intended to assist the University in stating its case at a time when crucial decisions have to be made. The outcomes of the process are likely to be better, both in terms of content and effectiveness, if the University's choices can be considered in the context of the choices confronting the entire State and with broad participation by its various constituencies.

Strategic Planning

Planning has played a critical role for the University during the last two decades by providing a framework for dealing with unexpected fiscal crises. The past three presidents (Magrath, Keller, and Hasselmo) have taken leadership for institutional planning. In his October 12, 1984 Final Report to the Board of Regents, President Magrath emphasized the importance of the Board of Regents' commitment to planning and priority setting: "Without such a commitment, the University will be unable to chart its own course, but rather will be buffeted by constantly changing economic and political winds." President Keller responded to the need for greater clarity concerning the University's unique mission in the State by preparing the document *A Commitment to*

¹ <http://www.opa.pres.umn.edu/specproj/accred/strategy.utm>

Focus. It outlined the general directions that the University should be taking, based on its planning activities during the previous several years and its projections of students' future education needs relative to the programs available at the University of Minnesota. President Hasselmo has articulated University 2000 as the planning process to bring the institution into the 21st Century.

During the 1980s, many public institutions had been forced to reduce their budgets because of large unexpected deficits in state revenue. The University of Minnesota has been successful in applying a planning process based on program priorities to respond to reductions in state revenues. The University's fiscal crisis began in October 1981 with the announcement of a projected \$750 million state deficit by the end of the 1981-83 biennium. Instead of proposed retrenchment budgets of 8 percent, 10 percent, or 12 percent, the University proposed three alternatives at the 12 percent level: (a) across-the-board reductions; (b) closing selected programs and campuses; and (c) closing the University for one quarter. The Board of Regents subsequently passed a resolution stating that the University could return \$10 million, that any cut above \$37 million would require financial exigency, and that the \$57 million alternative would undermine the University's viability. The final outcome was that the University had to reduce its expenditures and/or increase its income by a total of \$25.6 million from that originally budgeted for the 1981-83 biennium.

At the time of the 1986 Accreditation Review, *A Commitment to Focus* had been articulated by President Keller and served as the framework for the institution's strategic planning efforts. Although that particular proposal no longer serves as the institution's guiding framework for institutional strategic planning and change, it is appropriately used to evaluate the changes made by the institution in the years following the last Accreditation Review.

Current Context for Strategic Planning

In the early 1990s, the University of Minnesota began to understand that, along with other higher education institutions, it was facing several major challenges as it moved toward the 21st century:

- Meeting the changing expectations for higher education--assessing and responding to the real-world needs of students, graduates, and the state.
- Addressing changing demographics and an increasingly diverse society--responding to a 50 percent increase in the number of high school graduates in the Twin Cities areas over the next 15 years, with more than half of the students in the Minneapolis and St. Paul schools being students of color.
- Maintaining changing demographics and an increasingly diverse society--playing a leadership role and applying expertise to social, economic, quality-of-life, and environmental issues in partnership with government and industry.
- Preparing for the shift of society and the economic health of Minnesota and the Upper Midwest--preparing people to be effective and successful in this global context, and focusing on international issues of concern to Minnesota.
- Dealing with a rapidly changing resource base for higher education--rethinking mission differentiation and market share in a competitive environment where state and federal funding of higher education is eroding.

- Offsetting the rising cost of higher education--making the most of tuition and state dollars, while keeping higher education both high in quality and affordable.
- Recruiting and retaining quality faculty and staff--making salaries competitive and improving working conditions so we are able to keep our best employees.

The most recent strategic planning initiative started in April 1992 with the aim of setting University goals and objectives within a clearly articulated vision, in order to base resource allocations on the University's goals and priorities. In January 1993, administrators presented a Plan for Planning to the University's Board of Regents. This document described a methodology for strategic planning, listed the essential characteristics of the University, described the higher education environment, and laid out some of the issues to be addressed, including customer service, competition, diversity, collaboration, and resources.

In late spring 1993, a planning steering committee presented a list of issues to address in planning the University's future direction and asked for input on this list from the University community. Over the summer, the committee researched other universities' strategic planning experiences, compiled data about the University's programs and students, and surveyed Minnesota employers and opinion leaders about the University's future. President Hasselmo used this information in formulating University 2000.

In September 1993, President Hasselmo presented his vision, called a "University 2000 working hypothesis" to the Board of Regents. During the fall of 1993, following consultation with about 50 groups inside and outside the University, the working hypothesis was refined into a document called the *University 2000 Mission, Vision, Strategic Directions, and Performance* statement, which was approved by the Board of Regents in January 1994.

In the spring, summer, and fall of 1994, chancellors on each campus and deans of each Twin Cities college began a planning process to align their own, unit-level plans with the University 2000 mission, vision, and strategic directions. Among other things, this process asked them to use the criteria of quality, centrality, comparative advantage, efficiency/effectiveness, and future demand to arrive at one of four key decisions of their disciplines and programs: to strengthen, maintain, downsize/streamline, or eliminate programs. A similar planning process was carried out by administrative/support units.

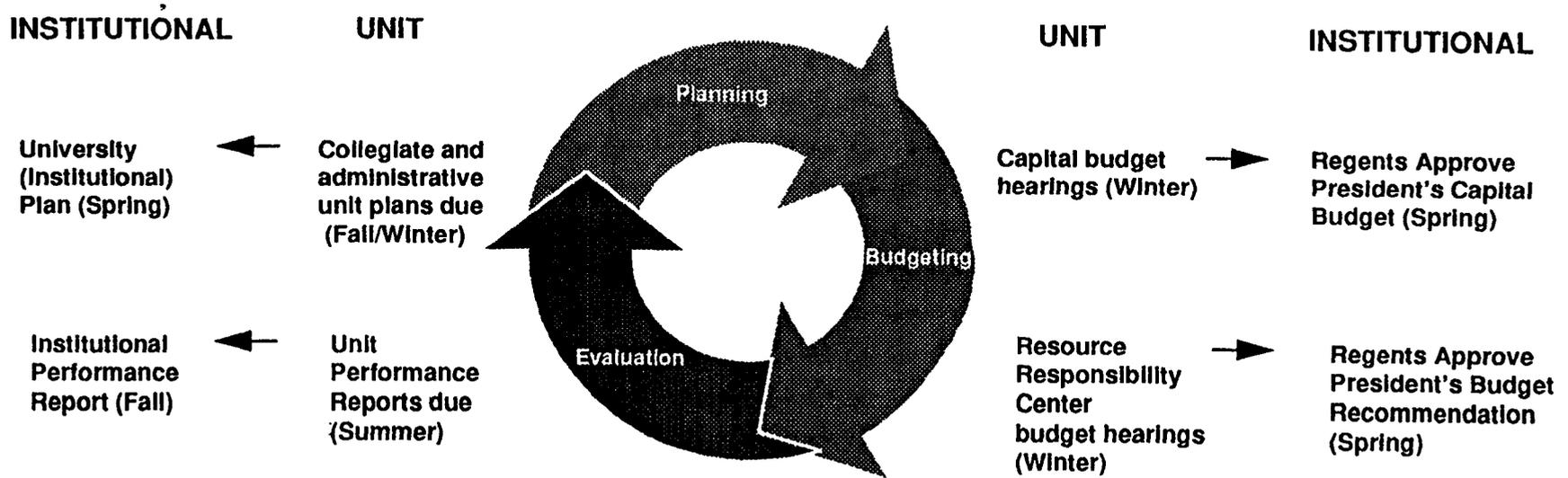
The campus, collegiate, and administrative planning process was intended to be repeated each fall, to dovetail with the budgeting process that occurs each spring, and then to be followed by an evaluation process that will occur each summer. Every year, this planning, budgeting, and evaluation cycle builds on the previous year's work, incorporating as needed changes in the internal and external environments and results of the evaluation process. The University's institutional plan will in turn be influenced by the campus, collegiate, and administrative planning, and its legislative strategy will be built on the results of this ongoing planning, budgeting, and evaluation process. The broad timetable for the institution's planning, budgeting, and evaluation cycle is outlined in Figure 6. The figure suggests the interconnectedness of the three elements of the cycle, and efforts continue to establish more definite linkages among the three components.

Brief History of Planning

Although considerably more detail was included on the recent history of planning as part of the focused Accreditation Review in 1986, an overview of planning activities of the past two decades provides an institutional context for the current strategic planning activities described below.

Figure 6

Annual Planning, Budgeting, Evaluation Cycle



Initial steps towards an integrated and formal long-range planning process began in the early 1970s. While there were some attempts at a comprehensive approach to planning, such as the expansive report *Towards 1985 and Beyond* prepared in 1971 by the Senate Committee on Planning and Resources, most of planning in the early 1970s took place within vice presidential Academic planning for the Health Sciences and the other academic units in the early 1970s was led by the Academic Policy and Planning Group as well as by the Health Sciences Master Planning Committee. From a system perspective, there was a preoccupation with growth. *Towards 1985 and Beyond*, for example, assumed that the University of Minnesota system would grow to 70,000 students by the mid-1980s, which never occurred. When it was necessary to implement a major retrenchment and reallocation process during 1971-72, the planning document proved of little value in guiding decisions. The basic assumptions on which much of the report was based were questionable, and the University learned that the first step in planning required the establishment of a planning framework that could be used in subsequent planning and budgeting activities.

One component of planning during the period from 1982-84 focused on six broad planning issues which cut across the University and have influenced its overall direction. With each of these issues as a focal point, all-University task forces prepared detailed recommendations on the following six topic areas:

- Computation, communication, and information systems
- The scholarly activity of the faculty
- Graduate education and research
- The University and the state economy
- International education
- The student experience

These task forces produced over 150 recommendations which were reviewed by central administration, and have been selectively incorporated into the ongoing planning and decision processes of the University. The products of the task force reports identified broad institutional issues that no single unit would have identified or subsequently addressed. These thematic reports added a new dimension to planning: that broad issues which are central to the University's future are as important as the detailed and often painful process of choosing among competing program alternatives within an academic unit.

Although it was not considered to be one of the formal cycles of planning, *A Commitment to Focus* is relevant within the content of planning. That document, which built on previous cycles of planning, proposed a set of far-reaching changes to focus the University's activities and to preserve and enhance its quality, both as an excellent undergraduate institution and a highly-ranked graduate institution. The long-range programmatic proposals in *A Commitment to Focus* emphasized the redirection of the University's efforts, differentiated the University more distinctly from other postsecondary systems in Minnesota, and preserved the University's identity as a land-grant research institution. The specific recommendations in *A Commitment to Focus* for programmatic changes dealt with undergraduate education, professional education, the University's coordinate campuses, and continuing education and extension activities. As part of *A Commitment to Focus*, six specific criteria were identified to help establish priorities among the various academic programs:

- Quality: The degree to which programs provide educational opportunities, research, and service consistent with the mission of a highly ranked institution.

- Uniqueness: The extent to which the program offers opportunities for students that are not available elsewhere in the state.
- Connectedness: The degree to which the program connects with and relates to other University programs rather than exists as an isolated unit.
- Integration: The extent to which the program's various services and educational experiences are coherent and internally consistent.
- Demand: The extent to which student demand for the program is present or is projected for the future.
- Cost-effectiveness: The degree to which the program costs are commensurate with its effects.

The directions outlined in *A Commitment to Focus* were closely related to two fundamental aspects of budget allocations for the University of Minnesota, both of which have changed considerably in the decade since 1986:

“Average cost funding, in its present form, would reduce the University's appropriation in proportion to its decrease in numbers of students. Thus, deliberately allowing a decrease in student numbers so that our funds could be used in a more focused way to improve the quality of education would be a vain effort because the funds would disappear. Indeed, the situation would worsen because such fixed costs as maintenance, fuel and utilities would remain, requiring some of the instructional dollars left to be used to cover them, and thus, leaving even fewer dollars for teaching.

The rigid 33 percent offset to our instructional appropriations that must be provided through tuition is a further counter-incentive to these changes. The University has been forced over many years to charge more than the average offset to students in low-cost programs since it has to charge less than the average to offset those in high-cost programs if access and competitiveness were to be maintained. The changes I have proposed would tend to reduce the size of these low-cost programs, but doing so would certainly not be advisable if it resulted in substantial tuition increases for our remaining students as unfortunately, it would under the present system” (*A Commitment to Focus*, p. 11).

Creation of Strategic Planning Advisory Committee

In November 1993, the Senior Vice President for Academic Affairs, also then Provost for the Twin Cities campus, appointed a 15-member Strategic Planning Advisory Committee (SPAC) to guide the institution's strategic planning efforts. A smaller staff group referred to as the Strategic Planning Work Group (SPWG), composed of 20 individuals from collegiate and support units on the Twin Cities campus and including the Chair of the North Central Advisory Committee, developed the protocol that is currently used to guide collegiate and support unit planning processes. The chair of the North Central Advisory Committee was heavily involved in the development of the strategic planning process as well as the planning meetings held with deans of each collegiate unit. SPAC continued to meet through the spring of 1995, at which time that particular formal group no longer met to refine the planning process. A somewhat differently constituted group, now part of the Office of Planning and Analysis within the Office of the Senior Vice President for Academic Affairs, continues to guide the institutional strategic planning efforts.

Collegiate and Support Unit Planning Process

The institutional planning process was developed to be used annually to track the implementation of University 2000 and to encourage colleges and support units to approach planning in a systematic fashion. It was not intended to connect to any particular set of institutional priorities, but rather was designed to be flexible so that it could accommodate changing institutional priorities. Strategic planning at the University of Minnesota was designed to have five major characteristics: (a) a continuous and cumulative "rolling plan" rather than a fixed-period plan; (b) based on the foundation of the collegiate and administrative unit plans; (c) based on consultation at the local level to permit meaningful participation by students, faculty, and staff; (d) emphasizes the use of critical measures and performance goals; and (e) planning is intended to be linked to the allocation of resources.

The planning instructions were organized into three interconnected phases of the planning cycle: (a) planning; (b) resource allocation and budgeting; and (c) accomplishments and performance. Each phase builds upon information modules that were due at different times during the year. In part because of the changing organizational structure on the Twin Cities campus, the proposed connections among the phases were not articulated completely during the first cycle of planning activities.

The institutional planning process, somewhat in transition during the past year in part because of the reorganization into provostal areas, consists of several interrelated "modules" that serve as the framework in which planning occurs. The seven modules for collegiate units (a slightly different set of modules was used for support units), presented visually in Figure 7, were as follows:

- Module 1: Description of unit
- Module 2: Environmental Context -- External
- Module 3: Environmental Context -- Internal
- Module 4: Strategic Issues and Working Assumptions
- Module 5: Vision Statement
- Module 6: Action Plans and Decision Items
- Module 7: Accomplishments and Performance

The mission of the Office of Planning and Analysis² (OPA) is to serve the needs of the University's central administration, including its provosts and chancellors, through providing a planning process and product, and a central repository of policy data and information, and to ensure that the University speaks with a single voice on evaluation matters. OPA provides analytical, procedural and administrative support to University leadership to initiate, develop, and guide institutional strategic planning and analysis for the University. Appendix G is a more detailed description of the roles and responsibilities of OPA.

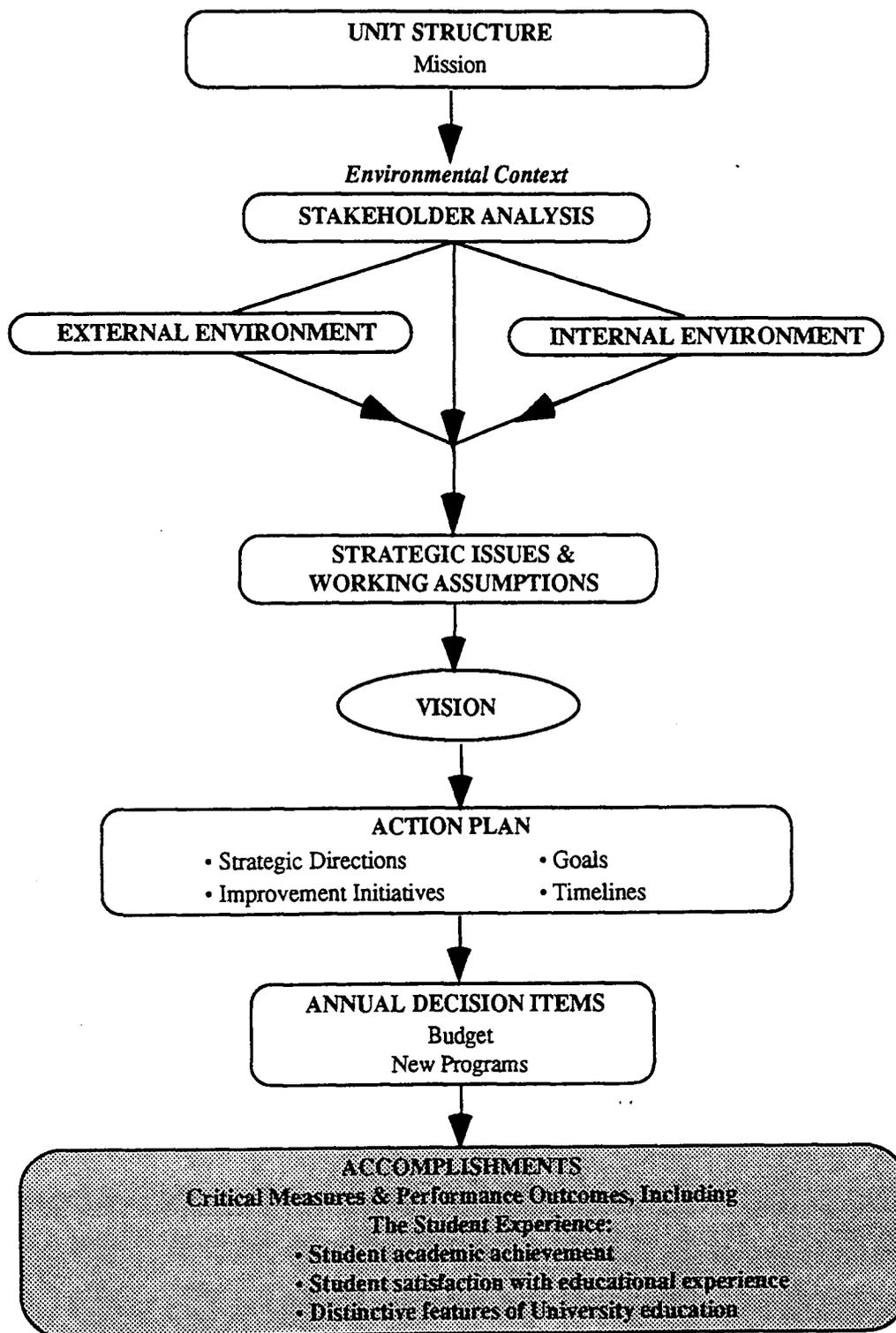
U2000 Strategic Planning Group

As part of the continuing discussion of University 2000, a small committee of faculty members referred to as the U2000 Strategic Planning Group, including the chair of the Faculty Consultative Committee, submitted a discussion paper in September 1995 *University 2000: Issues and Positions 1995 Supplement* that was intended to help the operating units of the University of Minnesota make U2000 operational. The primary

² <http://www.opa.pres.umn.edu/>

Figure 7

Overview of the Planning Process



purpose of U2000 was to ensure that the University of Minnesota had defined "a path to meet its current challenges and to strengthen its role as one of the leading research universities." The discussion paper classified U2000 institutional goals into two categories: (a) enabling (user-friendly community, diversity, faculty and staff, supporting infrastructure, and finance); and (b) output (research, graduate and professional education, undergraduate education, and outreach and access). The document identified the following seven additional issues that needed to be addressed in the implementation of U2000:

- What major academic areas and/or institutional characteristics should comprise the recognizable signature of the University of Minnesota?
- How can the institution attain stability and adequacy in long range financing? How should the budget be developed to properly emphasize state funds in conjunction with tuition and other income?
- How can the productivity (relation of real output to real input) of all University operations be significantly increased? How can we determine how expectations for improvement should vary by the nature of the unit?
- How can the delivery of our products to our constituencies be significantly improved (cost-effectiveness)? How can the quality and value of the institution's services be better presented to its constituencies?

The University will have a recognizable signature that includes a number of major academic areas some of which will be cross-boundary in nature. Consideration will also be given to inclusion of one or more institutional characteristics (e.g., wide use of leading edge information technology).

The institution will estimate the level of general state support for the institution as a whole over the next five years. This estimated general support will be allocated to major areas (units). A primary financial requisite is the necessity to provide sufficient funds to maintain the University as a leading land-grant, research university. To accomplish this, tuition and outside funding must be sufficient to augment the state support. The institution must encourage efficient use of all financial resources.

The productivity of the administrative and support operations of the University must be increased by 25 percent by the year 2000. Similarly significant improvements must be made in the productivity of direct academic units. Expected improvements for various major activity categories will necessarily vary.

The importance of marketing must be stressed to all operating units with emphasis on both product excellence and constituency access. The role of the Continuing Education/ University College and the Graduate School in providing support to the academic operating units must be defined.

- How should the recognition/reward/tenure systems be made responsive to the needs of the institution?

The University must have a Tenure Code that meets the legitimate needs of the faculty (especially for protection of academic freedom) and the needs of the University to have sufficient flexibility to operate efficiently and to allow prompt corrective action in cases where individuals do not adequately meet their responsibilities. Existing performance measurement/reward systems must be made more flexible for both faculty and staff. Additionally, new forms of faculty/staff recognition must be generated. Student recognition must be expanded.

- How can the University attain its diversity goals?

The institution will reconfirm its general diversity targets (critical measures). It will further emphasize a change of culture that broadly supports diversity.

- Can the University significantly improve the value-adding aspects of its support infrastructure?

The institution will develop an exemplary support infrastructure that serves its internal and external constituents (e.g., student access to computing, efficient grants management, effective classrooms). Investment will be made in projects that will significantly enhance the capabilities of those served, significantly improve efficiency, or both.

Development of Institutional-Level Critical Measures

With increasing frequency and from several sources, all institutions of higher education are being asked to be increasingly accountable to the constituencies they serve. When the Board of Regents approved the *University 2000 Mission, Vision Strategic Directions and Performance* statement on January 14, 1994, their resolution also initiated "the development, by the University's central and unit administration and in consultation with the University and unit governance organizations, of critical measures and benchmarks for measuring institutional, campus, and unit performance in realizing the goals of University 2000."

The Strategic Planning Working Group articulated the goal of developing a system and set of performance measures that would be useful in several contexts: to form a systematic foundation for the University of Minnesota to evaluate and improve institutional performance within the context of its strategic planning efforts; to respond to new emphases from the North Central Association in the area of assessing student academic achievement as well as to provide a basis for institutional self-study as part of the reaccreditation process; to respond to legislative pressures to submit performance data for all postsecondary institutions in Minnesota; and to anticipate possible new federal requirements as a result of the creation of State Postsecondary Review Entities (SPREs) as a result of the 1992 Amendments to the Higher Education Reauthorization Act. An *Overview of External Reporting Requirements for Academic Programs and Students' Academic Progress and Outcomes at the University of Minnesota* was prepared to articulate the University's own assessment processes within the context of emerging external requirements.

Efforts underway in the University of Minnesota to develop a set of indicators are similar to efforts in similar institutions. The February 1994 issue of the *NASULGC Newslines* contained the article "Universities Grapple with Productivity," in which the author highlighted common concerns voiced about higher education that imply that taxpayers are not getting sufficient value from public institutions for their tax dollars. In describing efforts of the state university system in Oregon to respond to such concerns, the article concluded that "the focus needs to be on productivity, not on workload, to emphasize output in relation to some measure of input" and that "productivity is becoming an integral part of the planning and decision-making at all levels within the institutions and its investors need to be much clearer in defining the outcomes they seek." A similar effort in the State of Wisconsin, based on an Accountability Task Force appointed in 1993 by the Governor, proposed specific indicators to measure the University system's performance in seven areas: effectiveness, efficiency, quality, access, diversity, stewardship of assets, and contribution to compelling state needs.

In the State of Minnesota, the Final Report to the Legislature and Governor, *Minnesota Task Force on Post-Secondary Funding*, proposed a set of recommendations concerning how to fund postsecondary institutions in Minnesota. Although no recommendations were made to specify performance indicators across or within systems, the report was supportive of system-specific efforts to develop a set of indicators consistent with mission. Some of the measures that will be proposed for internal use by the University of Minnesota should be identical to those being required by external agencies.

An initial statement of four purposes to be served by the development of critical measures guided all subsequent activities:

- To publicly confirm the institution's success in meeting its stated goals and objectives.
- To guide and facilitate institutional, campus, collegiate, and support unit self improvement.
- To serve as an important link between planning, performance, evaluation, and resource allocation, so that performance in a desired direction can be supported and rewarded through the budgeting process.
- To provide means for comparison with other similar institutions, in search of best practices for the accomplishment of institutional goals.

The next step in the process was to identify a set of principles to guide the development of a specific critical measure, with a particular focus on those principles that have been suggested in the recent literature on the development of measures of student academic achievement.

Following the identification of a tentative set of 19 measurement areas, an extensive consultation process within and outside the institution was conducted to develop specific measures in each area. During the past two years the following committees subsequently reviewed draft proposals for the institutional-level critical measures before they were presented for review and approval by the Board of Regents:

- Faculty Consultative Committee
- Senate Committee on Educational Policy
- Senate Committee on Finance and Planning
- Senate Committee on Faculty Affairs
- Senate Committee on Intercollegiate Athletics
- Senate Committee on Research
- Senate Committee on Social Concerns

- Student Affairs Strategic Planning Team
- Graduate and Professional Students Association, Executive Committee
- Minnesota Student Association Representatives
- Academic Staff Advisory Committee
- Labor Management Committee
- Civil Service Committee
- Outreach Council
- Continuing Education and Extension Student Board
- Council of Graduate Students
- Commission on Women,
- Disability Issues Committee
- CLA Student Board
- Selected College Deans from the Twin Cities and Duluth campuses
- Faculty, Student, and Staff Representatives at Duluth, Morris and Crookston campuses
- President's Four Minority Advisory Committees

The consultation process resulted in a list of 18 proposed critical measure areas, which were finalized into 19 critical measure areas, categorized into three implementation phases as described in Figure 8 below. The first five measures were presented for review at the September and November 1994 meetings of the Board of Regents, and were subsequently approved at their meeting on December 8, 1994. The second seven measures were subsequently approved by the Board of Regents at their meeting on July 9, 1995. The third set of measures was being developed during the 1995-96 academic year, and were awaiting review and approval at the time of the preparation of this self-study report. Although a much longer proposal was developed for each of the critical measure areas, shorter executive summaries (Appendix H) were used to facilitate focused discussion within the institution.

Figure 8

Development and Implementation Timetable for Critical Measures

<u>First Phase (1994)</u> ³	<u>Second Phase (1995)</u> ⁴	<u>Third Phase (1995-96)</u> ⁵
Characteristics of entering students	Student experience	Reputation of undergraduate, graduate, and professional programs
Graduation rate	• Student academic achievement	Interdisciplinary/applied programs
Underrepresented groups/diversity	• Student satisfaction with educational experience	Outreach, public service
Sponsored funding	• Distinctive features of University education	Responsiveness to market demand
Investment per student	Post-graduation experience	Responsiveness to compelling state needs
	Scholarship, research, artistic accomplishments	Customer service/streamlining Technology
	Overall satisfaction of Minnesota citizens	
	Faculty and staff experience	
	Facilities infrastructure	
	Investment and voluntary support	

³ <http://www.opa.pres.umn.edu/specproj/critmeas/phase1/phase1.htm>

⁴ <http://www.opa.pres.umn.edu/specproj/critmeas/phase2/phase2.htm>

⁵ <http://www.opa.pres.umn.edu/specproj/critmeas/phase3/phase3.htm>

Although the impetus for developing critical measures was internal to the University of Minnesota as part of the University 2000 strategic planning process, the new assessment initiatives have been used and are useful in interacting with the Minnesota Legislature relative to their increasing interest in accountability and performance based funding for higher education. As part of the 1995 Higher Education Bill, the Minnesota Legislature established a \$5 million performance incentive account, and will release \$1 million each time the University of Minnesota presents evidence that it has achieved one of five performance measures. Legislation recently enacted by the 1995 Minnesota Legislature has included language that bases some institutional funding on performance on the critical measures developed by the University of Minnesota. The specific language is as follows:

"The Board of Regents of the University of Minnesota is requested to, and the board of trustees of the Minnesota state colleges and universities shall, establish:

- (1) a set of accountability measures that reflect each system's specific mission; and
- (2) goals to improve each system's performance on the measures established.

Each system shall establish both system-level and institution-level accountability measures and goals. Each system will report to the legislature in the biennial budget document on the measures selected and timeline for achieving the established goals. In addition, each system will include baseline data and a description of the processes implemented to evaluate progress toward the goals established. Examples of goals include:

- (1) develop a post-tenure review process;
- (2) increase student satisfaction with the education received;
- (3) improve time to completion rates;
- (4) reduce the number of credits required to receive a degree; and
- (5) assess employer satisfaction with graduates from different programs.

The commissioner of finance shall place \$5,000,000 of the second year appropriation in a performance incentive account. The \$5,000,000 is a nonrecurring appropriation. The commissioner shall release \$1,000,000 of this amount to the Board of Regents each time the University presents evidence that it has achieved one of the following performance measures:

- (1) increases at the Twin Cities campus, excluding General College, in the percent of 1996 new entering freshmen ranking in the top 25 percent of their high school class;
- (2) increases in the rate of retention of 1995 new entering freshmen;
- (3) increases in the number of 1996 new entering freshmen who are minority students and increases in the percent of faculty hired in 1995-1996 who are women or minorities;
- (4) increases in the five-year graduation rate measured between August 1994 and August 1996; and
- (5) increases in the number of credits issued through telecommunications between fiscal year 1995 and fiscal year 1996."

Perspectives of Employers and Recent Graduates

This section on the perspectives of employers and recent graduates is included in this chapter to emphasize the importance of the institution's effectiveness in preparing undergraduate and graduate and professional school students.

One of the most pressing issues in American higher education today is the connection between education and employment. In its narrowest sense, institutions are being required by federal legislation (e.g., Student Right to Know Legislation and criteria proposed for the State Postsecondary Review Program) to collect and make available to students information on "placement rates" for recent graduates. Although employment closely related to field of study is an appropriate measure for graduates of programs in the Academic Health Center, Professional Studies, and a subset of advanced degree programs in the Graduate School, graduates from many programs in Arts, Sciences, and Engineering often begin full-time employment in a wide range of occupational arenas.

As background for developing University 2000, Lannin & Associates surveyed a non-random sample of employers of University graduates to obtain their perspectives on how well the institution was preparing individuals for future employment. Among the employers were the following: Abbott-Northwestern Hospital, Arthur Andersen, Cargill, Cenex, the City of Minneapolis, Dayton-Hudson, First Bank Systems, General Mills, Hennepin County, Honeywell, IBS, IDS, Minnesota Departments of Agriculture, Natural Resources, Health, and Transportation, Northwest Airlines, St. Paul Schools, Snyders, Super Valu, 3M, United Healthcare, US West, and VA Medical Center.

The interviews were focused primarily on these organizations' experience as employers of University graduates and not based on a random sample of public and private organizations in the state. These findings suggest the need for institutional attention to knowledge and performance levels of graduates from its diverse array of degree programs. Key findings from the 1993 Lannin & Associates study included the following:

- The University's reputation was viewed as average when compared with other institutions. The employer community believed the University has the potential to be a top-tier research institution. Strengths cited included the "Minnesota community," selected academic programs, and research capabilities. Weaknesses cited included the bureaucracy, poor academic programs in some areas, and inaccessible faculty.
- Employers found the University to be passive as a marketer of its graduates. Many of those surveyed felt the University's placement functions were not customer-oriented.
- The University's continuing education programs are viewed as competitive with, but less accessible than, and not aggressively marketed, compared with competing programs.
- Overall, graduates of the University of Minnesota were seen as competitive but not exceptional performers in the workplace. Strengths cited included being cooperative "team players." Weaknesses cited included lack of practical experience; and less skill in creative thinking, leadership, and management.

- Lack of diversity was driving employers to reduce their recruiting efforts at the University and to look to other institutions both locally and nationally for graduates with diverse backgrounds.

Although most of the collegiate units on the Twin Cities campus conduct periodic surveys of recent graduates and some survey graduates annually, there is no systematic surveying of recent graduates from all collegiate units and degree levels. College specific results from recent surveys of graduates are available for review. The Former Student Survey Project (FSSP), a collaborative effort of Academic Affairs and Student Affairs, was intended to cover all graduates from all degree programs on all campuses from fall 1977 through summer 1978. The study, which proposed a long-term plan for "systematically assessing the status and opinions of former students" including a routine survey every fourth year of all graduates who were one, four, ten, and twenty years "post-graduation," could serve as a general guide for developing the data collection instrument for a campus-wide survey of graduates.

The purpose for the Post-Graduation Experience Critical Measure is to determine the extent to which graduates have benefited from their University of Minnesota education. The connection between the educational experience and subsequent life experiences can be thought of as a continuum ranging from little or no connection (e.g., a graduate who follows an unrelated career or avocation, with no apparent application of even the general knowledge and skills that might be acquired in a University education), to the most direct kind of connection between a specific educational program and a specific job (e.g., a Medical School graduate practicing in the specific area of training received here). The majority of graduates are probably somewhere in the middle of the continuum and are applying knowledge and skills developed as part of their University education, but may or may not be in a career path directly connected to their program of study.

For the purposes of this critical measure, post-graduation experience as related to a University education will be viewed in terms of preparation for subsequent life activity in three areas: careers and employment; further education, including graduate and/or professional education, professional development and/or retraining for career change, and "lifelong learning;" and quality of life, including civic and community life. Figure 9 below emphasizes the importance of continuing contact with and support for the University of Minnesota by its alumni.

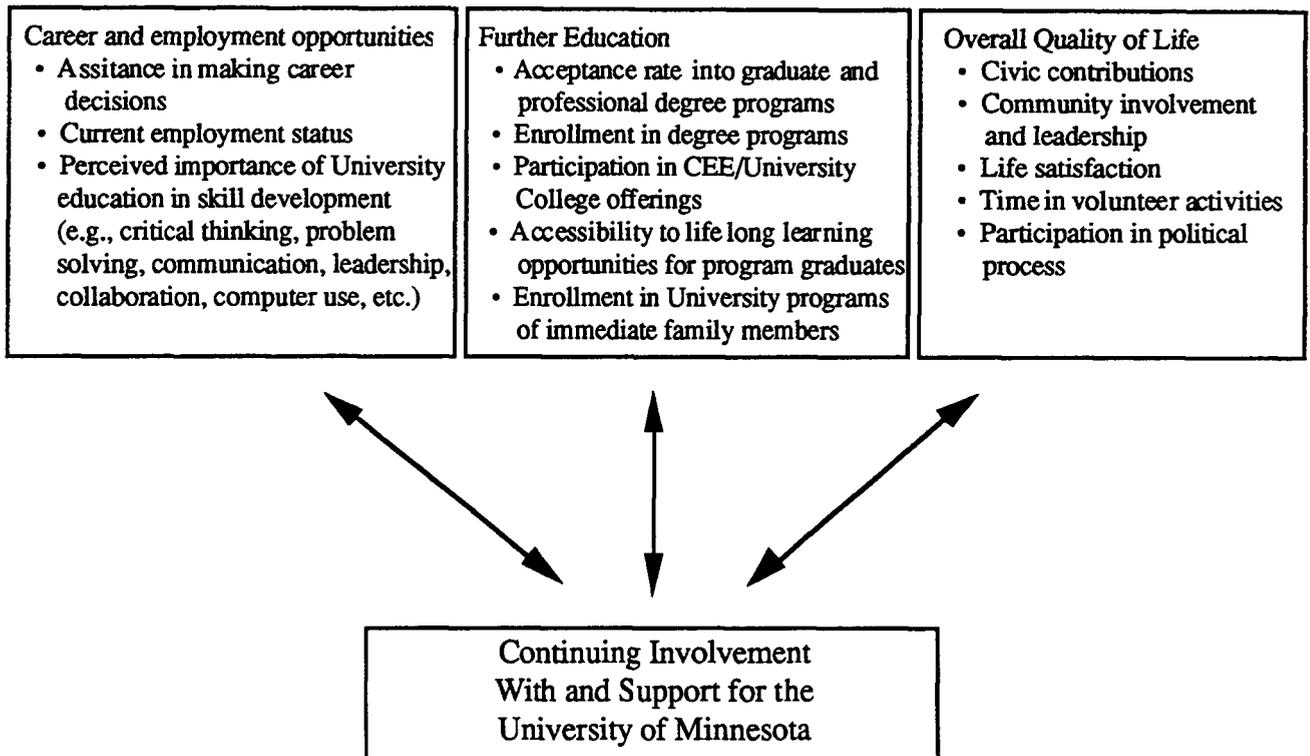
The emphasis on employment, additional educational experiences, and community and civic contributions is consistent with students' perceptions of why they are attending college. Illustrative data collected for freshmen entering the Twin Cities campus for fall quarter 1993 (N=2,308) as part of the national Cooperative Institutional Research Program (CIRP) pointed to the increasing importance of expected employment outcomes and preparation for graduate/professional school as reasons for entering college. For example, the percentage of students saying that "to be able to get a better job" was "very important" has increased from 76 percent in 1989 to 82 percent in 1993; and the percentage of students in 1993 saying in that "preparation for graduate/professional school" was "very important" was 61 percent, while the percentage saying it was "somewhat important" was another 32 percent.

The timetable for the implementation of this critical measure coincides with the preparation of this self-study report, so campus-wide results from surveys of recent graduates are not yet available. Post-graduation experience will be measured through graduates' own evaluation of the value and relevance of their University education in each of the three areas. The perspective of employers and others who interact with our graduates would be a very useful second perspective and may be added as part of one of the critical measures in

the third phase (e.g., responsiveness to market demand), but it will not be the focus of this measure. Data for this measure will be collected through a periodic survey of a random sample of graduates (stratified by undergraduate, graduate, and professional levels, and for at least two points in time since graduation), with appropriate over-sampling for particular groups (e.g., graduates of color) consistent with the goals of University 2000. The survey will contain a set of core, overall questions that are identical across campuses and levels, but will allow for other questions to be added to address the unique concerns of a particular campus, college, study type, and/or student level.

Figure 9

Model for Critical Measures of the Post-Graduation Experience



Proposed Academic Program Changes

The most recent component of changes related to University 2000 were announced in late March 1996, and suggest major changes in academic programs on the Twin Cities. Those changes were alluded to in Figure 1 that presented an overview of institutional changes under discussion at the same time that this institutional self-study report was being drafted. Those proposed changes are outlined in the April 1996 *Institutional Plan*. The recently announced program changes “will result in programs to better serve student and marketplace needs (some of which have been discussed elsewhere in this self-study report) and to reduce overall administrative costs in a time of increasing budgetary constraints.”

The plans for 1997-99 call for creation of several new degree programs along with significant administrative streamlining -- including the possible merger of two Twin Cities campus colleges and the phasing out of another. Investments in the 1997-99 academic program plan include: several new master's programs; doubling the size of the Residential College program, where students take courses in common and live in the same dormitory; and expanding the use of technology for both on-campus and off-campus programs.

Administrative streamlining includes: proposed phasing out of General College by 1999, other ways of preparing such students for university-level work would be expanded; examining a possible merger of the College of Human Ecology with the College of Education and Human Development and related programs from other colleges; continuing the major reengineering of the Academic Health Center already underway; and reorganizing biological sciences -- several colleges are now home to biology-related faculty, and the Council of Biological Sciences Deans is examining ways to streamline and enhance biology programs.

The proposed Twin Cities campus academic program plan for 1997-99 is based on the following principles:

- To serve students better through course offerings and systems support.
- To meet marketplace demand by developing courses and integrated programs that recognize societal and economic needs.
- To recognize economic reality and seek efficiencies that hone the profile of the University, reduce administrative costs, and improve the quality of academic programming and administrative support.

The more detailed proposed plan is summarized as follows:

Reorganize Biological Sciences

- The Council of Biological Science Deans is determining where and how biology should be organized and taught, including selection of master teachers who will provide outstanding undergraduate education in biological studies. Its report is expected in June 1996.
- Explore the integration of all undergraduate biology instruction on the Twin Cities campus through the establishment of an undergraduate faculty that would be integrated across the various departments now teaching biology. The goal is to provide a more efficient and seamless delivery of the undergraduate curriculum, especially in the freshman and sophomore levels. Discussions are in the early stages.

Arts, Sciences, and Engineering

- Proposed new investments include: (a) creating several new professional master's program designed to meet key industry needs, including software engineering, the management and technology of telecommunications, and manufacturing engineering; (b) doubling the size of the Residential College program; (c) and strengthening high-quality programs and programs that meet state needs.

- Proposed structural realignments include: (a) proposed phase out of General College by 1999; (b) serve students who are underprepared for the University -- including those who new enroll in General College in hopes of gaining entry to degree programs -- in the following ways: increase special CLA admits from 200 to 300 and seek Residential College opportunities for them; work closely with the Office of Student Development and Athletics in developing an initiative tentatively named "University 1001," which includes for-credit courses to build academic skills; and work with Continuing Education and Extension/University College to explore new ways it can be a launching pad for entry into University degree programs by certain student populations; (c) support efforts in the Institute of Technology to create a School of Electrical Engineering and Computer Science and to merge physics and astronomy into a single department; and (d) explore departmental reorganization in the College of Liberal Arts.

Professional Studies

- Proposed new investments include: (a) expand the use of technology and educational technologies for both on-campus and off-campus programs in areas such as the College of Architecture and Landscape Architecture and at the Earle Brown Continuing Education Center; (b) explore through market analysis additional degree, certificate and professional lifelong learning educational programs in areas such as the environment, planning, business and youth-related areas; and (c) continue to make strategic investments for diversity hires and programs.
- Proposed structural realignments include: (a) examine a merger of College of Human Ecology programs with the College of Education and Human Development and of related programs in other colleges; (b) continue the consolidation of branch station livestock programs by phasing out research dairy herds, and work in partnership with the University of Wisconsin, Madison to establish a shared research herd; (c) integrate more fully the support functions of the Minnesota Extension Service and Continuing Education and Extension/University College while recognizing their different missions; (d) review the relationship between the College of Natural Resources and the College of Agriculture, Food, and Environmental Sciences, as well as other units as they relate to changes in biology programs; (e) examine whether the Humphrey Institute of Public Affairs is best positioned as a stand-alone college or as part of a larger entity; and (f) examine the advantages/disadvantages of centralizing to the college level some services now performed by departments.

Academic Health Center

- Reengineering process, now in Phase II, continues. Ten design teams are developing plans for restructuring the Academic Health Center. Among the teams: organizational structure and responsibilities; human resources, compensation, and incentives; tenure and governance; and management information requirements. The goals of the reengineering process are as follows: to promote the acquisition and dissemination of knowledge to customers; to redesign programs for training health care professionals in a managed care environment; and to promote more effective technology transfer.

CHAPTER V

COLLEGIATE OVERVIEWS, PLANS, ACTIONS, AND CONCERNS¹

Table 6 below presents registration highlights for fall quarter 1995 and contrasts enrollments for the previous fall quarter and a decade ago. The large change in the College of Architecture and Landscape Architecture reflects the shift from baccalaureate to master's degrees in the profession, which is now incorporated into the enrollments in the Graduate School.

Table 6
Collegiate Registration Highlights for Fall Quarter 1995 and
Comparisons with 1985 and 1994

Campus/Provostal Area/College (Program)	Enrollment	Change from 1994		Change from 1985	
		N	%	N	%
Total	48,091	444	0.9	-7,985	-14.2
Twin Cities	36,995	296	0.8	-7,595	-17.0
Crookston	1,729	172	11.0	592	52.0
Duluth	7,415	-52	-0.7	-104	-1.4
Morris	1,952	28	1.5	270	16.1
Academic Affairs					
Graduate School ^a	8,299	-198	-2.3	633	8.3
Academic Health Center					
Dentistry	344	16	4.9	-94	-21.5
Medical School	1,766	-23	-1.3	-183	-9.4
Nursing	227	1	0.4	-119	-39.1
Pharmacy	356	0	0	80	29.0
Public Health	243	12	5.2	-33	-12.0
Veterinary Medicine	294	-5	-1.7	-16	-5.2
Dental Hygiene	88	13	17.3	39	80.0
Medical Technology	82	15	22.4	25	43.9
Mortuary Sciences	67	-21	-23.9	3	4.7
Occupational Therapy	81	1	1.3	11	15.7
Physical Therapy	60	1	1.7	1	1.7
Arts, Sciences, and Engineering					
Biological Sciences	468	2	0.4	100	27.2
General College	1,453	22	1.5	-1,797	-55.3
Institute of Technology	4,238	-58	-1.4	-1,510	-26.2
Liberal Arts	13,396	484	3.7	-2,737	17.1
University College	202	33	19.5	76	60.3
Professional Studies					
Agr., Food, and Environmental Sciences	917	45	5.2	-158	-14.7
Architecture and Landscape Architecture	77	-74	-49.0	-	-
Education and Human Development	1,224	10	0.8	-1,087	-47.0
Human Ecology	835	1	0.1	-512	-38.0
Humphrey Institute	214	187	14.4	138	55.1
Law School (fall semester)	835	-8	-0.9	70	9.2
Management	838	69	9.0	-733	-41.7
Natural Resources	605	-42	-6.5	297	96.4

^aHumphrey Institute of Public Affairs enrollments are included in the overall Graduate School enrollments.

¹ <http://www.opa.pres.umn.edu/specproj/accred/college.htm>

During the past decade, several changes have occurred in collegiate units on the Twin Cities campus that are worth noting.

Name Changes

Changes in the names of the following collegiate units were made to reflect the changing and broadening mission of several collegiate units.

Formerly	Currently
College of Agriculture	College of Agricultural, Food, and Environmental Sciences
College of Education	College of Education and Human Development
College of Forestry	College of Natural Resources
School of Business	Carlson School of Management
College of Home Economics	College of Human Ecology

Associated Changes in Mission, Size and Quality

During the past decade, several collegiate units have undergone significant changes in their mission, size, and quality. Several of those changes were initiated as the result of the implementation of *A Commitment to Focus* whereas others have evolved from subsequent planning efforts. Among those changes are the following:

- The College of Education and Human Development (narrowed focus)
- The General College (elimination of degree programs and focusing of mission)
- The Carlson School of Management (size and quality; the Carlson School will admit students as freshmen beginning fall quarter 1996)
- The Law School (quality)

Units' Strategic Plans

The best unit specific information about collegiate units comes from collegiate strategic plans and administrative commentary, coordinated by the Office of Planning and Analysis and used in the self-study process, relative to relationships with other units and campus-wide efforts within the overall planning context of University 2000. The following unit descriptions present a comprehensive overview of the efforts and accomplishments of those units. More detailed information on the budgets of each collegiate unit is available for review.

Academic Health Center

The Academic Health Center includes the following collegiate units: the School of Dentistry, University of Minnesota Health Systems, the Medical School, the School of Nursing, the College of Pharmacy, the School of Public Health, and the College of Veterinary Medicine. Also included, but not described in detail, are the following programs: Dental Hygiene, Medical Technology, Mortuary Sciences, Occupational Therapy, and Physical Therapy. The December 1995 *Academic Health Center Planning Data Book*, prepared by the Office of the Provost for the Academic Health Center, provides a more current overview of information for the collegiate units in the Academic Health Center than is contained in the college specific descriptions summarized below.

The AHC provides Minnesota residents with the opportunity to pursue professional training here in the state and prepares them for challenging careers in all aspects of health care. The clinics affiliated with the Medical School, College of Veterinary Medicine, School of Public Health, and School of Dentistry provide valuable experience for our students and a critical resource for practitioners while service patients from around the state. The experiential components of the curricula are possible through collaboration between state practitioners and colleges in the AHC. Research and graduate training programs in the AHC schools contribute to the land-grant mission of the University of Minnesota, tackling today's most challenging biomedical research questions and training our state's future leaders in research and technology innovation.

The AHC faces unprecedented challenges associated with health care reform and managed care. Despite declining revenues from all of its historically stable income sources, the AHC is committed to a re-engineering process that will allow it to provide a quality educational product while minimizing the need to rely on further increases in tuition revenues. Students in the AHC professional programs, already burdened by massive debt upon graduation, are not being adequately trained for the challenges of a rapidly changing health care marketplace. At the urging of students, a cornerstone of the reengineering efforts will be a provision of a completely redesigned, modern and adaptable curriculum.

School of Dentistry

Mission/Vision

The school celebrated its first Century of Excellence in 1988. In essence its mission is to produce quality dentists, dental hygienists, dental specialists, dental scientists, and the generation and transference of new knowledge/technology. The school, the only dental school in Minnesota, is viewed by the A.D.A., A.A.D.S., and N.I.D.R. as one of the nation's leading dental schools. The school recently completed a self-study and accreditation site visit. The ADA Commission on Dental Accreditation granted full approval to the D.D.S., dental hygiene, and advanced education programs. The school has the unique distinction of being the only dental school in the country offering its students a "Guarantee of Quality" program.

- The school will continue as a leading dental research enterprise, and was one of two schools in the U.S. to be funded for an NIH Clinical Research Center.
- The "Health and Human Services Report to the President and Congress on the Status of U.S. Health Professions" has, for the last few years, predicted dentistry to be the only health care profession expected to have a shortage by the year 2010. There is currently a dire shortage of dental hygienists and shortage of rural dentists.

- The A.A.D.S. recommends further development of post-doctoral positions in General Dentistry. By the year 2000 all graduates of U.S. dental schools should be able to enroll for one year of post-doctoral training.
- Patient shortages, new ethical considerations, and recent advances in teaching will demand that the school consider the purchase, installation, and implementation of state of the art dental simulation laboratories.
- University development of distance education facilities/lines will enable the school to offer courses/programs throughout the state/region.

Changes/Trends

A few years ago, the dental profession was viewed as over supplied. The school's applicant pool has grown faster than the United States average. For the past few years it ranked 5th among 35 public schools in student quality, as measured by the Dental Aptitude Test and GPAs. Overall, 35 percent of the enrollment are female. In addition to the school being viewed as a leader in producing quality clinicians and making major contributions in generating new knowledge/technology, the school's clinic system is viewed as a model clinical program. It is the most cost effective, quality dental education program among public schools. Over 124,500 patients are seen annually in the dental school's clinics.

Major Strategic Objectives/Issues

The school's faculty and staff developed and are implementing a strategic plan which the President, central administration, and Board of Regents acclaimed as ambitious, bold and innovative. The school's strategic plan is now viewed as a model. Examples of steps being implemented include the following:

- Streamlining school organization by reducing the number of departments from 13 to 4, and reducing the number of assistant/associate deans from 4 to 0.
- Developing a new curriculum which includes the latest concepts of technology, stresses life long learning, critical thinking, and is outcome oriented.
- Developing and implementing a new patient centered clinical education program focusing on comprehensive dental care in association with patient care groups.
- Establishing a Dental Research Institute in 1987. Annual NIH research expenditures over the past five years increased 131 percent from \$1.3 million in FY87 to over \$3 million in FY92.
- Developing a new baccalaureate level dental hygiene program commensurate with *A Commitment to Focus* recommendation.
- Reconfiguring space because of downsizing to reduce space by 31,000 ASF. A new Strategic Plan to guide the school into the 21st Century is in the final stages of completion.
- The school needs assistance in stabilizing its O&M budget which has been historically underfunded. According to MPIS data (now the Office of Planning and Analysis) the school is underfunded in the amount of \$4,289,539.

- In order to recruit and retain quality faculty and staff, salary augmentation is sorely needed; salary data shows the school to be under the weighted mean of AAUP public schools by 12.6 percent.
- The school is acknowledged as having outstanding patient care and instructional facilities. Facilities are now 20 years old and in urgent need of repair and maintenance to meet health and safety standards for patients, students, faculty, staff, and accreditation standards.
- The role of the school must be clarified with respect to serving as a state resource for medical assistance care. The school is becoming a provider of last resort. It does not receive monies from the state or county to offset the cost of this service yet these patients are needed to satisfy student requirements.
- Clinic fees may have to be lowered in order to assure sufficient numbers of patients to meet education needs. This would markedly affect clinic income and add to budget instability.

Budget Strategy

The School of Dentistry is facing financial exigencies. The American Dental Association data ranks the school 32 out of 34 public schools in state appropriation per student per year. Over the past eight years the school has reallocated \$7 million; \$3 million was targeted for external retrenchment. According to ADA data, the school's tuition and fees rank 4th among public schools. The clinic income/production has been maximized. Financial constraints preclude augmentation of state support. Reasonably the school should receive indigent patient care funds to offset the over \$300,000 lost annually in providing indigent care. The school seeks administrative support for its achievements in implementing its strategic plan. Stabilization of funding for the school is critical.

Medical School²

Mission/Vision

The mission of the Medical School is to conduct high quality programs of research, education and service through which the college contributes significantly to the provision of excellent health care for the people of Minnesota.

The Medical School programs include undergraduate, graduate and continuing education in all medical disciplines. The programs are comprehensive and maintain and enhance the high quality of University-based scholarship. Educational programs for medical students include fundamental understanding of basic concepts of biology, human health and disease with emphasis upon individual learning, research and scholarship, integrated and disciplinary programs, ambulatory care, biomedical ethics, health economics, geriatrics and nutrition. The Medical School is responsible for preparing its students for participating in and understanding the advances in contemporary biology and their applications to medicine. It is responsible for encouraging and facilitating faculty activities in research. Biomedical research, both basic and applied, represent a continuing central focus of the Medical School and substantial contribution by the faculty and staff to the highest aspirations of the academic community to be responsible for the acquisition, refinement and learning of biomedical knowledge.

² <http://www.umn.edu/>

The Medical School faculty, serving as the medical staff for the University of Minnesota Hospital and Clinic and other affiliated teaching hospitals, offer extensive professional consultative services to the public and to practicing health care personnel. Medical School personnel provide direct patient care consistent with this consultative role and with the School's responsibility for providing essential educational and research resources for the faculty, students and community.

Changes/Trends

New initiatives include the advanced admission program, minority student recruitment and an integrated course in cell and molecular biology, as well as increased emphasis on primary care. Admission requirements have been broadened to encourage excellent students with varied educational experiences to enter medicine. An education program to improve rural health has been implemented which will include multi-disciplinary health care professionals linked by improved methods of communication and consultation.

Medical student applications have increased and now stand at 712 Minnesotans and 2,303 out-of-state applicants. Forty percent are women. Minority enrollment is increasing, particularly that of American Indians. There are 2,840 medical students, allied health students, medical residents and fellows, and graduate students in the Medical School. More Minnesota graduates enter primary care than graduates of any other Medical School in the nation. Those numbers will increase over the next seven years. The school is developing a rural family practice residency program and programs in rural and environmental health with the University of Minnesota-Duluth School of Medicine, the School of Public Health and other units within the Academic Health Center.

Basic health sciences research and graduate programs have increasingly become interdisciplinary and have strong intercollegiate linkages. Success of the basic sciences and of interdisciplinary research programs are key to the major scientific initiatives of the Medical School. Examples include neurosciences, cell and developmental biology, biochemistry, and biomedical engineering. The Medical School specifically targeted the Basic Sciences for improved vigor and productivity in research and education as they represent the infrastructure for all of its research programs and has encouraged and promoted basic and clinical science relationships through recruitment and program development. Continuation of success of these endeavors will depend heavily upon replacement of Basic Sciences research facilities which began spring 1994.

The Clinical Sciences faculty have the heavy challenge and responsibility of implementing their missions within highly competitive local, state and national environments for health care which severely impact their activities. Altered patterns of health care economics, including limitations of patient referral, access, and reimbursement have led the faculty to expend more effort in the direction of the competitive health care marketplace. These efforts seriously threaten and strain their ability to conduct their academic activities. They and the Medical School are attempting to adjust to these pressures while not compromising standards and performance. These pressures have resulted in new methods of relating together as practitioners including strong and cooperative ties with the University of Minnesota Hospital and Clinic and the emerging University Health Care System. However, traditional relationships with community medical practitioners and health care institutions, including some affiliated hospitals, have been strained and occasionally impair fulfillment of academic missions. Nonetheless, these pressures and the need to accommodate them, has provided students with an opportunity to participate in the "real world" during their educational experiences and the faculty with innovative opportunities in research and role-modeling.

Major Strategic Objectives/Issues

Completion of the Basic Sciences/Biomedical Engineering Building and of the Cancer Center are paramount to the school's research, education and patient care programs. Funding of research is dependent upon the ability to garner flexible funding for equipment purchase and maintenance (\$4,000,000/year), for faculty start-up and interim research funding and for graduate program support, little of which is available from current sources of funding including formula allocations from indirect costs. Medical student tuition constitutes 40 percent of costs and is rising. Medical student indebtedness at graduation exceeds \$50,000 and conflicts with career choices in primary care and academic medicine. All sources of funding are decreasing, including patient care-derived sources for education and research support. Significant support of education costs for medical and allied health residents and fellows are derived from patient care revenues. Participation in one or more integrated service networks by the University Health System is essential to maintaining an adequate flow of revenues from patient care. The percentage of Medical School expenditures derived from state funding has decreased from 26 percent in 1982-83 to 20 percent in 1992-93 despite a 65 percent increase in absolute state dollars, while federal research funding has decreased from 31 percent to 29 percent despite a 101 percent increase in federal funding. Private sources constituted 43 percent of total expenditures in 1982-83 and 51 percent in 1992-93, an increase of 262 percent in that decade.

Budget Strategy

All sources of funding are being dedicated to achieving the objectives identified above. The clinical departments in conjunction with the Medical School and the University Hospital and Clinic will focus financial resources to achieve institutional objectives in order to implement the clinical strategic plan. The Cancer Center, as the top priority of the Medical School, has received the major focus of private fund raising. Financial strategies will be developed for future research facilities in clinical departments. Medical School resources will be dedicated to short-term investments for the recruitment of faculty and for program enhancement. MinnesotaCare funding in primary care and related educational program funding will be dedicated to fulfill legislated mandates. The school continues to seek private funding for medical student scholarships while also seeking tuition relief to encourage primary care; \$6.5 million per year will be necessary to achieve stability and timely replacement of research and research training equipment assuming a 10-year turnover. Funding for teaching supplies has decreased. The supplies budgets of the basic science departments have decreased in recent years and need to be restored.

School of Nursing³

Mission/Vision

The mission of the School of Nursing is to generate and disseminate to students, peers, and the community knowledge necessary for providing nursing services. Established in 1909 as the first university-based school of nursing in the world, the school prepares nurses for research, education and practice. Almost 10,000 degrees have been awarded. The school is ranked 13th among the 636 U.S. schools with baccalaureate and higher degree programs.

³ <http://www.nursing.umn.edu/>

The School of Nursing will maintain its leadership role among colleges in the state in nursing research and graduate education. Internationally, it will contribute to the development of knowledge necessary to address fundamental societal health needs through externally-funded research and scholarship and through its Ph.D. and master's education programs. While its emphasis is on graduate education and research, it is also committed to demonstrating the application of new knowledge to practice and to preparing baccalaureate students for entry-level practice of the profession. The School will continue to reassess the appropriate level for basic preparation as the needs of the state and profession change over time.

Changes/Trends

The School was reaccredited in October 1993. In 1989, the undergraduate curriculum was completely redesigned for a reduced number (88) of high ability, achievement oriented students likely to take full advantage of a professional program in a major research university. A pilot RN/BSN/MS option for selected registered nurses and an honors program were implemented in 1989. In response to heavy demand, eight additional baccalaureate students were admitted in 1992. Master's programs prepare nurses for advanced practice in most major clinical areas (including nurse midwifery) as well as educational and management roles. The Ph.D. program was initiated in 1983. In 1992 the master's program in Public Health Nursing was transferred to the School and a gerontological clinical nurse specialist/nurse practitioner option was added to the master's curriculum. In FY93, the endowed Long Term Care Professorship was filled, the pediatric nurse practitioner option was launched, and the graduate program was extended to northwestern Minnesota in partnership with Moorhead State University. The family nurse practitioner and a dual MS/MPH options were added in fall 1993. A special outreach to public health nurses in northwestern Minnesota and a collaborative project to develop rural clinical training sites for nurse practitioners were also begun in FY94. These new options are partially supported by one state and nine federal training grants. The state-supported proportion of total expenditures changed from 82 percent in FY82 to 74 percent in FY92, reflecting increases in externally funded research and program projects.

Major Strategic Objectives/Issues

The seven major strategic objectives and issues for the School are as follows:

- To achieve national and international distinction in research-based knowledge that can be used to improve the health of human beings.
- To expand rapidly research and knowledge generation specifically related to client self-care, managed care, client outcomes, and cost-effective health care.
- To have academic programs congruent with the mission and unique resources of an academic health center.
- To offer educational programs at all levels designed for high ability students who seek and can benefit from enrollment at a research university.
- To influence and shape public policy and consumer information regarding health.
- To enhance the School's physical and interpersonal environment to facilitate building a community of scholars.
- To improve technical support and decision making systems and services to promote quality and efficiency.

Budget Strategy

In real terms, the FY93 state-supported budget of the School of Nursing decreased from FY87 despite the transfer of 4.5 positions associated with the absorption of the public health nursing program. Yet the School has responded to external pressures for new types of practitioners and research by reallocating funds internally, aggressively seeking external support, and making a decade-long investment in faculty research development. The use of teaching assistants and preceptors for clinical instruction will continue as a strategy to reduce costs further. A practice plan is being established to support clinical teaching and recruit nurse midwives and nurse practitioners. Two task forces are searching for greater complementarity and cooperation between the School and University of Minnesota Health Center. Several courses will be reformatted to make them more accessible through Continuing Education and Extension/University College. The School is included in a Center of Excellence grant for American Indian students to support diversity efforts.

The College of Pharmacy

Mission/Vision

Throughout its 100-year history as the only College of Pharmacy in this state, the college has produced two out of every three pharmacists who provide health care for Minnesotans, and serves as a model for pharmacy programs worldwide. The College of Pharmacy is responsible for the education of pharmacy practitioners and pharmaceutical scientists who will meet the health needs of the people of Minnesota, society, and deliver essential pharmaceutical services. The College is committed to the improvement of human health through the creation and dissemination of knowledge leading to the development of new drugs and drug delivery systems, the optimization of drug use, and the improvement of pharmaceutical care. It is also committed to the development of pharmaceutical technology to strengthen the economy of Minnesota. The College of Pharmacy at the University of Minnesota is ranked 3rd among the 75 U.S. pharmacy programs.

Changes/Trends

The college is responding to a national mandate to make the Pharm.D. degree the entry level degree for the profession by revising its Pharm.D. curriculum, discontinuing the BS program, and by creating a new pharmacy program that will prepare graduates to be effective 21st century health care providers. The revised professional curriculum is designed to anticipate changes in health care, and promote the increased responsibility of the pharmacist as an accessible and respected source of health care services and information for the public. The new Pharmacy program will begin to admit students for fall quarter 1995. Applications for entry into the college are up 25 percent over 1991-92, and three qualified applicants are evaluated for every available position. Approximately 72 percent of the students in the professional program are Minnesota residents. The mean GPA of students entering in the fall of 1993 was 3.46. The graduation rate exceeds 90 percent. Sixty-nine percent of the 344 professional pharmacy students are women, representing a gradual increase from 34 percent in 1977.

The College of Pharmacy has made a serious commitment to expanding the role of minority and women faculty. Over the past 10 years, 14 new women faculty have joined the College. Today, one in three pharmacy faculty are women.

Major Strategic Objectives/Issues

There is a well-documented shortage of pharmacists in Minnesota. The limited funds supporting the College's instructional programs have prohibited the college from admitting many highly qualified Minnesota residents. Additionally, a substantial portion of the instructional efforts supporting the professional pharmacy programs is derived from volunteer faculty, non-regular faculty, and affiliated institutions. Each pharmacy student spends a required minimum of one year in a variety of practice settings learning to provide pharmaceutical care for patients, under the preceptorship of pharmacy faculty. A substantial portion of this one-on-one instruction is provided by volunteers at their practice sites throughout Minnesota. These affiliated hospitals, pharmacies, home health care agencies, nursing homes and HMOs can no longer provide the same level of free education to University pharmacy students. The College must obtain the resources to support these teaching needs. Additionally, the new pharmacy program requires the remodeling of the teaching laboratories to create a modern pharmacy practice setting. Over \$150,000 has been raised for the new Pharmaceutical Care Laboratory, with additional commitments from business groups for equipment.

The high ranking of the College of Pharmacy is a result of not only the excellence of its teaching programs, but also of the strong research programs of the faculty. The College has 55 faculty supported by 38 FTE of state funds, and offers four graduate programs with 80 Ph.D. and M.S. candidates. The Medicinal Chemistry program is one of the very strongest in the nation and houses the editorial offices of the *Journal of Medicinal Chemistry*. The Pharmaceutics program has research strengths in pharmacokinetics, solid state pharmacy, and novel drug delivery systems. The faculty of the graduate program in Hospital Pharmacy recently developed a new emphasis in Experimental Pharmacotherapy designed to prepare future clinical scientists in pharmacy. Faculty in the Social and Administrative Pharmacy program have developed the Pharmaceutical Care Project and the PRIME Institute. Over the past decade, four endowed chair positions have been funded; these include three PUF chairs and one additional chair in pharmaceutics, the most of any pharmacy program in the country.

Budget Strategy

The College's 1992-93 direct expenses were \$9.5 million, representing 46.8 percent from state funds, 12.4 percent from federal, and 40.8 percent from private funding. The College is also supported by over \$1.6 million in donated volunteer instruction, provided by more than 700 Minnesota pharmacists who teach and mentor pharmacy students in the pharmacies where they practice. The college faces budgetary challenges on many fronts. These include the inability of non-University health care institutions and practitioners to continue to teach students in their practice environments without financial support from the college, the increasing expense to attract, hire and retain new faculty, especially minorities and women, and the need to implement a revised Pharm.D. program to better prepare future graduates. In addition, the 1993-94 salaries of the Pharmacy faculty are ranked last among their peer institutions (Big Ten plus Texas and California).

The College has developed a five-year budgetary plan to address its needs. The strategy will generate additional financial support for the college's teaching program each year, as those funds are generated primarily through increasing enrollment and restructuring tuition. The College of Pharmacy has received support through academic priority planning to assist in maintaining the professional student enrollment of 331. The new five-year plan calls for an increase in enrollment to 415. This is a sound, integrated financial and educational strategy given the very strong demand for the program by

highly talented students, the growing need for pharmacists in Minnesota, and the necessity to ensure the highest quality educational programs for future health care providers.

School of Public Health⁴

Mission/Vision

The mission of the School of Public Health (SPH) is to preserve and enhance the health of the public through education, research, and service programs designed to discover and transmit new knowledge aimed at the prevention of disease and disability, the improvement of health, and the planning, analysis, management, evaluation, and improvement of systems for the delivery of health services.

Organization

Presently the SPH is organized into five administrative units: the Divisions of Biostatistics; Environmental and Occupational Health; Epidemiology; Health Management and Policy; and the Institute for Health Services Research. These units support and focus on the School's mission of education, research and service for health promotion and disease prevention for the people of local communities, the state, nation and the world. Biostatistics combines statistics, computing and biomedical science to further research in human health. Environmental and occupational health is the study of the interaction between people and the harmful aspects of their environments. Epidemiology is the study of the causes, distributions, trends, control, and prevention of diseases in populations. Health Management and Policy prepares leaders for the field of healthcare administration, public health administration, long-term care, and maternal and child health. The Institute for Health Services Research conducts research on the organization and delivery of health services and provides a broad range of training programs for those in health services research and policy.

The SPH offers nine educational majors leading to professional master's degrees. Five Graduate School degree programs are also based in the SPH. The school's educational reputation is underscored by the sizable number of applicants to its programs of study.

Changes/Trends

The current national debate on healthcare reform provides opportunities for research into the organization, financing and management of health care in the U.S. The unpredictability of the outcome of the debate creates uncertainty about the future for health professionals of all types and will require re-examination of the training programs required to prepare professionals who will work within the new system whatever its configuration.

The School has recently increased faculty strength in public health aspects of infectious diseases (including AIDS), in environmental health policy, and in health services management and policy. The SPH has developed a strategic plan; at this time, goals relating to improvement of instruction, research, accessibility, outreach, collaboration, financing, diversity, and space have been articulated. Specific plans to achieve these and other goals have been formulated by the school's Policy Council.

⁴ <http://www.sph.umn.edu/>

The SPH continues to be a national leader in sponsored research within its professional peer group, and within the University. Data provided by the Office of Research and Technology Transfer Administration (ORTTA) indicate that the SPH is the third most productive school in the University and that it brings in the highest amount of sponsored dollars per faculty.

Major Strategic Objectives/Issues

A major issue facing the SPH is the lack of contiguous space. The SPH is the only Academic Health Center unit that does not have a building designated for its occupancy. While the amount of space occupied by the school -- somewhat under 200,000 ASF -- is adequate, its location and configuration significantly hinder faculty interaction. The space is located in 13 different buildings: five on campus, one on University leased property, and the remaining seven off campus in rented quarters. This geographic separation presents problems of communication and transportation for faculty, staff and students and seriously impedes the very core of public health practice: interdisciplinary collaboration.

The issuance two years ago by the Federal Office of Management and Budget of a set of revised regulations concerning the allowability of items that can be directly charged to federal grants and contracts has had serious financial implications. The impact on the SPH has been estimated to be \$2,000,000 per year, beginning July 1994. It was necessary to find resources to cover nonallowable items until the renegotiated rate for indirect cost recovery for the University was established.

The SPH has made progress in increasing its academic reputation, recruiting outstanding faculty, maintaining high standards of education, and expanding sponsored research. The School would be in a stronger position to enhance its academic reputation and to strengthen its goals of collaboration and outreach if more state support were available to underpin salaries, and if its students and faculty were situated in contiguous space that fosters greater interaction.

Budget Strategy

SPH annual expenditures have grown to approximately \$44 million, with state funding constituting only \$7 million of that amount. Hard dollar support has averaged between 16 percent and 18 percent since 1985. Only due to the extraordinary productivity of SPH faculty and their effectiveness in securing grants and contracts has the school been able to maintain its excellence in student instruction, its national eminence in research, and its level of commitment in community services. Given the school's necessity to pursue outside sources of support, there exists the potential hazard that its academic agenda may become adversely affected by the available dollars. If the school were to lose all of its external funding, it would find over 95 percent of its state allocation committed to regular faculty salaries. The sobering fact is that, under such circumstances, the school could not continue to function due to its inability to provide for support staff and support services.

College of Veterinary Medicine⁵

Mission/Vision

Since 1948 the College of Veterinary Medicine (CVM) has served to foster the welfare of Minnesotans by enhancing food animal and companion animal health, animal health research, and the solution of public health problems through teaching, research and service. In recent years the College has selectively enhanced its status as a world leader in contemporary swine, poultry and dairy production services, and for the provision of preventative companion animal medicine.

The collegiate vision was established in its 1990 Strategic Plan. This included plans to:

- Strengthen production animal programs particularly in swine, poultry and dairy to ensure the CVM's international lead role in food animal veterinary medicine.
- Change the emphasis of companion animal veterinary medicine from a traditional therapeutic/restorative approach to one of preventive health care.
- Deemphasize certain species programs (i.e., beef cattle, small ruminants, equine, pet bird and exotic pet medicine) within the CVM. Coverage for teaching and service in these areas to be via agreements with other veterinary colleges, veterinary practices, etc.
- Focus the CVM's research effort on its areas of overall emphasis (i.e., swine, dairy, poultry and companion animal), via budgetary and personnel reallocations particularly to strengthen two disciplinary areas: molecular biology and population medicine.
- Continue change and growth within the College in order to graduate veterinarians with the education and skills demanded by rapidly changing rural and urban societies.
- Revamp the professional curriculum of the DVM degree to permit students to specialize for the type of veterinary practice they intend to enter (e.g., small companion animal, dairy, equine, swine, poultry, mixed rural, mixed suburban, etc.)
- Enhance the College's ability to remain as one of the three leading U.S. Colleges of Veterinary Medicine for Ph.D. graduate education.
- In concert with the Health Sciences' Strategic Plan, invigorate faculty and staff by strengthening career development programs directed at encouraging faculty and staff to expand their professional and personal horizons and skills.

Changes/Trends

Since 1990 approximately \$1 million has been aggressively reallocated to priorities of the College's strategic plan.

⁵ <http://www.cvm.umn.edu/>

- Basic science and in particular molecular and cellular biology have been strengthened within the College by a series of actions.
 - The 1991 merging of the College's two basic science departments to form a new, large (32 member) department of Veterinary Pathobiology.
 - In both 1991 and 1992, \$10,000 was used to develop and support a 12-day laboratory based program for faculty to improve understanding and skills in molecular biology. The success of this program led to the 1993 offering being made available to international faculty through the Office of International Agriculture Programs.
 - In 1993 a new chairman was hired for the Department of Veterinary PathoBiology.
- In June 1992, a new fourth year curriculum was initiated for the DVM professional curriculum. In 25 two-week blocks, 37 specialty choices are offered. A revision of years 1-3 of the curriculum also was undertaken.
- Reallocation to graduate education has been accepted by the funding of an additional \$60,000 in graduate stipends for those seeking the Ph.D. degree.
- Production aspects of Food Animal Medicine Programs were strengthened by the addition of the Department of Animal Science to the College (July 1991). In early 1994 the officing of Animal Science and Veterinary faculty along species lines was begun.
- Companion Animal Preventive Medicine gained a boost in 1992 by the establishment of the Center for Companion Animal Health within the College.

Major Strategic Objectives/Issues

A major challenge to the CVM is to keep pace with the rapidly changing needs of the employers of its graduates. This is particularly true in the area of food animal production medicine, and with the advancement of medical science as it relates to companion animal health care. Change comes hard in a College which for many years has experienced less than five percent faculty turnover per year. The maintenance of faculty vitality remains an increasing challenge under these conditions. The College must continue to be diligent in the allocation of its resources, and the building of a replacement equipment fund. The CVM also suffers from the explosion in medical equipment and supplies costs.

Budget Strategy

The College has successfully completed approximately 90 percent of its Redistribution and Reallocation Plan. Additional reallocations compatible with the College's Strategic Plan have continued in budget planning. In order to maintain an acceptable physical infrastructure, the CVM continues to build equipment reserve budgets as well as reallocate personnel funds to building maintenance and refurbishment. Over the next five years the College intends to reallocate \$500,000 for remodeling alone.

Collegiate Response to Issues Identified in 1986

Since the last accreditation of the Twin Cities campus by the North Central Association for the Accreditation of Colleges and Schools, the College of Veterinary Medicine was

reviewed by the Council on Education of the American Veterinary Medical Association in 1992 for accreditation status. The results of that review are discussed in some detail here, since the 1986 North Central site visit team report raised several issues relative to the College. This Council on Education is the official accrediting body for U.S. Colleges of Veterinary Medicine. The results of this evaluation was that the College of Veterinary Medicine was granted full accreditation for a period of up to seven years. Following are the specific findings:

- **Organization:** The findings were that the organization meets the essential. It was further stated that the affiliation of the Department of Animal Science with the College was a forward step designed to enhance the capabilities of both entities.
- **Finances:** The findings were that the financial support of the College meets the essential.
- **Physical Facilities and Equipment:** The physical facilities and equipment meet the essential requirements. It was recommended that the planned construction and renovation of the research laboratories and animal housing be implemented. Funding for equipment purchases should be provided to meet current and future needs. Implementation of measures to correct the concerns of the female students about locker room facilities is considered imperative.
- **Clinical Resources:** The findings were that the clinical resources meet the essential. The College was recommended for its planned use of innovative measures to acquire additional clinical material for large animal medicine and surgery (i.e., Cannon Falls Herd Health Practice and the Clinical Professorship Program). The site team was concerned with the minimal number of large animal patients in the Veterinary Teaching Hospital.
- **Library and Learning Resources:** The findings were that the library and learning resources meet the essential. It was recommended that there be an addition of staff and storage space to assist library personnel.
- **Enrollment:** The findings were that the enrollment meet the essential.
- **Faculty:** The findings were that the faculty meets the essential. It was suggested that future hiring of faculty members should be conducted with a view toward increasing the number of non-University of Minnesota graduates.
- **Curriculum:** The findings were that the curriculum meets the essential. It was recommended that review of the new fourth year curriculum be completed as planned and appropriate adjustments to the curriculum be made.
- **Continuing Education:** The findings were that continuing education meets the essential. The College was recommended for its outstanding continuing education program.
- **Research and Postgraduate Education:** The findings were that research and postgraduate education meet the essential. The College was complimented on the size and depth of its graduate programs and commended for the success in recruiting veterinarians into these programs. The College was also commended for its effort in developing an international Veterinary Research and Educational exchange.

Physical facilities. The report indicated a need for expansion of diagnostic laboratory facilities and additional research space. A new addition to the Veterinary Diagnostic Laboratory was

completed and dedicated in November 1992. The laboratory now has approximately 64,000 gross square feet of space. The new addition provides facilities for toxicology, client and specimen receiving, bacteriology, mycology, virology, genetics, necropsy, parasitology, faculty offices, and administrative offices. Renovation of the original laboratory is currently underway and should be completed in 1996. When this renovation is complete, the Diagnostic Laboratory will have excellent facilities. Additional research space has also been created since 1986. Remodeling of teaching laboratory space to research laboratory space was accomplished in three buildings during this period of time. This has helped to solve the deficiency of research laboratory space but has not completely solved it. Additional research animal space, including isolation facilities meeting the P-3 level of biological security standards, are included in the Phase III building program of the College. The Phase III plan has not yet been funded.

The College also has \$200,000 budgeted for remodeling each year until 1998. This will further help resolve the research laboratory space problem.

Research funding. The 1986 report indicated that a major increase in research funding was needed to assure that the level of research can be sustained and enhanced.

Research funding has continued to increase each year. The following statistics provide a summary of research expenditures for the past ten years.

<u>FY</u>	<u>Level of Support</u>
1985-86	\$3,279,285
1986-87	\$3,778,083
1987-88	\$4,513,748
1988-89	\$4,721,072
1989-90	\$5,362,633
1990-91	\$5,803,105
1991-92	\$6,993,136
1992-93	\$7,593,603
1993-94	\$8,590,463
1994-95	\$9,895,202

This increase in research funding is primarily the result of increased support from private funding sources.

Enrollment in the professional programs. In 1986 at the time of the previous site visit report, the enrollment in the professional program was limited to 80 students admitted to the first year class. The entering class size was reduced for two years to 62, but was increased to 76 in 1991, and that enrollment policy is still being maintained. The demand for admission remains high. The College has have been able to enroll superior academic students into the professional program. Following are data for the past three years:

- For the class that entered in 1992: 423 applied; 75 enrolled = 5.64 ratio
- For the class that entered in 1993: 482 applied, 76 enrolled = 6.34 ratio
- For the class that entered in 1994: 520 applied, 76 enrolled = 6.84 ratio
- For the class that entered in 1992: The mean GPA was 3.53; the mean score on the Graduate Record Exam was 1883
- For the class that entered in 1993: The mean GPA was 3.50; the mean score on the Graduate Record Exam was 1878
- For the class that entered in 1994: The mean GPA was 3.50; the mean score on the Graduate Record Exam was 1820

Post-graduate programs. The College of Veterinary Medicine and the Graduate School collaborated to offer graduate programs in the broad field of veterinary medicine. In the past there have been seven graduate programs in veterinary medicine. They were as follows:

- Theriogenology (animal reproduction)
- Veterinary Bilopgy (includes physiology and pharmacology)
- Veterinary Medicine
- Veterinary Microbiology
- Veterinary Parasitology
- Veterinary Pathology
- Veterinary Surgery, Radiology and Anesthesiology

In 1993, the program funds of veterinary microbiology, veterinary parasitology, and veterinary pathology were merged to form a program called Veterinary Pathobiology.

The graduate program is one of the primary education programs of the College. The average number of students enrolled in the Graduate School in these seven programs is usually about 130.

The number of graduate degrees (M.S. and Ph.D.) conferred in these programs each year is approximately 25. Following is a summary for the past four years.

Year	M.S. Degree	Ph.D. Degree	Total
1991-92	12	14	26
1992-93	7	16	23
1993-94	2	22	24
1994-95	10	13	23

Arts, Sciences, and Engineering

Arts, Sciences, and Engineering includes the following units: the College of Biological Sciences, General College, the Institute of Technology, the College of Liberal Arts, and University College (as it was defined in 1986 rather than the transformation of Continuing Education and Extension).

College of Biological Sciences⁶

Discussions continue as of April 1996 relative to possible reorganization of the biological sciences on the Twin Cities campus of the University of Minnesota. Those proposed changes are outline in the 1997-99 Academic Plan.

Mission/Vision

The mission of the College of Biological Sciences (CBS) is to provide outstanding educational opportunities to undergraduate and advanced students and to carry out world-

⁶ <http://molbio.umn.edu/cbs.html>

class research in areas of modern biology from the molecular to the ecosystem level. To accomplish this mission it is necessary to integrate a strong basic research program with both traditional and innovative classroom teaching and with intensive mentoring of students at all levels.

As part of its mission, the College is dedicated to providing basic biological science education and to sharing expertise with students and colleagues in other disciplines at the University of Minnesota, such as agriculture, engineering, health sciences, and liberal arts. The College provides the majority of the instruction in undergraduate biology at the University, and shares graduate programs with a variety of other life sciences units around the campus. It ranks very highly among comparable units in the quality and innovation of its teaching and in its research funding.

The College is committed to outreach to the general community and cooperation with other educational institutions. Members of the college actively participate in the scientific community and in the leadership of professional organizations, and they contribute to the administration and governance of the University.

The College includes four academic units: the Departments of Biochemistry; Ecology, Evolution, and Behavior; Genetics and Cell Biology; and Plant Biology. It also includes the Institute for Advanced Studies in Biological Process Technology (BPTI), the Cedar Creek Natural History Area, and the Itasca Biology Field Station. Until July 1, 1995, it also included the James Ford Bell Museum of Natural History that now reports to the College of Human Ecology.

Changes/Trends

The College has been the originator of or a major partner in three of the 30 Research Training Groups awarded nationally in biology by the National Science Foundation, and one of its faculty is the principal investigator of an NSF-sponsored Long-term Ecological Research Grant located at the Cedar Creek Natural History Area. Its faculty share numerous inter-college graduate programs with the Institute of Technology, the Medical School, the College of Agricultural, Food, and Environmental Sciences, and the College of Natural Resources. CBS ranks among the top five units in the University in externally sponsored research funds per FTE faculty.

CBS plays an important role in many research initiatives. The BPTI, a unit with ties to the Institute of Technology, the College of Agricultural, Food, and Environmental Sciences, and the Medical School, is an example of the intercollegiate nature of many of CBS's programs. The College, in conjunction with the Medical School, is currently initiating a cooperative program in developmental biology.

CBS has been a major innovator in teaching and minority recruitment on campus. Its General Biology Program has pioneered the use of multimedia for large lectures, and this contribution has been recognized nationally. It has been the major force in establishing summer research programs which serve the entire life sciences community at the University in bringing undergraduates, both from Minnesota and from other states, to the campus in order to improve and diversify graduate recruitment. In 1993 these programs consisted of 110 students, of whom 37 percent were students of color and 65 percent were women.

In keeping with national trends, the enrollment in CBS is up more than 30 percent over the last five years, and it is approaching the all-time high achieved in 1975. Despite this rise in enrollment, 60 percent of the undergraduates spend at least one term in a faculty laboratory doing undergraduate research. As the new Liberal Education Requirements

are implemented, the number of students taking courses in CBS will greatly increase. A new three-course sequence, using an innovative organization of subjects, has been developed to serve as an alternative for General Biology as the lower-division introductory course. Concurrently the undergraduate curriculum has been updated to reflect the rapid changes in biology.

Major Strategic Objectives/Issues

The number of faculty in the College has been reduced by about five percent over the last five years and the increasing enrollment will pose a threat to the competitiveness of the faculty for external research funding. Since the reduction in faculty has been unequally distributed across departments, the need for the college to find ways to adapt will be a major focus of our current planning efforts. A major issue in the College is the rapidly changing nature of biology, which suggests that a department which does not add a new faculty member every three or four years is likely to stultify. The heavy dependence of faculty research on federal grants is common throughout the University, but since about 70 percent of the graduate students are supported on such grants, and since the difficulty of obtaining such grants is increasing yearly, the College may soon face a situation in which both research and teaching at all levels will suffer significantly due to lack of graduate assistants.

Budget Strategy

In order to accommodate reduced funding levels in 1994-95, the College collapsed the Associate Dean salary line which currently supports the Coordinator for Recruitment and Retention in the Life Sciences, and retrenched the coordination of the student intern program, retracted commitments to new department heads, and reduced supplies and equipment budgets. These choices were made in order to protect core departmental programs. The College is engaged in a strategic planning process in order to maximize productivity and maintain the current level of quality.

Issues Identified in 1994-95 Strategic Planning Process

Three strategic issues were identified in the CBS's strategic planning document:

- CBS's student base is too narrow and it needs to reach a broader base of students.
- The College should identify and focus on a small number of research areas that will be of major importance in biology in the next ten years.
- The College will make the Bell Museum a major outreach unit for natural science from all over the University.

Assumptions about the organization of the biological sciences at the University of Minnesota are under discussion.

Collegiate Response to Issues Identified in 1986

CBS now reports to the Provost for Arts, Sciences, and Engineering. It serves as a focus for undergraduate instruction in biology and as a research unit comparable in size to the Basic Sciences in the Medical School and equally effective in obtaining external funds. Although it is presently an upper-division college, it has plans to admit sophomores in the next few years, and may admit freshmen by the year 2001.

General Biology, the introductory biology series for the entire campus, has been revised in the last three years and now offers two tracks: Bio 1009, which is an accelerated introduction emphasizing genetics, cell biology, and biochemistry; and 1201-2-3, a one-year series which begins with evolution and ecology (1201), continues with cell and molecular biology and biochemistry (1202), and ends with organismal biology (1203). Both series are laboratory courses, and a committee of faculty of the college has developed innovative laboratory offerings for the series. The General Biology Program has pioneered the use of multimedia technology at the University of Minnesota, and largely as a result of its efforts, several classrooms in Minneapolis and in St. Paul have been equipped for this instructional technology. General Biology continues to be a source of pride to the college, with the most effective teachers in CBS giving the lectures. A succession of Directors of the Program has maintained the high quality and excellent esprit of the program.

As a result of the restructuring of the Plant Biology Department (formerly Botany) into a unit jointly administered with the College of Agricultural, Food, and Environmental Sciences, and the formation of the Biological Sciences Policy Council, composed of the Deans of CBS, Agricultural, Food and Environmental Sciences, Medicine, and the Graduate School, relations between CBS and the other colleges with biology in their mission have become more cooperative.

General College⁷

Most Recent Development

The detailed evaluative and descriptive overview was prepared during the 1994-95 academic year prior to the implementation of the three-provostal model. The University of Minnesota and Minnesota State Colleges and Universities (MnSCU) announced in late March 1996 the exploration of new ways to help students complete four-year degrees at the University of Minnesota. If the partnership with MnSCU is approved, MnSCU would serve many of the students now in the University's General College. Hasselmo indicated in a press release that the current General College model is not as effective in meeting the goal of successful access to the University as would be liked. In cooperation with MnSCU, the University hopes to find an approach that is more beneficial to students and builds on relationships that already exist between the University and area community colleges.

Representatives from the University of Minnesota and MnSCU will draft a detailed proposal and transition plan in the coming months. The University of Minnesota will sponsor public hearings on the proposal at which representatives from General College and others will be encouraged to present alternatives. A committee consisting of University and community leaders will review all proposals and report its findings. It is anticipated that their recommendations will be forwarded in June 1996 to administrators at the University of Minnesota and MnSCU, with expected review by the Board of Regents in July 1996. In conjunction with the proposal, the following initiatives are likely to occur:

- The College of Liberal Arts (CLA) will expand its current program of special admissions for students who narrowly miss the entrance requirements but who appear, on the basis of personal interviews, to be prepared for CLA level work. The number of students admitted to this program yearly would increase from 200 to 300.

⁷ <http://www.gen.umn.edu/>

- A K-12/Community Diversity Initiative is being launched under the direction of the associate vice president of academic affairs with special responsibility for minority affairs and diversity. A community-based advisory panel, with input from the president's minority advisory committees, will assess the University's approximately 300 K-12 initiatives to determine how to best coordinate and focus them for serving a diverse population.
- Continuing Education and Extension/University College will explore new ways it can facilitate entry into University degree programs by certain student populations.
- The Office of Student Development and Athletics is developing a for-credit course, tentatively named "University 1001," stressing academic skill building and campus-community values to give students a better chance to succeed at the University.

Mission/Vision

The General College aspires to identify and recruit underprepared students who can benefit from early integration into the University and who are willing and able to direct their energy towards a baccalaureate education; to design and implement programs of the highest quality that serve the educational needs of special student populations; to offer a variety of interventions supportive of student achievement; to hire faculty skilled in developmental education; to support faculty in the design of curriculum and the delivery of instruction; to increase the number of students who successfully transfer to other academic units for completion of degrees; and to promote multicultural education as a logical extension of the cultural diversity at the University.

The General College admits students whose life circumstances, previous educational background, or failure to meet the University's preparation standards make them inadmissible through the normal admission process. The College prepares students for transfer into degree programs primarily in the colleges of Liberal Arts, Human Ecology, Institute of Technology, and the Carlson School of Management.

Changes/Trends

The College has eliminated all of its upper division courses and faculty who taught those courses have been reassigned to other areas of the curriculum or have transferred to other units of the University.

The College has reduced the size of its faculty, and additional faculty retirements will take place by FY96. Faculty workloads have been revised, and criteria for advancement in rank have been developed and approved by the faculty. A program for effective assessment of teaching mastery was fully implemented in 1995-96.

The General College student and instructional support services unit has been restructured with a change in focus from personal counseling and registration to educational assessment and planning, developmental, intrusive advising interventions, career exploration, and instructional support.

The College's three academic divisions have been reorganized into a single, unified faculty, supported in the educational process by civil service and academic professional staff.

The curriculum's effectiveness continues to be assessed with respect to courses required to drive the curriculum, faculty available to teach, cost effectiveness, and desired student outcomes.

Early exit counseling is being provided for students who do not demonstrate academic potential; students demonstrating the capacity for transfer into receiving colleges earlier than anticipated are being offered accelerated transfer options.

Major Strategic Objectives/Issues

The proper mission of a developmental educational unit within the context of a research institution is a major issue, particularly with respect to admissions criteria, size of college enrollment, nature of the curriculum, student outcomes, and cost effectiveness of the program. It is important that benchmarks be set for retention and graduation rates, so that programmatic outcomes can be adjusted to expectations.

Budget Strategy

There is not much budget flexibility. The College's contribution to the University's reallocation plan, coupled with further cuts to the college's annual allocation, resulted in a loss of approximately \$900,000 over a five-year period. The College is revisiting the faculty workload issue to respond to instructional capacity issues. Curriculum flexibility has decreased as a result of the diminution of unassigned instruction resources, which previously allowed the college to hire graduate teaching assistants. Further erosion of civil service and academic professional staff will make it increasingly difficult to deliver quality instruction. Inasmuch as 90 percent of the college's resources are tied up in salaries, there is very little to reallocate in support of innovation and change.

Issues Identified in 1994-95 Strategic Planning Process

The following three strategic issues are central to the General College's future:

- The resource base may continue to decline even the number of students served remains constant. This may result in faculty size reductions, an increase in the average class size, and a decline in the quality and effectiveness of program delivery.
- The demand for the services provided by the General College will continue to increase because of its location in a major metropolitan area.
- The College will provide outreach activities with respect to underprepared students and developmental education. The College is exploring the possibility of expanding its Commanding English program into the metropolitan urban high schools, as well as engaging in collaborative research with Minneapolis Community College on selective admissions and student retention.

The basic assumptions involve the limits on available resources, also raises again the role of the various post secondary institutions in the metropolitan Twin Cities.

Collegiate Response to Issues Identified in 1986

Students admitted to the General College are often those disadvantaged by racism, ethnocentrism, classism, and disability biases. The ethnic makeup of the freshmen admitted fall 1995 was 66.5 percent non-students of color; 11.9 percent African American; 2.6 percent American Indian; 4.1 percent Chicano/Latino; and 14.9 percent Asian/Pacific. The majority of students come from rural, urban, and suburban communities in Minnesota. The fall quarter target for new admission into General College is 750 students.

Restructuring of curriculum. The General College curriculum emphasizes communication and mathematical skills integrated with liberal education courses. The focus is on preparing students for successful academic performance in a variety of baccalaureate programs by integrating education and career goals in a multidisciplinary and multicultural setting.

Advising and student outcomes. The College's Student and Instructional Support Services unit has been restructured with a change in focus from personal counseling and registration to education assessment and academic program planning; developmental intrusive advising interventions; career exploration; and instructional support.

Using five years of freshmen cohort data, 35 percent of General College admits transfer to degree programs within the University; if statewide four-year programs are included, 40 percent transfer; and if all post-secondary options are considered, 60 percent are choosing to transfer to some type of post-secondary institution.

For General College students who transferred to the College of Liberal Arts (CLA) in the fall of 1987 or 1988, 46 percent have graduated in five years. This is comparable to the five-year graduation rate of student who enter CLA as freshmen and of students who transfer to CLA from institutions outside of the University.

General College within the context of University 2000. The proper mission of a developmental educational unit within the context of a research institution is a major issue, particularly with respect to admissions criteria, size of college enrollment, nature of the curriculum, student outcomes, and cost effectiveness of the program. It is important that benchmarks be set for retention and graduation rates, so that programmatic outcomes can be adjusted to expectations. The mission is accomplished through the efforts of faculty involved in teaching, research, and service that support traditional disciplinary focus as well as developmental education theory and practice.

Institute of Technology⁸

Mission/Vision

The Institute of Technology (IT), the University's second largest college, is unique among the country's major research universities in that it includes engineering, mathematics, and the physical and computational sciences in a single unit. This is a combination that will continue to be advantageous, as the boundaries between pure science and engineering continue to disappear. IT is a small college compared with peer institutions, many of which have colleges of engineering that are larger in resources and faculty than the whole of IT. The 11 departments that make up IT include five engineering departments, four science departments, mathematics, and computer science. In addition there are 19 centers, including 2 NSF engineering research centers, one NSF science and technology center, the NSF-funded Institute for Mathematics and Its Applications, and the Army High Performance Computing Research Center.

The mission of the Institute of Technology is to provide programs of instruction, research and service/outreach that are appropriate to a research university and that are responsive to the needs of the state, its citizens and the nation. In fulfilling its teaching mission, IT's goals are: (a) to provide a rigorous and stimulating education for its undergraduate and

⁸ <http://www.itdean.umn.edu/>

graduate majors in mathematics, physical science and engineering; (b) to provide programs of instruction in engineering that meet nationally accepted standards for practice of the profession of engineering; and (c) to provide a rigorous and stimulating education for majors in other colleges of the University for whom the Institute provides instruction in mathematics and physical science.

The Institute's basic and applied research programs sustain its educational programs, enrich modern culture, improve professional practice, and create the knowledge and know-how that are essential to our increasingly technological society and the maintenance of our desired standard of living. The Institute's service and outreach objectives are: (a) to make appropriate contributions in the application of new knowledge to the problems of our society; (b) to provide expertise to the state's industry; (c) to enhance education in science, mathematics and technology in grades K-12; and (d) to develop, where appropriate, collaborative programs with other educational institutions in the state.

Changes/Trends

Over the past ten years, IT has worked to restore a proper balance among its undergraduate programs and its graduate, research, service/outreach programs. This has involved some reduction in undergraduate enrollment. From a high of 6,280 in 1982 the undergraduate enrollment has fallen to 4,500, slightly below the long-term steady-state goals of 4,785. Graduate enrollment has been stabilized over the last three years at the steady-state goal of 2,000. The College's attention is now focused on sustaining the balance and making selective investments in activities requiring increased support. These activities include undergraduate education and increasing opportunities for post-baccalaureate study for working professionals. The Institute has put in place an advising/mentoring program for first-year students that has resulted in increased retention and academic performance. Institute faculty have been involved in recent campus-wide initiatives, such as the creation of Residential College.

Major Strategic Objectives/Issues

- IT must increase funds for instructional equipment, support staff, and supplies. Expected resources imply that the number of faculty in IT will be essentially constant. As a consequence, the student-to-faculty ratio in IT will remain high compared with many of our peer institutions.
- High quality undergraduate education will require a reallocation of resources among programs, based on enrollment targets for each program.
- IT must increase the number of master's degrees granted. Most of these will be course work only degrees for working scientists and engineers.
- Securing competitive research grants from federal agencies will require an institutional matching commitment and funds for the initiation of research programs of new faculty.
- IT must strengthen and expand outreach programs directed to the physical and environmental infrastructure of the state, to non-credit post-baccalaureate education (including distance learning), and to programs in science, mathematics, and technology directed to K-12 education, to technology transfer of research results, and to joint and cooperative research activities with outside companies.

Budget Strategy

- IT eliminated seven faculty and seven staff positions in the FY 1994 retrenchment; it cannot cut more faculty lines without a significant decrease in the quality of its programs. IT has reallocated faculty positions from areas of low need and priority; it is anticipated that chemistry and mechanical engineering programs will be strengthened by reducing faculty in other areas in IT.
- IT will vigorously pursue external fund-raising for undergraduate scholarships, for set-up funding for new faculty members, and for capital improvements.
- Funds for the purchase and maintenance of instructional equipment must be increased. The 1989 accreditation team recommended a level of \$3.0 million per year; in FY 1994 the level was \$1.2 million.
- The increase of the budget for computer labs in order to support both instructional and research programs will be the highest priority in FY 1995 and 1996 for use of the \$530,000 in reallocation funds that will come to IT.
- IT will continue to reallocate faculty and staff effort and other resources to increase the level of its current undergraduate advising programs.
- IT must increase the level of recurring investments in support staff, particularly skilled technical personnel.

Issues Identified in 1994-95 Strategic Planning Process

The following two core strategic issues were identified in the IT's strategic planning document and in the resulting discussions coordinated by the Office of Planning and Analysis:

- Federal research funding is shifting to areas that often require collaborative teams and partnerships with industry rather than individual efforts. This new research paradigm also tends to encourage applications of basic research. The specific strategic issues in this area include: incentives for faculty involvement, the measurement of productivity, and appropriate credit to departments for the efforts of their faculty. There are also questions regarding the proper location and management of research centers. The expectations of shifts in federal and other research funding support are especially critical for IT's future particularly the relationships between basic and applied sciences.
- The College identified the expectations of a modest increase in enrollments, a slight reduction in faculty size, and the need for growth in practice-oriented and professional masters-degree programs. A related significant strategic issue is the expectation of enrollment increases, faculty size reductions, and the need for growth in practice-oriented and professional masters programs. Implications for a phased reduction in the production of Ph.D.'s must be considered.

Issues raised by IT have been incorporated into the University's institutional plan, especially equipment needs, enrollment management issues, and mission differentiation issues.

The following more specific issues were also identified as affecting IT's future:

(a) faculty research support - the support of new faculty for initiating research program, ongoing support in form of cost sharing on Federal contracts and grants, and general technical support for instruction and research will continue to track inflation and market demand; (b) diversity with respect to its undergraduate and graduate students and faculty and staff; (c) the development of alternative educational delivery systems such as interactive televideo instruction, coursework only masters degrees, and the viability of programs offered at the Rochester Center; (d) the funding for instructional equipment and computing which is well below the average of comparable institutions; and (e) improved instructional effectiveness, including innovations in the curriculum and instructional methods.

Collegiate Response to Issues Identified in 1986

The 1986 report commented on the problems encountered by the Institute of Technology in the 1970s as a result of enrollment pressures, compounded by budgetary constraints. It noted that in 1978 the Institute established controls on enrollments. In 1985, at the time of the last visit, there were 5,600 undergraduate and 1,700 graduate students in IT. Planning at that time anticipated an increase in graduate student numbers of about 30 percent in ten years and a decrease in undergraduate student numbers of 5 percent. The actual changes over the ten years are a 7 percent increase in numbers of graduate students (although the number of degrees granted is up 25 percent) and a 24 percent decrease in undergraduates.

Controlling enrollment and matching student numbers to faculty size and instructional facilities is a continuing concern of the Institute of Technology. The large class sizes and faculty-to-student ratios in the engineering programs in the early to mid 1980s led to further efforts to control enrollment. This has been done in three ways: by adjusting admission standards; by placing conditions on advancement to upper division; and by controlling the numbers of transfer students admitted. The freshman admission target for the past two years was 700. This is also the target for next year. The target for the total number of undergraduates is 4,500.

Starting for freshmen entering in 1982, minimum GPAs were required for students to advance to upper division (junior year). The minimum varies from major to major, and is adjusted with time in response to student demand. Currently, the highest threshold is 2.7, and for most majors the threshold is 2.0, the minimum otherwise needed to remain in good academic standing in the college. The threshold that applies to an individual student is that in effect at the time the student is admitted, so that students know what academic performance is expected of them.

Transfer students applying for admission to the upper division are held to high standards and admitted after review with the major department, and depending on space available. The minimum GPA for transfer from colleges outside the university is currently 2.5, and is 2.8 for high-demand majors.

As noted in the last report, an honors program in IT was instituted in 1985. This program thrives and continues to enroll outstanding students. One strength of the honors program has been the lower division advising and class structuring - central advising, keeping student together as a team, and arranging for them to take the same courses at the same time. This approach was adopted in 1991 for all students entering IT. The students are assigned in their freshman year to teams of 80-100 based on their field of interest or intended major, and registered with team members in the same sections of the introductory classes of basic sciences and mathematics. Currently, each team has a faculty advisor, a graduate student advisor, and a peer advisor.

College of Liberal Arts⁹

Mission/Vision

The College of Liberal Arts is committed to serving the people of Minnesota by educating future citizens, training future scholars, and serving as a public resource to enrich the quality of life of the state's residents.

CLA faculty includes leading scholars in a wide range of disciplinary and interdisciplinary studies devoted to both innovative scholarship and undergraduate education. These faculty members form the core of a research, land-grant university and their responsibilities include:

- Providing an undergraduate education that prepares future generations of knowledgeable, socially engaged, ethically responsible citizens for leadership positions and demanding careers in a rapidly changing world.
- Providing the highest quality graduate training for the next generation of scholars, scientists, public servants and business and professional leaders.
- Developing significant new knowledge and artistic expression that enhances our lives individually and in our communities.

The arts and sciences are the foundation of undergraduate education, so the quality of education at the University of Minnesota depends in large part on the strength of CLA.

Changes/Trends

As a result of the University's enrollment management initiative starting in 1987, the academic profile of admitted students has increased steadily, and the College's services to students have continually improved, and student academic performance has excelled. Access to advising and required courses, reduced class size, increased class discussions and critical writing assignments have all improved the student experience. These improvements have contributed to a 20 percent increase in graduation rates for new students in CLA, outpacing the improvements in other Twin Cities units.

Unfortunately, enrollment decisions linked to tuition revenue and repeated retrenchments are beginning to deteriorate this progress. Strategic recruiting and a manageable ratio of students and resources are the key to maintaining this success and reaching the U2000 graduation goal. The following figures indicate the disparity in CLA between resources and outputs on the Twin Cities campus:

Percent of O & M Funds	20%
Percent of Undergraduate Instruction	50%
Percent of Undergraduate Degrees	45%
Percent of New Freshman	55%
Percent of Total Instruction	35%
Percent of Total Degrees	35%

⁹ <http://cla-net.cla.umn.edu/clahome.html>

Major Strategic Objectives/Issues

Responsibilities and resources within the University are not always well matched. The ability of the University's reallocation plan to redress that imbalance has been significantly reduced by budgetary reduction equal or greater than the amount reallocated. The college continues to lag behind comparable liberal arts units at Big 10 institutions in terms of faculty and resources per FYE student. Had the college not experienced almost \$3 million in retrenchments in recent years, reallocation funds would have permitted the college to close the resource gap. State demographics suggest the possibility of future increased undergraduate enrollments. Without the infusion of additional resources over and above the scheduled reallocation, the disparity in resources, and educational outcomes, between CLA and comparable liberal arts colleges in the region will inevitable widen.

With a large proportion of the College's resources (over 60%) committed to tenured faculty, the ability to make short term permanent reductions without long-term programmatic harm or painful dislocations to units and individuals remains extremely limited. When the added constraints of not reducing course access or adversely impacting tuition revenue are considered, the choices are even fewer.

How to maintain the quality needed to attain the objectives envisioned in U2000 and attract future students given the continued budget reductions remain the fundamental challenge for CLA.

Budget Strategy

Primary objectives for the College continue to be linking resource decisions to strategic objectives and actively managing all available resources to achieve desired outcomes. In addition to identifying reductions scheduled for the next fiscal year the college must complete the financial restructuring begun in 1993-94. As part of that restructuring funds have been reallocated from operational to investment expenditures necessary to ensure the long-term health and vitality of the College. The coming year will be critical in determining whether the reallocation investment plan can be continued or whether the college will begin to lose ground on the gains made in the last several years.

The preferred strategy for implementing reductions which will not indiscriminately harm the college's strongest programs are targeted programmatic reductions. The primary drawbacks to this approach will be that savings from programmatic reductions would not be realized soon enough to meet the 1994-95 budget reduction targets and the likelihood is high that quality will have to be sacrificed in some instances. Sacrificing faculty lines can no longer be a viable option if CLA is to remain competitive with other comparable land-grant institutions.

Issues Identified in 1994-95 Strategic Planning Process

The following seven issues and concerns were identified in the most recent strategic planning process for the College of Liberal Arts:

- The CLA faculty is too small to carry out the three dimensions of its mission.

An appropriate size of faculty and enrollments -- at both undergraduate and graduate level -- needs to be settled.

- Funding base for undergraduate education is too low.

The institutional measures related to undergraduate education and enrollment opportunities indicate that additional resources are needed by the College.

- The scholarly/creative activities of CLA faculty require a complicated and multifaceted system of research support, a significant proportion of which must come from within the University.

Questions have arisen about how aggressive and competitive some units have been in securing external research support, especially in the Humanities. The new political reality, however, raises concerns that need to be addressed at multiple levels within the institution.

- The CLA has a unique position to take the lead in interdisciplinary teaching, research and outreach activities because of its multidisciplinary nature.

We need to ensure that barriers to interdisciplinary activity are removed both within the College and with other colleges. With respect to resources, the grant-in-aid program of the Graduate School will need continued support.

- The CLA is facing a crisis in maintaining the quality of its graduate and professional education programs.

Financial support needs to be provided to sustain ranking departments.

- Technological enhancements have either already created or are about to create profound changes in scholarship and teaching.

The failure to address this issue along with distance education delivery may put the College and University at risk, as more and more lower division-level courses will be taught elsewhere and transferred to higher cost programs elsewhere.

- International perspectives are critical.

Ultimately, language education delivery needs to be reconsidered both in terms of level of instruction (K-12 versus University), mode of delivery, scope of programs, organization and staffing, along with the future of area studies.

Collegiate Response to Issues Identified in 1986

The report's discussion of CLA's responsibilities under *A Commitment to Focus* was reasonably accurate at the time, but is no longer an accurate description of CLA. The College has achieved the level of enrollment called for in *A Commitment to Focus*, through reduced admissions over an extended period of time. CLA only reached the agreed upon level in 1994, partially because it continued to serve those students who were refused admission to other colleges whose enrollment targets were met quite early. Undergraduate enrollment at that time was 16,000, but was targeted to reduce to 12,000 students, is now at about 13,200 students. Enrollments decreased each year from 1986 to 1993. An increase in admissions in fall 1994 and fall 1995 to meet tuition revenue targets have had the effect of reversing this trend. Enrollment has gone up this year, and will probably continue to do so for two reasons. First, the demographics of entering students is weighted toward freshmen, most of whom enter the University through CLA. The second reason has to do with the importance of tuition revenue and the impending advent of Responsibility Center Management. The entire University depends on CLA's tuition, and it is easy to attract good students into the College. It has the potential of being a real investment for the institution as a whole, and there continues to be pressure to increase enrollments in the future.

CLA continues to fulfill a role as a four-year state institution for the Twin cities area. It is not exclusive in this role, since Metropolitan State University is now a four-year institution. The fact that General College has changed from a four-year to a two-year program since the report is also relevant. The continuing perception of the CLA/ University of Minnesota as the four-year institution for the Twin Cities has certain negative affects, particularly upon efforts at increased selectivity in admissions.

CLA no longer has a separate admissions office. As of spring 1995, the CLA Admissions and Prospective Student Office was closed and its personnel and function incorporated into the central Admissions Office. CLA continues to participate in the control of its admissions by representation on two University-wide bodies, the Admissions Advisory committee and the Enrollment Management Committee.

The 1986 report cites a decrease in faculty by 52 FTE in the preceding seven years. While the faculty grew slightly during 1989-91, it has since shrunk and is now a further 12 FTE smaller than it was in 1986 (at 474 FTE).

CLA reviewed its rankings of departments in 1991, using essentially the same categorizations as those cited in the 1986 report. These classifications have been taken into account in the allocation of college resources.

CLA eliminated a number of majors and closed the departments of Linguistics and of Humanities.

The proposal to terminate the Library School was executed, and the School of Social Work was moved to the College of Home Economics (now Human Ecology). The proposal to eliminate the Department of South and South West Asian Studies was rejected by the CLA Assembly. The Department was reconstituted as South Asian and Middle Eastern Languages and Culture. During the 1994-95 academic year, the baccalaureate major in this department was terminated, and a single major in South Asian and Middle Eastern Area Studies (SAMELC), through the Institute for International Studies will take its place. The remaining department is reduced in scale, has one tenured faculty member, and exists with the administrative framework of the Institute of Linguistics and Asian and Slavic Languages and Literatures.

The approach to foreign language instruction also has changed. Rather than trying to force students into Less Commonly Taught Languages (LCTLs) the College has sought to increase high school preparation in languages and to provide access where there is demand. The perception that Spanish is a rapidly growing second language in the U.S., and the impact of social changes have contributed to an increased, and hard to resist, student demand (nationally, not just in Minnesota). The College requires two years of second language for a B.A. degree. It has instituted placement testing at entry to determine at what level students enter the language course sequence. Students are also required to pass a four-part Graduation Proficiency Test for graduation. The College has reverted to a policy of allowing credit for first year as well as second year proficiency due to problems with the earlier policy. Access to introductory language instruction is now assured by a provision by which 70 percent of the tuition from additionally required sections is returned to the college to provide instruction.

The School of Journalism has received provisional accreditation, and the faculty has struggled to evolve a plan for its future directions as a result of the most recent external review. This segment of the 1986 report is best answered by referring to the most recent strategic plan submitted by the School of Journalism as well as recent accreditation and external review reports. Much has been accomplished regarding equipment and curriculum; the School has changed its curriculum and the number of areas of emphasis that it can support. Writing laboratories have been closed and the emphasis in the curriculum has been shifted.

University College¹⁰

These comments refer specifically to the unit that existed when the last site visit was conducted. The degree programs are being incorporated into the new University College, which is the transformation of Continuing Education and Extension.

Mission/Vision

The mission of University College (UC) is to offer programs in alternative, individualized, and cross-collegiate undergraduate education. In order to achieve this mission, the college is currently organized into two baccalaureate-level programs: the Inter-College Program (ICP), for students to pursue cross-collegiate degree programs, and the Program for Individualized Learning (PIL), for students to create specialized degree programs and combine traditional University study with other forms of educational experience. Through these programs, University College is able to provide an approach to undergraduate education that emphasizes the needs and goals of individual students.

The academic advising staff of UC collaborates with faculty from throughout the institution to tailor degree programs for individual students. The close partnership of faculty member, academic adviser, and student offers a unique experience for the student who seeks to develop a personalized baccalaureate. Until the recent reorganization, the College reported directly to the Vice President for Arts, Sciences, and Engineering, who also served as the dean of the college.

Changes/Trends

For the first time in their history, the two programs of University College share a common space. This combining of programmatic spaces was initiated as a way to increase efficiency and effectiveness of services to prospective students. It was also designed as a way of promoting increased cooperation and effective use of resources between the two programs. The move to shared space has already resulted in improved referral services for prospective students. The move away from the center of campus, however, has resulted in diminished student traffic for both programs. A goal for the next year will be the creation of outreach activities and services for prospective students and new programming for admitted students.

ICP has recently returned to adequate staffing levels following an extended period of high staff turnover and periodic understaffing. A pattern of stable staffing will result in improved service to students in at least two ways: (a) both prospective and admitted students will have more timely access to program advisors; and (b) advising staff will be able to devote renewed attention to programming aimed at both prospective and admitted students.

The Program for Individualized Learning has been reduced by three academic professional staff members during the past three years as a result of reallocation and budget cuts. The remaining program staff has made major changes in educational strategies for their students, relying more on group instruction and less on individual advising. Budget cuts for the next biennium will result in reducing the academic staff during the summer. Currently efforts are underway to develop strategies to sustain adequate, though limited, academic advising services during the summer despite this reduction.

¹⁰ <http://www.cee.umn.edu/>

Major Strategic Objectives/Issues

- To operate the programs with increased efficiency and effectiveness. To that end, both programs are reviewing staffing patterns and responsibilities, exploring areas for collaboration, and reviewing policies and procedures.
- To provide opportunities for students and faculty to create curricular and programmatic innovations. In pursuit of this objective, ICP and PIL are working with Continuing Education and Extension and faculty from several departments and colleges to explore the possible development of partially designed cross-college areas of study.
- To refine the definition of PIL's target adult student population and increase the effectiveness and efficiency of students' academic progress through to graduation. PIL has analyzed past student patterns and has proposed a variety of programmatic modifications to be implemented during the next two years.
- To complete an overall assessment of the ICP pre-admissions advising process and, based on that assessment, develop new advising materials and strategies designed to improve students' progress through the pre-admissions degree planning process.

Budget Strategy

- University College, primarily PIL, has been cut 23 percent over the past three years, resulting in the elimination of three professional positions and one half-time clerical position.
- Additional cuts for 1993-95 for University College will also come from PIL, resulting in reducing contracts of two professionals from 12 months to 9 months and in reducing the level of appointment for the program's faculty director.
- Both programs will work cooperatively to develop strategies for increasing fiscal efficiency and effectiveness.

Collegiate Response to Issues Identified in 1986

The mission of University College (UC) is to offer programs in alternative, individualized, and cross-collegiate undergraduate education. The College is currently organized into two individualized baccalaureate-level programs: the Inter-College Program (established in 1930), for students to design and complete credit-based cross-collegiate degree programs, and the Program for Individualized Learning (established in 1972 as the University Without Walls), for students to design and complete specialized degree programs that combine University credit-based coursework with a variety of other educational resources and learning strategies. Through these programs, UC provides an approach to undergraduate education that emphasizes the needs, goals, and responsibilities of individual students. Simultaneously, the College seeks to meet the needs of other departments and colleges for curricular flexibility and innovation.

Though University College has no faculty of its own, the involvement of faculty from other colleges at the University remains critical. The College's governance is managed by a faculty assembly representing different colleges. In addition, all UC students must have their educational programs approved at different stages by a variety of faculty and academic professionals.

Since the 1986 study, the Inter-College Program (ICP) has continued to serve the institution, faculty, and students by offering unique baccalaureate options. ICP serves as a bellwether of emerging student interests: working with committees of interdisciplinary faculty in 1994-95, ICP developed new program "majors" in Health and Wellness and Deaf Education and Culture, responding to strong student demand.

ICP continues to provide colleges and departments the opportunity to pilot small scale curricular innovation. Several new or revised majors in line colleges have recently been developed incorporating features of ICP students' programs in those departments: some examples are the Kinesiology major, the Foundations of Education major, and the revised Family Social Science major.

Maintaining the program size of 1986, ICP is currently responding to student interest in the combining of applied areas of study with theoretical studies to meet academic, career, or personal goals (e.g., Human Resource Development with Psychology, Youth Studies with Sociology). The rate of students continuing to graduate and professional studies has remained the same.

In the years since the 1986 self study, several changes have been implemented in what was the University Without Walls; these changes grew primarily from issues raised in discussions following the publication of *A Commitment to Focus*. First, the name was changed to the Program for Individualized Learning (PIL). Second, the mission of the program was refined to focus more clearly on students who needed access to the special resources of the University to build distinct degree programs; for example, students wanting a general business orientation were referred elsewhere, while students seeking unique programs (e.g., International Investment Analysis in Asia, were admitted). Third, in response to staff cuts resulting from budget retrenchment, PIL expanded its group teaching and limited some individual tutoring.

During the past 10 years, PIL has faced conflicting directions concerning enrollment. First, in response to *A Commitment to Focus*, the enrollment of students in the program was to be reduced by 20 percent. This policy was being implemented until 1989-90 when the new dean of the college, who was also Vice President for Arts, Sciences, and Engineering, directed the program to increase the number of students it served while reducing the size of the staff. Currently, the program enrolls 155 students and the rate of students continuing on to graduate and professional schools remains high.

Professional Studies

Professional Studies consists of the following units: the College of Agricultural, Food, and Environmental Sciences; the College of Architecture and Landscape Architecture; the College of Education and Human Development; Minnesota Extension Service; the College of Human Ecology; the Humphrey Institute of Public Affairs; the Law School, the Carlson School of Management; and the College of Natural Resource.

College of Agricultural, Food, and Environmental Sciences¹¹

¹¹ <http://beauty.agoff.umn.edu/~coafes/>

Mission/Vision

The mission of the College of Agricultural, Food, and Environmental Sciences is to provide responsible leadership in the generation and application of research-based knowledge to the use of our natural and human resources for the production, distribution, and consumption of food, fiber and renewable energy, and for the betterment of our natural and human environments--all with technologies that address needs and concerns of a diverse constituency.

The College will continue to be a respected national and international leader in the development and dissemination of knowledge in current and emerging issues concerning the production and use of biological materials and their interactions with the natural and human environments. We will serve as the authoritative source of such information for all citizens, providing leadership in education, research, and outreach. We will continue to develop and maintain high quality programs that promote diversity and serve to maintain and enhance the economy and quality of life of Minnesota. We will continue to be the principal source of B.S. degrees and the only source of M.S. and Ph.D. degrees in agriculture and related fields in Minnesota.

Organization

The College consists of ten budgeted departments and six branch experiment stations containing 229 faculty (a decrease of 15 percent in two years), 866 undergraduates and 423 graduate students. The College's tripartite mission is supported on a recurring basis by University O & M funds, state special and federal formula funds, as well as grants and gifts. State and federal funds are provided by matching fund cooperative agreements in support of research and extension in agriculture. The college supports extensive off-campus research facilities, including experiment stations and cooperative sites around the state. The faculty have an enviable record of program development and interactions in many developing countries.

The College is among the top ten programs of agriculture in the United States, and includes several departmental programs in the top five nationally. The College research and extension programs make enormous contributions to the success of the food and agricultural industry in the state. The College offers high quality, cost effective instruction and advising by faculty, and its teaching innovations are widely renowned within and outside the University.

Major Strategic Objectives/Issues

Over the past few years the College has accomplished the following objectives:

- Increased women (30%) and minority (250%) faculty since 1984-85.
- Put in place, in cooperation with industry, a minority undergraduate scholarship program supporting 50 students majoring in several colleges.
- Established and funded, in cooperation with external groups, Minnesota Institute for Sustainable Agriculture and a statewide Dairy Initiative.
- Reallocated more than 6 percent of resources to high priority areas.
- Implemented plans to increase computer and telecommunications facilities.

- Increased undergraduate enrollment from 644 (1989-90) to 866 (1993-94).
- Established seven regional advisory councils.
- Increased external revenues from \$7,606,688 in 1989 to \$11,668,133 in 1993.

The College's University 2000 goals are as follows:

- Provide an environment in which people have clearly defined responsibilities and in which their contributions are adequately recognized and compensated.
- Provide administrative/fiscal management that tightly links planning and priorities to resource allocations.
- Redirect programs to reflect more holistic interdisciplinary approaches to agricultural teaching and research that recognizes consumer interests, sustainability issues and clientele needs.
- Adopt the latest appropriate communication, computer and scientific technology in teaching, research and outreach programs.
- Assure that teaching, research and outreach programs are of highest quality and relevance.
- Develop partnerships with neighboring universities, state and private collaborators to jointly deliver teaching, research and outreach programs.
- Diversify students, faculty and staff in terms of gender, ethnicity, nationality and age.
- Improve image of a high quality, accessible, innovative and responsible College prepared to meet the challenges of the 21st Century.

The above goals will be integrated into the six strategic areas of the University with respect to research, graduate and professional programs, undergraduate education, outreach and access, diversity, and user friendliness.

Budget Strategy

The College's effectiveness was hampered by continued selective reductions of O & M funds above University averages, in spite of high quality and cost effectiveness of its academic programs.

- Continue 10 percent reallocation plan.
- Devise plan to correct severe faculty salary problems.
- Allocate resources based on the criteria of quality, demand, centrality, efficiency and effectiveness, and comparative advantage.
- Reduce staff and teaching assistants in short run and additional faculty positions in long run to accommodate O & M reductions.

- Increase student credit hours via increased enrollment and provision of required liberal education courses.
- Increase clientele support for programs and increase grant funds.
- Strive for increased efficiencies in operational support of units.
- Request from legislature restoration of critical funds and programs lost over past five years.

Issues Identified in 1994-95 Strategic Planning Process

The College of Agricultural, Food, and Environmental Sciences identified the following strategic issues in its most recent planning document:

- **Urbanization.** There are significant shifts of people away from farms and rural communities. These changes have influence on the College's programs and political support. What assumption must be made with respect to focusing programs to production needs versus consumers?
- **Shifting public priorities.** An increasing awareness and concern about food and environmental quality issues (e.g., erosion, water quality, and waste management). At the same time, the need and potential benefits of traditional programs continue to exist. Is a more assertive statement required regarding the College's focus on environmental issues?
- **Internationalization.** There is an increasing demand for more global issue on the part of undergraduate students and an increasing student demand from overseas.
- **Funding.** A decline in funding threatens the quality of the College's programs. The challenge is to find alternative funds (e.g., legislative support for research and extension programs, private funds).
- **Location.** The location of the College offers great opportunities for graduates and the College since the metro area is an important agribusiness center, and Minnesota is one of the largest and most diverse agricultural producers in the nation.
- **University administration.** A limited understanding of the College's structure and missions is evidenced by repeated decisions to reduce funding, decisions that appear contrary to cost and quality assessments.
- **Tradition.** Several organizational or academic policy issues limit the College's programming flexibility and goal orientation. Such issues include tenure, academic calendar system, ownership, and perceptions of academic freedom.
- **Structural complexity.** The challenge of maintaining administrative structures in support of strong disciplinary research and graduate education programs is intensifying.
- **Infrastructure and technology.** The failure to keep pace with availability of facilities for telecommunications and computer classrooms severely hampers the College's ability to stay abreast of the competition and to deliver programs of the highest quality. The College's programs are also hindered by old and ineffective greenhouse and animal facilities.

- Liberal education guidelines. There are potential benefits offering such courses but the College will need additional resources.
- Border universities. An increasing competition with other border universities (e.g., SD State) affects the College's ability to recruit students from greater Minnesota. Competition is mainly a result of reciprocal agreement. At the same time, there are opportunities for greater cooperation with several other universities.

Collegiate Response to Issues Identified in 1986

The College has a new name: the College of Agricultural, Food, and Environmental Sciences. The new name represents the continuing dynamic change that is occurring in our teaching, research and outreach programs. The College remains committed to serving our traditional clientele, while expanding our programs into other areas. The College continues to be healthy and effective and to enjoy a sound reputation, as the following examples suggest.

Since 1986, the College has invested significant resources to sustain quality and enrollment in its undergraduate academic programs. With the assistance of a generous grant from the W.K. Kellogg Foundation, a major curriculum revision project (Project Sunrise) was initiated in October 1986. By September 1989, a new interdisciplinary, interdepartmental undergraduate academic program was inaugurated. An "Agcitement" publicity campaign introduced the new curriculum and an aggressive recruiting scheme carried the campaign to high schools, community colleges, and other public and private post-secondary institutions across the state. The consequences of renewed quality and energetic publicity have been noted in enrollment. Further, enrollment in our programs has been sustained in spite of contradictory demographic predictions and more demanding University of Minnesota entrance standards. Enrollment in the College's course by non-college students has increased due to active participation by College departments in the University's common core of liberal education courses. To be sure, problems of agricultural finance continue to plague farmers in the state and fewer than 10 percent of the College's graduates enter or returned to farming after graduation. However, the College placement office cannot keep up with the demand of employers who visit campus seeking students for internships and employment.

The College of Agricultural, Food, and Environmental Sciences is a leader re-defining the University's Land Grant Mission. The College recently received a grant from the W.K. Kellogg Foundation's Food Systems Education Initiative to begin a project called "Visions for Change." Visions for Change is a joint initiative of the University of Minnesota, North Dakota State University and South Dakota State University. Visions for Change is an opportunity for citizens of Minnesota, North Dakota and South Dakota to create a shared vision for education professionals to ensure the sustainability and quality of the world's food system. This project will help ensure that our land grant educational system prepare food systems professionals to meet tomorrow's needs.

The College of Agricultural, Food, and Environmental Sciences consistently ranks among the top five agricultural science programs nationally, with all departments ranking among the top ten; several in the top five. The faculty includes leaders in professional societies, editors of scientific journals, members of the National Academy of Science, and Regents' Professors. The College is among the national leaders in receiving competitive research grants and contracts.

The College's outreach programs are among the strongest in the University. The College provides access to the state's citizens through off campus sites (Branch Stations and the Minnesota Landscape Arboretum). The College provides a valuable linkage between the Minnesota Extension Service field staff and University faculty. Our teaching, outreach, and research are integrated across departments and other colleges, with most faculty having joint appointments in at least two areas. Courses "for-credit" and "non-credit" are offered at various locations throughout the state, with plans to increase the frequency and variety of offerings. The College also has joint research and outreach programs with adjoining states, with plans to increase this cooperation in the future.

College of Architecture and Landscape Architecture¹²

Mission/Vision

The College of Architecture and Landscape Architecture (CALA) provides Minnesota's only accredited programs in architecture and landscape architecture. While CALA maintains excellent professional educational programs -- ranking 13th nationally among architecture programs and 7th among landscape architecture programs -- the College also contributes to the University's undergraduate liberal education mission by offering courses that address the role of the built environment in reflecting and shaping human culture. CALA has developed a focused, "small college" identity, while maintaining connections with other U of M areas such as public affairs, engineering, horticulture, interior design, geography, and art history.

CALA became a separate collegiate unit of the in 1989. The College is organized to reflect and support its mission of educating students and professionals, conducting research, and providing service to the University, the state, and the nation. The University of Minnesota has a distinguished history of educating leaders in architecture and landscape architecture. Building on that tradition of excellence, the college has in only five years become one of the "success stories" of the University. CALA has revitalized its curriculum, developed new research capabilities, and focused its mission.

Changes/Trends

Changes and trends are summarized for each of the following: curriculum, external funding, and private funding.

Curriculum. The undergraduate and graduate degree programs in architecture and landscape architecture offered by the U of M are changing. The College has restructured, streamlined, and focused its degree programs and curriculum, and has reduced the number of degrees offered from 9 to 6. Effective fall 1993, the Architecture and Landscape Architecture departments ceased admitting students to *undergraduate professional* degree programs. Both departments are phasing out their bachelors-level first professional degrees and phasing in the offering of new *graduate professional* degrees as the only professional degrees offered. Architecture admitted the last group of Bachelor of Architecture (BArch) degree students in the fall of 1993; the first group of the new professional Master of Architecture (MArch) degree candidates was admitted fall 1994. Landscape Architecture admitted its last Bachelor of Landscape Architecture (BLA) candidates in 1991-92 and began admitting students to the new Master of Landscape Architecture (MLA) professional degree program in 1992-93.

¹² <http://gumby.arch.umn.edu/>

This shift in the professional programs from undergraduate to graduate enhances the College's ability to attract excellent students and to compete for research funding. The college has also received approval to offer the post-professional, research-oriented Master of Science (M.S.) degree and has begun to admit students. (The possibility of other doctoral degrees is under preliminary discussion, and the feasibility of interdisciplinary practitioner-oriented graduate degrees may be studied.)

CALA will continue to serve undergraduates, by offering a B.A. degree with a major in architecture (the B.A. is currently granted through CLA)* and the Bachelor of Environmental Design (B.E.D.) degree for landscape architecture students (the B.E.D. is granted through CALA). These degrees prepare students for entry into graduate programs, or for careers in related fields such as city planning, urban design, development, and historic preservation.

External Funding. CALA has shown dramatic growth in obtaining external funding to support faculty research. In 1984-85, supported research expenditures were \$50,000. In the past five years external support expenditures, as reported by ORTTA, have averaged over \$1 million per year. Many of these applied research projects directly benefit the citizens of Minnesota.

Private Funding. The College has also been successful in raising private funds to support CALA's mission. The total value of CALA endowments is now over \$7 million, and the donor base of alumni and others who contribute to the college has increased each year.

Major Strategic Objectives/Issues

The courses, degree programs, and underlying rationale for the graduate degrees are solid, and the CALA faculty are committed to the transition to graduate professional education. However, within the broader U of M environment, two critical factors will determine whether these programs can achieve their potential to become among the top five in the country: (a) the recurring funding per FYE student is below the level of other U of M accredited professional programs, (b) there is a critical need for more space and better facilities for classrooms, design studios, faculty offices, research activities, computer networking, and computer-aided design.

Across the country, architecture and landscape architecture programs are aggressively adopting computer technology. CALA has shown leadership in computer-aided design courses and research. However, to remain competitive and stay abreast of the rapidly-improving technology, CALA will need to network its design studios, library resources, faculty offices, and computer labs, as well as replace equipment that is becoming outdated.

Budget Strategy

As part of the FY95 planning process, CALA has requested SIP funds for the following purposes: (a) to increase the base; (b) develop the "electronic environment" necessary to support networking and computer-aided design; and (c) study the feasibility of various interdisciplinary practitioner-oriented masters degrees.

* CALA has initiated plans to move the granting of the B.A. degree from CLA to CALA. The purpose of the move is to improve student services -- including recruiting, degree program advising, degree clearance, graduation clearance, and placement -- by centralizing all activities in the college where students take their major coursework.

The College anticipates an increase in the number of FYE students and has requested the corresponding 70 percent of the additional tuition revenue generated by new students be returned to CALA. In addition, CALA has proposed a four-year increase in the CALA graduate student tuition rate.

The College will continue to seek support for research projects, especially sources of support that provide ICR funds. The College administration will continue to increase its base of support from private sources.

The CALA building addition/renovation project would create the space to strengthen the college's programs, emphasize graduate education and research, and improve service to local professionals and the people of Minnesota. This project received over \$700,000 in funding in 1987. Design development documents are complete, and the project is ready to go into construction documents, bidding/negotiation, and contract administration.

The College has identified four broad strategic issues based on its environmental scan:

- Enhancement of the knowledge base and skills of the professional core. There is an increasing demand for CALA's design education. However, there is also an increasing demand and interest for professional skills in computer assisted-design and more in-depth, specialized knowledge in core content areas such as building materials/construction, construction documents, project management, and professional practice.
- Strengthening the liberal education base.
- A strong demand for increasing applied research and outreach.
- Increased demand for post-professional masters and continuing education programs in certain areas.

In addition to the above strategic issues, additional clarification is needed relative to the College's broader role in undergraduate education.

College of Education and Human Development¹³

Mission/Vision

The College of Education and Human Development and Human Development -- with its mission to generate knowledge about teaching, learning, and human development and to apply that knowledge to improve education and development for all individuals -- is one of the premier colleges of its kind in the nation. The College has a strong reputation for research, attracting scholars from around the country as well as from abroad. It offers superb academic programs that prepare future scientists, practitioners, policy makers, and other leaders in education and human development. And it has a strong service commitment to the community, both within and outside the University. The College is also a leader within the University in developing alternative strategies for the delivery of professional education and has an impressive track record of collaboration with school districts, community service agencies, state universities, technical and community colleges, higher education institutions in other states, business and industry, and human services programs.

¹³ <http://www.coled.umn.edu/>

Change/Trends

As the 21st Century approaches, the College is restructuring its programs to better meet the changing needs of society. Educational issues and social problems today increasingly extend beyond the confines of single disciplines, departments, or even colleges. To address these important issues, the College will emphasize interdisciplinary and collaborative research programs or centers that cut across departmental and college boundaries. It will operate programs (in research, teaching, and service) in partnership with other University programs and with other institutions of higher education in Minnesota and other states. The College's strength in core disciplinary fields, and an increasing emphasis on interdisciplinary programs (in teaching, research, and dissemination) that address significant issues and problems, and that build upon the College's—and the University's—unique strengths, relationships, and opportunities. The College offers a model post-baccalaureate teacher education programs to ensure that students will have a strong foundation in the arts and sciences before matriculation.

Despite declining federal support for educational research, College faculty have generated a record level of revenues from external grants and contracts in the College's history (\$11.7 million in FY93, up from \$4.1 million in 1980). On the Twin Cities campus, the College ranked fourth in external awards received in FY93 (after the Medical School, the Institute of Technology, and the School of Public Health). Only two other public colleges of education in the country (Ohio State and Wisconsin) generated more revenues from external grants and contracts in FY92 -- and Ohio State did so largely with support for a small number of major grants and contracts in international education and development.

Although the College must expand its capacity to attract students of color and prepare them for leadership positions, its initiatives in this area -- the Common Ground Consortium, the Multicultural Teacher Development Program, and the International and Minority Graduate Students Program -- are clearly exemplary. Within the University, the College is a leader in promoting cultural diversity and it will continue to actively demonstrate its commitment to attracting and retaining a diverse community of students, faculty, and staff. It will promote understanding of and sensitivity to individual differences while playing a broad leadership role in meeting the needs of all citizens in a participatory democracy, incorporating multicultural perspectives into its teaching, research, and service programs.

In the past several years, the College has undergone considerable restructuring of its programs and offerings. Innovative efforts to date include creating a new college-wide Administrative Budget Center, which allows the elimination of middle management and other support positions in all departments/units within the College, and downsizing the Education Student Affairs Office in conjunction with the reduction in teacher education programs but with emphasis on meeting the changing needs of students in the full range of programs offered. Vastly improved and better integrated physical facilities are critical to the college's administrative restructuring now under way, the goal of which is to reduce administrative costs by at least \$700,000 over three years.

Major Strategic Objectives/Issues

The College has reduced faculty positions in the college by at least 20 FTE, one aspect of which was a three-year hiring freeze. Additional budget reductions would place at serious risk our academic programs of high productivity and national distinction; further reductions would also cripple the college's capacity to leverage future cost savings and to

fulfill its leadership and land-grant outreach responsibilities to Minnesota's schools, the legislature, and state and local agencies. The following are the strategic directions the college will follow:

- Promoting Excellence in Research and Scholarship -- Advance and apply knowledge about critical issues in education and human development, create interdisciplinary/collaborative programs, and strengthen the infrastructure to advance the research mission of the College.
- Strengthening Academic Programs that Prepare Leaders in Education and Human Development -- Strengthen and maintain core Ph.D. and M.A. programs while developing and implementing post-baccalaureate initial teacher licensure programs, interdisciplinary approaches to academic programs and continuing professional development opportunities, and course/degree offerings for undergraduate students.
- Extending Outreach and Service -- Strengthen formal links between the College and the communities it serves and provide them with first-rate technical assistance and information.
- Advancing Cultural Diversity -- Foster an environment that values diversity while increasing college resources for recruitment/retention of students and faculty of color.
- Creating a User-Friendly College Environment -- Strengthen and maintain reforms to meet the changing needs of students (including curricula, support services, and access to programs) while creating a stronger sense of community among students, faculty, staff, and alumni in the college.
- Improving the Overall Efficiency and Effectiveness of College Planning and Resource Management -- Increase productivity of college curricula and of non-state funding for core academic programs and research initiatives, reduce administrative costs significantly, build institutional research capacity, and enhance communications to internal and external constituencies.

Budgetary Strategy

The College has responded aggressively to reductions both in state funding and under the University's five-year Academic Priorities Plan. But this constant erosion of resources cannot continue without serious damage to the college and its programs. We will continue to improve the use and reallocation of existing resources to initiate new programs and strengthen existing core programs.

Issues Identified in 1994-95 Strategic Planning Process

The College of Education and Human Development and Human Development identified six broad strategic areas in its strategic planning document, and within each area, specific strategic issues were articulated.

- Promoting Excellence in Research and Scholarship
- Strengthening Academic Programs that Prepare Leaders in Education and Human Development

- Extending Outreach and Service
- Advancing Cultural Diversity
- Creating a User-Friendly College Environment
- Improving the Overall Efficiency and Effectiveness of College Planning and Resource Management

The one strategic issue that was raised but not discussed at length is the significance of the proposed name change for the college. From the standpoint of the University, the College's taking on "human development" has the potential for being more significant than just a name change since, presumably, such a mission adjustment would have implications for other units and other programs in the institution. Those implications and consequences will need to be addressed so that there is full understanding and agreement on what is being implemented.

The College will continue to play a leadership role in the University's K-12 initiative, especially with respect to diversity, as well as a leadership role along with the Admissions Office, in the area of K-12 outcomes education.

Minnesota Extension Services¹⁴

More discussion of the Minnesota Extension Service (MES) is contained in Chapter VIII: Outreach.

Mission/Vision

The mission of MES is to involve people in improving the quality of life and enhancing the economy and the environment through education, applied research and the resources of the University of Minnesota.

Changes/Trends

As an organization whose primary mandate is to link the University with the people of the state, MES is sensitive to changes both in the needs of our clientele and in the internal milieu of the University. At the outset of 1995, MES is positioned for a future shaped by eight predominant environmental trends:

- Greater complexity of problems facing the public
- Availability of multiple sources of education and information
- Multiple agencies and organization focusing on similar problems and issues
- An increasing demand on land-grant universities to be responsive to public needs
- An increasingly diverse population
- A better educated public

¹⁴ <http://www.mes.umn.edu/>

- A growing skepticism about science and technology
- A desperate need for able community leadership
- Technological advances

The Minnesota Extension Service, as a major outreach entity of the University, is engaged primarily in non-formal education at local, community and regional levels. The shape and focus of these programs reflect a broad range and variety of forms. Essential to MES is ongoing strategic planning, environmental scanning, and program analysis on an interactive basis, within the organization and the University, and with local people we serve across the state. MES regularly reviews its educational programs to evaluate their alignment with demand, comparative advantage, and centrality to our mission. Staff are in continuous direct contact with clientele throughout the state, and we regularly monitor both quantitative and qualitative data regarding their educational needs. As a result, MES is able to address emerging issues and adapt our programs to meet public needs on an ongoing, regular basis. This flexibility and fluidity has allowed us to make significant shifts in resources and to establish a reputation for quality and responsiveness to important public issues. It has also at times put MES at odds with other parts of the University which use a more deliberate, orderly and cautious approach to education and public problem-solving.

Major Strategic Objectives/Issues

MES believes that it can and should continue to play a more central role in the University of Minnesota and its outreach. Toward that end, MES has three overarching goals that guide strategic planning:

- To help bring the University's resources to bear on societal problems from a total University perspective.
- To provide two-way access: of the public to the University through our county offices, and access by the colleges to the public through our extension network.
- To strengthen interdisciplinary approaches across the spectrum of research, graduate and undergraduate education, and outreach and across all parts of the University.

The University's strategic planning process creates an important opportunity for MES to expand the scope of education for the public, to strengthen relationships with other University colleges and departments, and to strengthen and initiate links with undergraduate/graduate education and research. MES's 1992 strategic plan, "Re-inventing the Minnesota Extension Service" is well into implementation, and is in concert with and already addressing many of the major themes expressed in the University's current strategic planning guidelines.

The following eight strategic issues for MES include the following:

- Contributing significantly to University of Minnesota outreach
- Identifying desired outcomes of MES efforts and sharpening our ability to report impact and outcomes

- Strengthening the cultural diversity of MES
- Expanding and strengthening partnerships with other colleges of the University of Minnesota
- Enhancing the effectiveness of the cross-organizational, interdisciplinary specialization teams and cluster teams
- Accomplishing a transition in the 4-H club program to allow greater impact for children, youth and families
- Supporting and creating transformational change in the culture of MES
- Significantly increasing distance education capacities

As part of the 1992 MES strategic plan, the entire MES administrative leadership team was restructured and adopted a new set of working assumptions and goals. The work of the MES Administrative Leadership Team, as a whole, is:

- Framing the work of MES -- articulating the context, broadening our perspectives, moving toward common understandings and vision for the future.
- Creating connections and linkages across the multiple parts of the organization and with our external environment to support the work of the organization.
- Holding the organization accountable for achieving significant outcomes.
- Creating change in the culture of the organization.

MES provides outreach education through three primary inter-related organizational structures: 17 county clusters, 10 interdisciplinary specialization teams, and partnerships with 14 University of Minnesota colleges and units.

MES educators in the 87 counties work in 17 clusters across the state in interdisciplinary issue-focused educational teams.

The ten interdisciplinary specialization teams are: Child and Youth Development, Community Resources, Crop Systems, Environment and Natural Resources, Family Development, Financial and Business Management, Horticulture, Leadership/Citizenship Education, Livestock Systems, and Nutrition, Food and Health. These teams include all extension educators across the state and campus faculty and are intended to provide the core long-term base for MES educational programming and staff development.

MES now has formal programmatic and fiscal partnerships with 14 colleges and units: Agricultural, Food and Environmental Sciences; Architecture and Landscape Architecture; Continuing Education and Extension; Center for Urban and Regional Affairs; Education and Human Development; Hubert Humphrey Institute for Public Affairs; Human Ecology; Natural Resources; Nursing; Public Health; Veterinary Medicine and three coordinate campuses (Crookston, Duluth, and Morris).

Budget Strategy

Over the past few years, MES has increased the number of grants and fee-generated income. An estimated 20 percent of the resources is now from grant and fees, and is

expected to increase. Much of the innovative new programming efforts have been supported through these funds. County and federal funds have been generally stable over time, but have not kept up with inflation. In addition, typically over the years, MES has had to cover shortfalls, particularly in federal funds, to cover salary increase, which is an ongoing issue for MES. Through internal reallocations, MES has shifted significant funds to 14 college partners.

To maintain quality, MES needs to maintain a high-quality faculty. One of the highest MES priority items during the last legislative session was the request for additional dollars to bring MES Extension Educator salaries into line with other educational professionals in the state and at other Big Ten land-grant universities.

College of Human Ecology¹⁵

Mission/Vision

The College of Human Ecology's orientation is based on the assumption that humans are interdependent with each other and with the total environment. This holistic view of individuals and groups in association with the physical, biological, and social conditions and events has provided a frame of reference that has come to be known as human ecology.

The unifying objective of CHE is the understanding, analysis, and improvement of the human ecosystem. The academic units of the College pursue this objective through examination of the interaction of humans and their environments: the natural, the designed, and the social environment. The College's teaching, research, and outreach provide insights into how people affect and are affected by their surroundings in a changing world. The College aspires to maintain highly ranked graduate programs, strengthened undergraduate programs, continued leadership of innovative outreach programs and increased research productivity which empowers faculty, staff and students to work creatively and effectively in improving the human condition.

The College seeks to continue its excellence in providing education for professions central to the quality of life in Minnesota, significant outreach to constituent communities, and global research leadership on topics related to the very core of human survival in rapidly changing physical and social environments.

Organization

The units within CHE are the Departments of Design, Housing and Apparel, Family Social Science, Food Science and Nutrition, and the School of Social Work. Approximately 800 students are enrolled in the eight undergraduate programs in the College, with an estimate of another 150 majors enrolled only in CEE classes at any given time. Approximately 50 percent of our undergraduate students are enrolled in one or more CEE classes. The college has accomplished the Strategy for Focus (SFF) mandate to reduce enrollment from over 1,350 undergraduate students to approximately 950 (including CEE). This has been achieved by strengthening entrance requirements to programs, instituting portfolio reviews to upper level programs and targeting recruitment efforts. Approximately 300 undergraduate students, one-third of the total enrollment, graduated in 1992-93.

¹⁵ <http://www.che.umn.edu/>

The graduate enrollments have remained constant with about 350 active graduate students. Approximately 200 of these are MSW students. The Family Social Science doctoral research program is considered by peers to be the top program in the country. The doctoral programs in the other departments--Design, Housing and Apparel, Food Science and Nutrition, and Social Work--are consistently ranked among the top five programs in their fields.

CHE is noted for the Goldstein Gallery, a teaching museum for dress and decorative arts, which has received international attention with its high quality exhibitions. The College houses three computer laboratories, equipped with approximately 80-90 computers with CAD (Computer Aided Design) software; the Alcohol and Drug Counseling Education program, a CEE funded program; and, three years ago, the Multicultural Student Center was opened and staffed with undergraduate and graduate program assistants.

The College participates with the College of Agricultural, Food, and Environmental Sciences in the operation of the Dairy Research Center and the General Mills cereal Chemistry Chair. The Gamble-Skogmo Chair for Child Welfare and Youth Policy is shared with the Hubert Humphrey Institute; the College also administers the Buckman Chair for Design Education.

Major Strategic Objectives/Issues

- Recruitment of a high ability, diverse, student body, while maintaining our present level of graduate and undergraduate students, is needed. The College's concern is to reverse the downward trend in undergraduate enrollments resulting from the SFF mandate. Targeted undergraduate recruitment for select majors will continue.
- Emphasis on cultural diversity will focus on creating a climate conducive to retaining a diverse faculty, staff and student body and curricula revisions stressing cultural sensitivity and global awareness.
- Greater coordination of outreach and distance education will be fostered by integrating extension and continuing education programs administratively in CHE.
- Scholarship development fund drive initiation will target undergraduate merit awards, internship and foreign study support, diversity scholarships and needs of special populations.

Budget Strategy

Since 1987, CHE has taken budget reductions resulting in the loss of approximately five faculty, plus graduate assistants, staff, and operating expenses. The proposed 5.3 percent budget reduction for 1994-95 will result in the loss of an additional two faculty, elimination or reduction of time of seven staff, loss of four graduate assistants, and \$20,000 in operating expenses. These reductions mean that the student/faculty ratio, the ability to do creative programming, and to improve graduate offerings will continue to suffer.

Issues Identified in 1994-95 Strategic Planning Process

The College of Human Ecology identified the following five strategic issues:

- Recruitment of a high ability, diverse student body, while targeting increases of graduate and undergraduate in certain majors.
- Increased research efforts aimed at solving the critical societal issues related to families, children, social intervention, food and health and the near environment.
- Scholarship fund drive will target undergraduate merit awards, internship and foreign study support, diversity scholarships and needs of special populations.
- Emphasis on cultural diversity which will create a climate conducive to recruiting and retaining a diverse faculty, staff and student body and instituting curricula revisions stressing cultural sensitivity and global awareness.
- Greater coordination of outreach and distance education is needed.

All are important critical issues facing the College, and follow directly from the external and internal analysis. Additionally, some of the important strategic issues affecting the College are missing in the description of strategic issues (e.g., competition with other higher education institutions, cooperative and collaborative efforts with the other units, and establishing new programs) and need further discussion.

Humphrey Institute of Public Affairs¹⁶

Mission/Vision

The mission of the Institute is excellence in education, research and outreach in public policy, planning and public affairs. The Institute prepares students for careers as managers, planners, and policy analysts; fosters the intellectual and ethical development of experienced practitioners as reflective leaders in a complex society; serves as an interdisciplinary center for basic and applied research; and acts as a nonpartisan resource to help empower citizens, communities, and organizations.

The Institute aspires to strengthen its research capacity to better understand the social problems society faces; to engage in research which integrates the social sciences with the biological and natural sciences to extend the frontiers of knowledge; to educate citizens from here and abroad for democratic governance; and to educate outstanding public policy professionals.

Changes/Trends

The Humphrey Institute has been through a five-year period of retrenchment and reconfiguration to adjust its programs to its underlying resource base and to shape its capacity to address the emerging problems of society. In total, \$190,000 has been retrenched and \$140,000 reallocated in the Institute's O&M budget. In addition, the long-running public affairs television show "Minnesota Issues" has been discontinued. The Institute's Citizen Education program was also closed in fall 1991, retrenching

¹⁶ <http://www.hhh.umn.edu>

approximately \$90,000. Without sacrificing quality, in FY 1992-93, the Institute increased its entering class enrollment by 30 percent to 80 students and, in order to meet inflationary increases, added a \$50 per quarter tuition increase on top of the University's average 9 percent tuition increase.

The Institute has aggressively gone outside to raise resources. This has enabled it to develop significant programs on such issues as environmental problems in Eastern Europe, economic conversion problems in Poland, the design of new means of integrating local, state, and Federal policy makers in design of new transportation infrastructures for the future, and to offer more mid-career training for groups such as state legislative staff. Currently over 50 percent of the Institute's programs are funded with soft or outside money.

Major Strategic Objectives/Issues

- To identify, hire, and retain quality faculty necessary to teach revised and expanded curricula and to sustain an expanded research mission.
- To identify, hire, and retain quality practitioners necessary to develop effective outreach programs and to undertake applied research.
- To identify and recruit an outstanding and diverse group of students both nationally and regionally and to provide them with an excellent education.
- To involve faculty from across the University in effective multidisciplinary approaches to solving critical social problems.

The Institute faculty has approved a new M.S. program in Science and Technology Policy and is doing the planning for a Ph.D. program.

Budget Strategy

The Institute seeks to consolidate its programs as the means to further strengthen its position as one of the premier multidisciplinary units of the University, thereby providing the means by which talent from across the University is brought to bear on society's pressing problems. It plans to become one of the top three programs of public affairs in the nation. And it seeks to increase its resource base so as to leverage more outside money.

To attain these goals, the Institute needs to very significantly increase its existing general purpose endowment of \$20 million, to attract additional resources from the University's state-funded resource base, and to obtain major multi-year commitments of funding from local and national foundations. At the same time, it will continue to aggressively seek grant and contract funding for its ongoing programs.

The Institute seeks to strengthen its programs in community and economic development, international economic policy, science and technology policy, and citizen participation and public leadership. Themes which cut across these areas of emphasis are: (a) a continuing emphasis on institutional design and reform; (b) a greater involvement of faculty from across the University in our activities; (c) a greater leveraging of more outside resources to address the ever-changing agenda of policy issues; and (d) an enduring concern with excellence.

Issues Identified in 1994-95 Strategic Planning Process

Five strategic issues are facing the Humphrey Institute of Public Affairs:

- The problem of structuring governance for the Institute including the means to reconcile the multiple competing demands on the Institute.
- The problem of resources including increases, the ratios of soft to hard moneys, and the question of fiscal independence.
- The proper utilization of instructional resources (especially at the undergraduate, masters, Ph.D. and mid-career levels).
- Strengthening collaborative efforts both inside the Institute and with other units in the University.
- The goals are to increase resources, the use of information technology in administration, teaching, research, and outreach, the range of degree offerings, the range of non-degree offerings, interdisciplinary collaboration, etc.

The Institute plans to develop a doctoral program financed from resources from expanded mid-career programs. The Institute also agreed to explore a generic minor for other graduate programs. The Institute has been encouraged to go forward with a mid-career program (degree and non-degree), with more formal tuition sharing arrangements.

Law School¹⁷

Mission/Vision

The mission of the University of Minnesota Law School is to provide quality legal education:

- By educating men and women in the law, through instruction leading to a Juris Doctor degree, and through other quality programs.
- By contributing substantially to knowledge of the legal order through the publication and other dissemination of scholarship.
- By providing discipline-related public service to the University, the state, the nation, and the international community, and to the legal profession in those fields in which it has special expertise.

In addition to maintaining the excellence of the J.D. program, by 1994 the Law School had undertaken an expansion of the LL.M. program for foreign law graduates. In an era of increasing international economic activity, the presence of foreign law graduates will provide significant enhancement of educational opportunities for domestic students, as well as the extension of the University's reputation internationally. The Law School also plan to create a program for specialized study for graduates of United States law schools.

¹⁷<http://www.umn.edu/law/>

Changes/Trends

Applications for admission continue at an extremely high rate, with more than 2,300 applications for the 270 places in the entering class. Students are particularly attracted to Minnesota because of its national reputation for high quality instruction. The Law School international programs and clinical education continue to be in high demand. The Law School has been fortunate to receive external funding for substantial elements of these programs over the past few years. The faculty's scholarly productivity has continued to expand and is now among the highest of any public institution in the United States.

Major Strategic Objectives/Issues

The Law School's objectives fall into several major categories.

Programmatic improvement. The Law School plans to improve its academic excellence by making specialized instruction available in newly developing areas, both through new appointments and by redeployment of existing resources. This includes both instructional effort and supporting services, such as the Law Library.

Diversity. The Law School intends to maintain its commitment to a diverse student body and expand the diversity of the faculty.

Quality. The Law School plans to continue to maintain the highest standard of quality in instruction and scholarship.

Internationalization. The Law School recognizes the growing importance of law in the international community and is committed to further study of international legal issues and to further exchanges with foreign schools.

Interaction. The Law School hopes to increase its interaction with other disciplines within the University.

The most significant immediate administrative issue is implementation of a "responsibility center and budgeting plan" for the Law School.

Budget Strategy

Under the responsibility center budgeting plan, the Law School will assume more direct responsibility for its financial and programmatic performance. Rather than seek central allocations for new program enhancements or changes, it will rather finance such changes from its own resources, either from revenues generated by these initiatives or from internal reallocations. The Law School will, however, continue to request an appropriate share of inflation-based changes in state support and of other University-wide initiatives (e.g., for library support).

Issues Identified in 1994-95 Strategic Planning Process

Central administration expects to coordinate enrollment management and new program issues in the Law School's attention to the following five strategic issues:

- Technological change is changing the nature of the legal instruction and legal research methods.

- A strong demand for skills training.
- Continued development of its international program and strong alliance with foreign institutions.
- A strong demand for post-professional education.
- Concern for increased student debt load.

Carlson School of Management¹⁸

Mission/Vision

Management in the 21st Century will occur in an environment of rapid change and increasing complexity. In this setting, the mission of the Carlson School at the University of Minnesota is to be a recognized leader in the development and dissemination of knowledge geared towards the improvement of management practice in a global economy that is subject to increasing technological and social change. The School believes these changes stem from: (a) the rapidly changing information technology; (b) the globalization of production, consumer, and labor markets; (c) the economically driven demand for attention to quality and continuous improvement; and (d) the resulting rapid social, political, and organizational change.

The vision is founded on a set of unusually favorable local circumstances. First, the Carlson School is part of one of the world's leading research universities. Second, the School is part of a remarkable business and government community that works and works well. Third, the School is part of a region with a unique spirit of entrepreneurship and innovation that has promoted both commercial success and quality of life. And finally, the School is part of a community that is extraordinarily vibrant, both socially and intellectually. The School has an environment that supports the development of managers prepared to deal with all aspects of societal issues. The vision for the School is to form a professional learning community that embraces students, faculty, staff, and the business community. This vision forms the foundation for the development of strategies that encourage the participation and interaction of practitioners and academics in the School's teaching, research and outreach activities.

As the Carlson School pursues the notion of a professional learning community, a number of changes in the structure of the school and its programs is likely to occur. A dramatic revision in the curriculum of the MBA program was implemented in 1993-94, and will produce over time an increase in the size of the MBA program as the College moves from a regional to a nationally-recognized program and as the student body becomes more geographically diverse and internationalized. A major initiative to "internationalize" our teaching and research programs is underway. The Carlson School also sees a significant expansion of our executive education programs and increased linkages with the Institute of Technology and other academic areas within the University through interdisciplinary research centers that focus on research problems important to the business community and that increase the amount of externally funded research. The School also expects a modest increase in undergraduate business program as it explore the possibility of entering into joint degree programs in areas critical to the School's mission. The School also expects to see improvement in the area of student services such

¹⁸ <http://www.csom.umn.edu/>

as placement. These efforts will require substantial redeployments of resources among our departments and programs as we seek effective and efficient operations.

Major Strategic Objectives/Issues

To realize its mission/vision, the School established a number of strategic objectives during an extensive strategic planning process in 1991-92.

These objectives result from extensive interaction with faculty, staff, the business community, government officials, and university administrators. The objectives include:

- Achieve teaching excellence through programs that improve the teaching skills of faculty, enhanced co-curricular student experiences, richer course and teaching evaluation procedures, and the explicit inclusion of teaching performance in the incentive system.
- Increase the presence of interdisciplinary research and research at the intersection of academic and practical concerns through increased dialogue with the management profession partially stimulated by research centers.
- Establish closer linkages with and become a visible force for change in the management community. The School must be the leading forum in the region for the development and exchange of ideas about business and management.
- Develop a global perspective for the School, recognizing the internationalization of business and the cultural diversity of its participants.
- Develop an MBA program of the highest quality that is competitive at the national and international levels.
- Develop a nationally recognized executive education center that advances the practice of management.
- Initiate a fund-raising campaign to address programmatic needs and partial funding of a new facility.

Budget Strategy

While the School is slated to realize an infusion of resources from university-level reallocation, a significant internal reallocation of existing resources is also necessary to pursue the strategic plan. The major ways in which reallocations will occur include:

- The centralization of certain staff functions (e.g., fiscal management) and attendant reduction of staff.
- A careful monitoring of course enrollments and elimination of courses with historically low enrollments.
- Shifts in faculty lines for the new MBA curriculum.

Issues Identified in 1994-95 Strategic Planning Process

Seven key strategic issues were identified in guiding the rapid changes the Carlson School of Management.

- High-quality teaching and student services are very critical in highly competitive business-school environment. While maintaining a strong research program, the Carlson School must increase the quality of student experience.
- The business world is globalizing, but many faculty and students are not interested in global issues from both curricular and research standpoint.
- The role of technology is increasingly critical, but many faculty lack the skills or willingness to improve the uses of technology in their teaching.
- The School faces greater demands for outreach and external relations but is not deep in faculty numbers who are inclined or capable of responding to these demands.
- Faculty and staff alignments across disciplines and programs are somewhat out of alignment with needs.
- Curricular initiatives need to focus on undergraduate program.
- While integrated and interdisciplinary problem solving is critical in today's business world, a strong departmental orientation of the School makes it difficult for the school to implement a similar approach in teaching and research.

The Carlson School is undertaking several changes in its curricular and degree programs and discussions about the directions of these changes will continue to take place. Some questions are suggested by the document (e.g., a more specialized undergraduate degree program). Two questions must be addressed. First, are the various masters programs sufficiently differentiated and structured and resources allocated to them appropriately? Second, how will RCM impact the emphasis placed on the numbers of students in the various programs?

The Carlson School has already begun to address some of these strategic issues. The important remaining issue is the lack of agreement among all parties about the role of the school; should it excel in research or in satisfying potential employers of its students, or can it do both? The recently published rankings in the *U.S. News and World Report* highlight this dilemma by indicating a relatively strong scholarly reputation (21) and relatively weaker reputation among recruiters (34).

Future plans need to address the nature of the competition with other business schools, nationally and locally, especially where the market for business students is going and what employers are expecting. In addition, continuing or distance education possibilities need to be explored more thoroughly.

College of Natural Resources¹⁹

Mission/Vision

There has never been a more exciting or important time to be involved in natural resources and environmental sciences. The College of Natural Resources is uniquely

¹⁹ <http://www.gis.umn.edu/cnr/>

positioned to play a leadership role in University's efforts to address these concerns in the 21st Century. The College's mission is to foster a quality environment by contributing to the management, protection, and sustainable use of natural resources through teaching, research and outreach.

The vision is based on an exceptionally strong foundation as one of the nation's top natural resource colleges. Major elements of that foundation include a long history of distinguished accomplishments of the faculty, staff, and alumni; physical proximity to other high quality University programs; unique offerings of the state's only undergraduate and graduate degrees in forestry, forest products, fisheries, and wildlife conservation; and a special relationship with Minnesota's citizens through the Agricultural Experiment Station and Minnesota Extension Service.

The vision is to be central to the University's efforts in natural resources and the environment. That vision is to be accomplished by:

- Providing visible, high quality work through students and faculty.
- Offering first-rate teaching, research, and outreach that supports improved policy making, environmental quality, sustainable economic development, and public understanding of natural resources and the environment.
- Establishing the college more firmly among the state, national, and world leaders serving natural resources, science, and society.
- Providing a welcoming environment and supportive culture for people, programs, or units in the University with primary interests in natural resource management and environmental protection.

Changes/Trends

The College of Natural Resources, like most such programs nationally, grew out of societal concern for the conservation and wise use of natural resources. Early efforts were directed at forests and their associated water, wildlife, recreation, aesthetic, and economic values, and products provided by these resources. Programs have since evolved and matured to encompass broader environmental and natural resource concerns of ecosystem management, sustainable development, and environmental quality. This history of growth and diversity in its program parallels society's increasing interest in environmental concerns, interests that are expected to continue to grow.

Undergraduate enrollments in the College have increased 127 percent in the last five years. The natural resources and environmental studies (NRES) curriculum has resulted in increased enrollment and more diverse student interests in science and natural resource and environmental issues.

Sponsored research funding accounts for approximately 62 percent of total research programming and increasingly drives the college's research and outreach directions.

Major Strategic Objectives/Issues

The College established seven goals to help accomplish its mission and realize its vision during an intensive strategic planning process in 1993-94. These goals resulted from extensive interaction with all college faculty, staff, and graduate and undergraduate

student leaders; selected University units; and external stakeholders representing alumni, natural resource agencies, industry, and environmental organizations. The goals are:

- Improve collaboration and integration inside and outside the college.
- Provide students with the best opportunities to learn, grow, and contribute to society following graduation.
- Improve the climate for and increase participation of under-represented groups in the college's faculty, staff, and student body and in research and outreach programs.
- Insure faculty, staff, and student development and an environment that enriches program capability.
- Administer efficiently, cost-effectively, and with accountability.
- Improve focus for college research and outreach efforts to address high priority needs in a timely manner.
- Provide leadership to University natural resource and environmental issues.

Budget Strategy

The College's strategic plan's 58 action steps give special consideration to initiatives that can be undertaken with existing personnel, financial, and facilities resources, but carrying out some actions will depend on its ability to attract additional support for its mission, vision and overall plan and to develop new and strengthened partnerships.

Preliminary planning efforts in departments and other college units served as a foundation for the college plan. College units and offices will now produce more detailed plans that respond to the college strategic plan, address their unique needs, and consider reviews by the USDA's Cooperative State Research Service and professional accrediting bodies. That planning will provide academic program reviews and identify areas that might be strengthened, maintained, streamlined, or eliminated.

The goals and actions agreed to in the college plan, and in the operational plans that will flow from it, will guide budget decisions and the allocation of college resources. Priority actions will be supported by a college strategic investment pool that is being assembled from various sources of non-recurring funds. Every effort will be made to leverage these relatively modest funds with those that may be available from the Institute of Agriculture, Forestry and Home Economics and from U2000 initiatives.

The College will aggressively pursue its strategic plan with internal resources, but considerable college and University potential will be unrealized without additional support.

Issues Identified in 1994-95 Strategic Planning Process

The College of Natural Resources' seven core strategic issues are as follows:

- More effectively use internal strengths and external partnerships to address natural resource and environmental issues.

- Provide students with the most effective opportunities to learn, grow, and contribute to society following graduation.
- Produce graduates who are more representative of society's diversity and able to address the needs of a diverse society.
- Provide an attractive environment and foster personal development that enriches faculty, staff, and program capabilities.
- Improve its program administration, efficiency, cost-effectiveness, and accountability.
- Focus its research and outreach efforts to address current high priority needs and maintain its cutting edge capability to address future needs.
- Play an appropriate leadership role in University efforts to address natural resource and environmental issues.

Academic Affairs

Academic Affairs includes two collegiate units (Continuing Education and Extension/ University College and the Graduate School) and University Libraries. Also included in this section are detailed overviews of Men's and Women's Intercollegiate Athletics, Office of the Vice President of Student Development and Athletics. Other relevant initiatives include the four baccalaureate degree programs offered in collaboration with community colleges as part of the Twin Cities Higher Education Partnerships.

Continuing Education and Extension²⁰

As part of the continuing implementation of University 2000, Continuing Education and Extension (CEE) is being transformed into a new unit named University College (UC). A more complete description of that transformation process is included in Chapter IX: Outreach.

Issues Identified in 1994-95 Strategic Planning Process

CEE has identified the following six strategic issues that are central to its evolution into University College:

- Maintaining access for the public to the programs and resources of the state's research and land-grant institution is a major strategic issue.
- A strong demand for graduate and professional education programs in the state. Through distance education and campus-based outreach, CEE/UC has an unprecedented opportunity to offer a wide range of credit and noncredit options in graduate and professional education.

²⁰ <http://www.cee.umn.edu/>

- CEE/UC provides a major part of its instruction at the undergraduate level. While providing undergraduate instruction with an academic excellence and creativity is a challenge for the CEE/University College, it also becomes more challenging due to the diverse backgrounds of its students such as more adult and part-time students.
- Like the rest of the University, CEE/UC also needs to address the issue that its courses, classes, programs, and staff reflect appropriate diversity, and that they also serve diverse audiences of learners.
- CEE/UC continue to provide the public access to the programs and resources of the state's research and land-grant institution, through a system-wide and centralized education unit.
- In order to stay competitive and grow in an increasingly competitive environment, CEE/UC must increase the "added value" that it offer students and clients. Added value includes quality of its programs and services, their price, their location and/or means of delivery, and the availability of information on which to make a decision whether or not to select CEE/UC continuing education offerings.

Graduate School²¹

Mission/Vision

Graduate education is the core component of a research university. The national and international reputation of the University of Minnesota, one of the nation's great research universities, rests on the strength and quality of its graduate programs, one of the main criteria for judgment. The Graduate School's goal is to enhance the national and international reputation of its graduate programs by assisting in the recruitment and support of the most outstanding graduate students, and to provide those students with an excellent education so that they are at the forefront of their fields.

Organization

Graduate study at the University of Minnesota was initiated in the 1880s, but the Graduate School was not organized into a separate college until 1905. The first Ph.D. was awarded in 1888, one of the first in the nation. Today, the Graduate School offers over 300 master's and Ph.D. degrees on the Twin Cities campus ranging from the traditional arts and sciences to agriculture, engineering, education, the health sciences, business, and public affairs. Master's degree programs are also offered on the Duluth campus. The more than 8,000 (Twin Cities campus) current graduate students come from all 50 states and approximately 100 nations: the graduate faculty numbers about 3,000. The Graduate School, the only Ph.D. granting college in the University, awards over 600 doctorates and 1,600 master's degrees annually. Minnesota ranked fifth in the nation in doctorates awarded in 1991.

The structure of graduate education at the University of Minnesota is similar to that at most research universities. Graduate programs are not necessarily tied to collegiate or departmental units, but rather are supported in a mutually beneficial partnership arrangement between the Graduate School and the budgetary colleges. The Graduate

²¹ <http://www.grad.umn.edu/>

School appoints graduate faculty from the colleges for purposes of advising master's and doctoral students and teaching graduate-level courses. In 1992, the position of graduate school dean was redefined to "Vice President for Research and Dean of the Graduate School," making the position clearly responsible for coordination of research initiatives and policy.

Major Issues

- Continuing discussion of the roles and responsibilities of the Graduate School.
- Encourage interdisciplinary program (teaching and research) activity.
- Increase recruitment and retention of minority students.
- Complete review of the Graduate School to improve program quality.
- Manage large admission application increases, especially for international students.
- Enhance regional collaboration (e.g., Wisconsin, Manitoba, Mayo), including in distance education offerings.

Budget Strategy

- Full operational support for interdisciplinary graduate programs.
- Increase faculty research funds, particularly to offset losses due to increased fringe benefit costs for research assistants' tuition.
- Assist graduate programs with increased costs of recruitment.
- Increase fellowship funds to recruit outstanding students.

Response to Issues Raised in 1986

The University of Minnesota continues to rank among the nation's major research institutions. It remains a top producer of doctorally prepared graduates, ranking fourth in the nation in 1994 with 706 doctoral degrees awarded. It remains among the top 20 research institutions in the country, as shown in the 1995 National Research Council's survey of U.S. research-doctorate programs. Based on the information in the NRC report, the social sciences and engineering fields are the University's areas of greatest recognition. More detailed analyses of the results (summarized in Chapter VII: Graduate and Professional Education) suggest some slippage in overall quality on the measure scholarly quality of program faculty. The University declined from 16th to 20th place since the 1982 NRC study on this measure. Five doctoral programs at the University are rated among the top ten in the country, based on this measure. Like other research doctorate programs nationwide, most of the programs at the University were perceived to have improved in quality during the past five years, which indicates that the quality of graduate education as a whole here has improved in the last decade. It is important to note that the programs evaluated by the NRC represent only one-third of the doctoral degree programs offered at the University of Minnesota. From 1987 through spring of 1992, 50 percent of the doctoral degrees awarded by the University came from the 39 programs included in the NRC survey. None of the institution's master's degree programs were included in the study. Furthermore, none of the University's professional programs (Doctor of Dental Surgery,

Doctor of Veterinary Medicine, Juris Doctor, Master of Laws, Master of Agriculture, Doctor of Medicine, Master of Education, Master of Healthcare Administration, Master of Public Health, Doctor of Pharmacy) are included in the NRC analysis. The University of Minnesota is unique in the broad scope of its postbaccalaureate degree offerings. Many of these other postbaccalaureate degree programs (both those within the Graduate School and those offered by the various professional colleges) are considered to be of very high quality and distinction. For example, the University was ranked seventh in the nation in the quality of its education programs in the March 18, 1996 issue of *U.S. News and World Report*. This publication also rated professional engineering fields 12th, law 21st, and management 32nd. Postbaccalaureate degree programs in agriculture and natural resources are also recognized as very strong. Thus, in evaluating the overall strength of postbaccalaureate programs at the University of Minnesota, one must consider the entire range of programs.

The University ranks 24th in master's degrees produced. In recent years, the University has responded to increased demand for expanded opportunities for master's-level education by providing new degree programs for special clientele, programs at off-site locations, or programs with modified structures or requirements. Greater emphasis will likely be placed on the expansion of master's programs -- especially those with an applied focus -- as employment opportunities for Ph.D. graduates decline, and in response to needs expressed both within the University's large urban environment as well as in outstate Minnesota. This trend is consistent with the Graduate School's goal of establishing, maintaining, and discontinuing graduate degree programs to meet the changing needs of society and the research education enterprise.

Increased selectivity in undergraduate students admitted, combined with enrollment management at the undergraduate level and relatively constant Graduate School enrollment, has resulted in a lower ratio of undergraduate to graduate students than was the case in 1986 (the current ratio of undergraduate to Graduate School students is about 3.35, based on fall quarter 1995 registration statistics for the Twin Cities campus; the ratio is 2.6 when programs outside of the Graduate School are included).

The Graduate School continues to recruit students competitively. It continues to: provide professional assistance to programs in the design of high-quality recruitment posters and brochures, participation in recruitment fairs, sponsor a program of competitive first-year fellowships, and monitor where students matriculate who turn down admissions offers here. The fellowships are a significant and highly effective recruiting tool for Minnesota. Students who decline first-year fellowship offers here select instead the following major competitors: the University of Wisconsin-Madison, University of Michigan, Cornell University, Stanford University, MIT, Ohio State University, University of Illinois, and Princeton University, to name a few.

As a result of an internal review in 1992, and following an examination of each program's standards, processes and goals, decision-making authority for graduate admissions and appointments to the graduate faculty and to Limited Teaching Status was transferred to the individual graduate programs. The Graduate School continues to collect admission applications, supporting materials, and fees, and continues to send the final letter of admission or rejection and to enter admissions-related information to a computer database; however, the decision to admit or reject resides with the program. (A somewhat parallel process is in place for graduate faculty appointments, and considerably less paperwork is involved in the new appointment procedures.) The Graduate School continues to provide special assistance and oversight to programs with respect to international student admissions; its staff performs a qualitative review of the files of admitted international students, sponsors training sessions for Directors of Graduate Studies (DGSs) on issues related to the admission of international students, and maintains

information on the World Wide Web to assist DGSs in interpreting international student credentials. Coupled with this change in decision-making authority is a periodic review of programs by the Policy and Review Councils (this review is in addition to the regular external program review) and expanded data management services to programs, which include not only enhanced communication of Graduate School data to its constituent programs, but also an ongoing series of workshops to assist DGSs in program administration. Budget reductions in the Office of the Vice President for Research/Dean of the Graduate School have resulted in the elimination of some staff positions. As a result, the Graduate School staff is currently at the very minimum required to carry out its responsibilities to students, faculty and staff. It nevertheless continues to do so effectively through reorganization of tasks and reassignment of effort in some areas. The Graduate School is currently leading an effort to develop a plan to mitigate the effects of rapidly escalating fringe benefit costs for graduate assistants.

Initiated in the early 1970s, the Graduate School's program review process began its third cycle in 1993-94. Interdisciplinary linkages among programs continue to receive careful attention, and this aspect of program review is likely to become a focal point in future reviews. (A study is planned to examine where disciplinary linkages occur and the nature of these linkages; the study results will in part serve to indicate which programs might be reviewed in combination.) The current cycle of reviews will also place increased emphasis on undergraduate issues and will involve the budgetary college deans to a greater extent than in the past. The Graduate School is pleased that the 1986 NCA team recognized the value of the review process and heard favorable comments about it from department chairpersons.

The model provided by the Neuroscience program has proven to be an effective one (introduced as a free-standing, minor-only program, Neuroscience evolved into a Ph.D. degree program within two years of its inception). Free-standing minors have become a practical means of gauging student interest in developing areas of scholarly inquiry before creating full-fledged degree programs. Because they reconfigure existing faculty and courses in new ways, minor-only programs require only modest operational costs, often underwritten by special Graduate School funds. Currently, 25 free-standing minors are offered under Graduate School auspices on the Twin Cities campus.

The Council of Graduate Students (COGS) organization is an important component in the Graduate School governance structure and provides a critical perspective in issues affecting graduate education and research at the University. The COGS leadership meets regularly with the Vice President for Research/Graduate School Dean and the Associate Deans with oversight for student services and programmatic issues. Teaching assistant training is currently provided through the Faculty and Teaching Assistant Enrichment program, administered through the Office of Human Resources. Additional opportunities are provided through a year-long program offered to doctoral students in participating departments or graduate programs. This program's goal is to provide opportunities for students to receive training in good teaching practices -- combined with mentoring by successful teachers -- in preparation for their future roles as college and university teachers. Response to the program has been very positive. Issues concerning the library collections, services and lending practices have been addressed by the current University Librarian who joined the University in fall 1989.

University Libraries²²

Mission/Vision

The mission of the University Libraries-Twin Cities campus is to provide the information, collections, and services that are necessary to support the instructional programs on the Twin Cities Campus and the research and outreach programs of the entire University. To fulfill this mission, the Libraries:

- Collects, stores, and preserves recorded information and promotes its use, creation, transmission, and application.
- Educates users toward developing their understanding of information resources and services, and improves their skills in searching for and evaluating recorded information.
- In collaboration with campus information technology units, applies appropriate technologies to increase and facilitate use of library resources by all who need access to them.
- Plays an important role in meeting the information needs of the state and regions, and contributes to the advancement of scholarship internationally.

The University Libraries delivers information to users where and when they need it in a format best suited to their needs regardless of where the source material is located. The Libraries is a leader in the collection and preservation of internationally recognized research materials, and develops its collections in cooperation with other libraries in the state, region, and nation. The collections of the Libraries are accessible electronically. The University Libraries plays a leadership role in the global effort to organize information and make it accessible.

Access to information whatever its source is provided through state-of-the-art, networked electronic access and document delivery systems to users both on and off campus. A full range of library services is available at one's work station. The Libraries is a leader, in partnership with campus information technology units and organizations, in the development of campus-wide information policy and infrastructure to insure effective, equitable, and integrated access to information. The Libraries has a nationally recognized program in information literacy. Library users are taught how to navigate the networks as well as how to assess information and evaluate its merit and reliability. Librarians collaborate with students and faculty in stretching the boundaries of knowledge, in developing curricula, and in exploring new approaches to integration of knowledge.

Major Strategic Objectives/Issues

- To extend library information services to faculty, students, and staff on campus and at remote sites through the use of new information technology.
- To support the goals and objectives of U2000.
- To expand access to both print and electronic information through increased cooperation with other libraries in the region and nation.

²² <http://www.lib.umn.edu/>

- To create through partnership with other units on campus a well-organized, state-of-the-art, highly responsive information infrastructure.
- To build and maintain library facilities that are most effective for the preservation of collections and the delivery of services.
- To continuously improve the quality of staffing, collections, and services to create a more user friendly environment.

Budget Strategy

Research libraries are in a period of major transition primarily because of two factors: first, the rapid advance of information technology, which is quickly making an electronic information system available; and second, a weakened financial picture, which results from the combined effect of declining or flat library budgets and dramatic increases in the cost of library materials, particularly science and technology journals. For the foreseeable future, the Libraries will be dealing with two information systems, one print and the other electronic. The challenge will be to take full advantage of the new electronic system while maintaining effective support for the print records of scholarship without a significant infusion of new funding. New information technology provides opportunities for improving access to scholarship, but it also presents costs and dislocations that will be difficult to manage. During this transitional period, the Libraries will pursue the following general budget strategy:

- The Libraries resources budget for the acquisitions of information sources was approximately \$7.3 million in 1993-1994. This represents thirty-three percent of the total Libraries budget. The resources budget is the base for all library services and must be kept strong. This budget will be used to acquire access to as well as ownership of information resources. The Libraries will also use the strategy of cooperative resource development with other libraries.
- The Libraries staffing budget for 1993-1994 was approximately \$13 million. The percentage of total budget allocated to staffing is likely to decline over the next five years, as funds are reallocated to the equipment and resources budgets. This is necessary to increase the Libraries automation of operations and delivery of networked information. The construction of the proposed Archives, Special Collections and Overflow facility is essential to the success of this strategy.
- The Libraries equipment and supply budget for 1993-94 was approximately \$700,000. This percentage will increase during the next five years as the Libraries becomes more equipment dependent. The Libraries will invest more heavily in all aspects of new information technologies to increase accessibility to electronically stored resources and to reduce personnel operating costs.

Men's and Women's Intercollegiate Athletics²³

Though some argue that intercollegiate athletics should play a less significant role in institutional life than it does, the reality is that intercollegiate athletics affect and are affected by other aspects of an institution's functioning. A comprehensive institutional self-study places appropriate emphasis on athletics within the context of the institution as a whole. The last

²³ <http://www.umn.edu/mica/>

decade has been one of considerable attention to Men's and Women's Intercollegiate Athletics at the University of Minnesota. The activities of both units are guided by the June 1992 Board of Regents Philosophy Statement for Intercollegiate Athletics - Twin Cities Campus.

Men's Athletics

The past ten years in Men's Intercollegiate Athletics at the University of Minnesota have been alternately marked by turmoil, transition and accomplishment.

The period began with significant upheaval in the coaching and administrative ranks. Among other significant changes, the hockey coach was dismissed in April 1985, the football coach, after two years of relative success, resigned to become head football coach at Notre Dame in Fall of 1985, and in early spring of 1986 the Madison incident precipitated the resignation of the men's basketball coach.

The Madison incident was a case alleging rape against three University of Minnesota basketball players who stayed in a Madison hotel room after a basketball victory against the Wisconsin Badgers. Though the players were acquitted, the impression of rampant social misconduct and public relations damage felt by the program lingered for many years. It also set the stage for another major personnel transition in July 1988, when the director of athletics was dismissed after a series of NCAA violations were advanced against the program. Some allegations were later substantiated, and the University of Minnesota was the subject of NCAA sanctions and probation which affected primarily its football program. The NCAA investigation cited a lack of institutional control, adding a cloud of perceived mismanagement to the competitive struggles produced by the NCAA investigation.

The department accumulated a deficit of more than \$2 million by 1992. Also facing the department as a separate financial challenge was the debt service associated with building the new Mariucci Arena and remodeling Williams Arena. Both were completed in 1993, and the department assumed additional responsibility for generating nearly \$4 million annually. By the end of the 1994-95 fiscal year, the sports facilities project had generated sufficient surpluses to absolve all the accumulated deficit carried by Men's Athletics and contributed \$170,000 to Women's Athletics' operating budget, while Men's Athletics ran a \$500,000 surplus.

The past decade was also a time of change and challenge on a national and conference-wide basis. Initially, cost containment at a national level, then gender equity goals on a conference-wide and institutional level, created internal and external competition for resources as well as the need to develop a working partnership with Women's Athletics to assure health and vitality of both programs. Despite a difficult start, by 1995 the University created the position of Vice President for Student Development and Athletics, and the two athletic departments became more closely associated in a strategic sense than ever before.

Men's Athletics currently offers 11 sports. A listing of those sports follows:

- Cross Country
- Track and Field (Indoors and Outdoors)
- Football
- Basketball
- Hockey
- Wrestling
- Swimming and Diving
- Gymnastics
- Baseball
- Golf
- Tennis

Context and overview. Participation in sports within Men's Athletics has, historically, been in the area of 350 student-athletes. Recent pressures to meet the Big Ten's 60-40 participation rate goal for men and women student-athletes has created the need for the first time to "manage" squad sizes and count athletes who try out. Men's Athletics has as a goal to work with the University to help remove these types of pressures to assure continued competitiveness and opportunity (particularly for non-scholarship athletes) within Men's Athletics. Pressure now exists to keep total participation at 300-330 student-athletes.

Over the past 10 years, Men's Athletics has won conference championships in tennis, baseball, gymnastics and hockey. Runner-up finishes have been earned in wrestling and swimming and a national title (NIT) was won in basketball. The football team has appeared in two bowl games during the same period of time. Men's Athletics has also contributed very significantly to finishes in the NACDA Sears Cup competition recognizing overall program excellence as high as 14th in the nation.

Men's Athletics employs approximately 115 full-time staff and has an annual operating budget of \$14.7 million. The department is responsible for generating all revenues to balance those expenditures. Primary sources of income include ticket sales, media contracts, donations and sponsorship income. The department is also responsible for generating the vast majority of the \$4 million necessary to fund the On-Campus Sports Facilities Project budget. Major sources of income for this budget include donor seating, arena signage, ticket sales and surcharges, rentals, concessions sales and club memberships. In addition to record income from basketball and hockey ticket sales, the department now enjoys record income from private fundraising (\$3.5 million annually) and corporate support (\$1.5 million annually).

In the area of NCAA compliance, Men's Athletics is committed to never revisiting its major violations of the 1970s and 1980s. Compliance responsibilities rest with all staff and are coordinated through a compliance officer who reports directly to the Vice President for Student Development and Athletics. The University employs a "thick file" approach to compliance. All violations, even the most minor, secondary violations are reported. Education through corrective measures and frequent programs with coaches form the basis for recent success in compliance.

Men's Athletics is committed to constant improvement in academic performance. Its overall GPA, across all teams, was a record 2.83 in the fall of 1995. Most recent graduation rates for the classes of students who entered between 1985-86 and 1989-90 are 36 percent over five years and 45 percent over six years. The rate is 48 percent at any time. Team graduation rates range from 77 percent in gymnastics to 23 percent in basketball. Professionalization and the challenges inherent at a metropolitan area university continue to present roadblocks to dramatically improved graduation rates. Men's Athletics contributes to an overall student-athlete four-year average graduation rate of 51 percent compared with the university average of 42 percent. It is the goal of the University's academic counseling program for intercollegiate athletics to "maximize the graduation rate of Minnesota student-athletes by reinforcing study skills and by providing services which assist the students in course selection as well as in the selection of a major and a career." The academic counseling program, again, reports directly to the Vice President for Student Development and Athletics. All athletes are, obviously, admitted through normal university channels and must meet University entrance requirements.

Men's Athletics recently added a student-development program to department offerings for student-athletes. The program, which partners with the NCAA Champs program, is designed to enhance and contribute to the development of the participant as a whole person and help ensure maturation and character development. The student-development program is based around four categories in learning development: (a) developing a sense of belonging; (b) acquiring knowledge and skills; (c) choosing informed attitudes; (d) and assuming self responsibility.

Community service is required of all student-athletes and customized student development programs are prepared for the challenges faced by student-athletes from each sport. The program is also a manifestation of the department's deep and abiding concern for diversity. As a major source of diversity, the department actively recruits minority student-athletes and recruits, hires and attempts to retain employees of color in significant positions of leadership.

The future of Men's Athletics depends largely upon its competitiveness across all sports but, from a financial standpoint, particularly football, basketball and hockey. Improving its competitive position will depend upon its ability to attract and expand resources and assemble an even better combination of premier coaches and student-athletes.

The goals for Men's Athletics. A comprehensive listing of the goals for Men's Athletics is as follows:

- Using the Big Ten Men's All-Sports standings as a competitive yardstick, become the most successful all-around athletic program in the conference.
- Create or sustain individual sports programs capable of contending for conference championships at least once in every five-year recruiting cycle and are capable of finishing in the top-half of the conference annually.
- Create or sustain individual sport programs capable of ranking among the top teams in the country within Division I (IA) on an annual basis.
- Within the context of University gender equity strategies, work to remove any restrictions on squad sizes, retain all 11 sports and explore possibilities of adding soccer.
- Improve graduation rates 10 percent over five years and annually improve overall department GPA (composite of 11 teams) by aggressively supporting average and at-risk student-athletes.
- Find ways of maximizing demand for basketball and hockey by increasing capacity of venues and create strategies to reach an average of at least 50,000 in home football attendance while building a reputation for exceptional customer service and family-oriented sports entertainment.
- Create administrative unit plans and quantifiable goals and objectives designed to produce record levels of performance in all areas of the department.
- Create plans and secure central administrative support to move the department budget into the top-half of the Big Ten within five years. Have the top hockey budget in the WCHA.

- Develop consensus surrounding a basic department-wide code of conduct (on which individual team rules and expectations can be based) for student-athletes, reflecting an aggressive approach to issues of social misconduct.
- Sustain and continue to build upon the firmest of commitments to compliance with NCAA and Big Ten rules, including reporting and correction of each and every secondary violation and the absolute avoidance of major violations, as well as fully supporting this commitment through educational programs, enforcement efforts, community outreach, vigilant institutional control and informed personnel decisions.
- Build a meaningful, time-effective student development program constantly ascertaining the needs of different sports and responding to them individually to produce more mature, academically and socially successful student-athletes.
- Work aggressively to forge a University/private sector/MICA partnership to build or improve tennis, golf, baseball, football and track and field facilities with a goal of having facilities which are among the best in the Big Ten and the best in the WCHA.
- Create strategies to aggressively pursue and develop good will with the department's vital publics (general public, on-campus community, high schools) and earn a reputation as a program truly committed to excellence in academics and athletics with a genuine concern for the welfare of the student-athlete.
- Forge a positive relationship with WICA, advancing university strategies toward gender equity, protecting the competitiveness of MICA and assisting the Vice President for Student Development and Athletics in meeting his goals.

Women's Intercollegiate Athletics

The University of Minnesota's commitment to equity in intercollegiate athletics is demonstrated in maintaining two separate intercollegiate athletics programs. Over the past ten years, the women's athletic department increased its public visibility, upgraded its athletic facilities and offered constantly expanding opportunities for its student-athletes. A host of new and improved athletic facilities have been added to the University of Minnesota, creating athletic facilities which now rank among the nation's best. In July 1990, the Twin Cities hosted the U.S. Olympic Festival, and that event resulted in the building of the new University Aquatic Center on campus and the new outdoor Bierman Track and Field Stadium. The University of Minnesota has hosted four major NCAA championships in the last seven years, events which have been strongly supported by both the public and the Twin Cities business community.

Minnesota enjoyed several Big Ten Conference champions and NCAA qualifiers during the decade. The softball and gymnastics teams took home three Big Ten crowns each, while the golf team added one championship and the department's swimming and diving team gained the first NCAA Top Ten finish (10th) in 1992. Athletically, the department has produced more than 20 All-American athletes, as well as 16 Academic All-Americans since 1985. Minnesota women athletes excelled academically. The department's cumulative grade-point average has been above 3.0 in each of the past three years, producing Big Ten academic honors for 169 athletes in that span.

Perhaps the most significant addition for women's sports was the renovation of the old ice hockey arena into a new Sports Pavilion with priority in scheduling for women's volleyball, basketball and gymnastics and a "home" for women's sports displays.

The overall department budget increased from \$2,300,000 in 1985-86 to \$5,819,277 in 1995-96. With the hiring of a new volleyball coach and the new contract given to the continuing basketball coach, pay equity and new contract terms and differentiating expectations are being reached for head women's coaches. Challenges of the next decade will be budgetary in developing new revenue sources for women's sports. The goal of Top 20 athletic success is more important than ever before with the operationalizing of U2000. The restructuring of athletics to report to the Vice President of Student Development and Athletics is providing greater synergy with the men's program, and integration into and access to University resources.

Women's Athletics provide a unique opportunity for women athletes to supplement their education through sports. Department goals and objectives have been designed to guide coaches and support staff to encourage students to achieve the highest potential for amateur excellence within an educational framework. The primary concern of the department is to provide an educational setting so that athletes can achieve a maximum degree of physical, emotional and social development through sound skill acquisition and the most challenging competition available. The strength of the program is its ability to encourage academic excellence first while providing highly skilled women a way to fully develop their athletic potential.

WICA joined the Big Ten Conference for all sports in 1982-83. The addition of ice hockey in 1997-98 poses a challenge for conference affiliation because Minnesota will be the only member with a women's team. Currently, the WCHA does not sponsor women's ice hockey. The University of Minnesota was a charter member in the Association of Intercollegiate Athletics for Women (AIAW), a pioneering organization in organized women's collegiate sports. When the National Collegiate Athletic Association (NCAA) began offering women's championships in 1981-82 it quickly attracted membership away from AIAW.

The University of Minnesota is now a member of the NCAA having joined in 1982-83 following the cessation of AIAW operations. WICA also holds membership in the National Association of Collegiate Directors of Athletics (NACDA) and the National Association of Collegiate Women Athletic Administrators (NACWAA). The University is scheduled to begin the certification process in 1999.

A comprehensive list of the sports offered by Women's Athletics follows:

- Basketball
- Cross Country
- Golf
- Gymnastics
- Soccer
- Softball
- Swimming and Diving
- Tennis
- Track and Field
- Volleyball
- Hockey (to be added in the 1996-97 year)

Mission for Women's Athletics. The specific goals for Women's Athletics are as follows:

To afford the highly skilled student an opportunity to attain the highest level of development in intercollegiate athletics consistent with the education commitments of the University.

To offer varsity programs which will encourage excellence in the performance of students in women's intercollegiate athletics.

To increase public understanding and appreciation of the importance and value of sports and athletics as they contribute to the enrichment of the life of women.

To stimulate the development of quality leadership for women's intercollegiate athletic programs.

To encourage and facilitate professional service to intercollegiate athletics for women through participation in and conducting of workshops, clinics and seminars.

High Expectations for Athletic Performance

- Top 20 ranking for athletic teams and/or NCAA Championship participation
- Top 20 finish with MICA for Sears Directors Cup
- Upper division finishes in the Big Ten Conference

Compliance with Title IX Regulations

- Budget to address needs (facilities, sport budgets, recruiting, publicity, etc.)
- Roster increases and addition of women's varsity ice hockey

High Academic Standards and Graduation Rates

- Recruit students who have the ability to obtain a degree
- Maintain a graduation rate above the University average

Provide Outreach to Greater Community/State and Public Service

- Community service projects and clinics by student-athletes and coaches
- Public speaking by staff and coaches
- Ongoing youth programs with various communities
- Programs to greater Minnesota

Diversity in Recruitment of Staff and Student-Athletes

- More women of color on teams
- Increase staff of color

Total Person Program for Student-Athletes

- Develop program to enhance life for student-athletes to cope with college life pressures and for life after college

Increase Fundraising and Gate Receipts

- Increase attendance and ticket sales in audience-driven sports
- Increase fund-raising donations

Context and overview. Participation has increased slightly over the three-year period 1993-94 to 1995-96 when squad sizes for fall quarters are compared. Projected squad sizes for 1996-97 for both men and women demonstrate maintenance of 1995-96 participation rates. Projections for 1997-98 include the addition of women's ice hockey and further modest increases in selected sports. Together these increases propel the University forward towards meeting its gender equity goals. Projected totals would bring the participation rate to 55 percent men and 45 percent women. WICA fully funds its teams for grants-in-aid up to the maximum NCAA limits. For FY96 the budgeted amount for grants-in-aid is \$992,250. The amount budgeted for 5th year aid is \$120,000. The total amount budgeted for grants-in-aid is \$1,112,250.

WICA employs approximately 61 full and 14 part-time staff. The following issues are worth noting:

- WICA is heavily subsidized by the state. In return, WICA repays the state through positive public service and by providing outstanding academic and athletic opportunities to young women.
- For FY96 WICA is funded from six major funding sources. The total revenue for FY96 is \$5,763,693, and the total expense is \$5,819,277.
- WICA faces an increasing challenge towards reaching fiscal self-sufficiency. Consequently, the development and fundraising units are posturing themselves to increase their current results.
- Partnerships have been forged to drive increased gate receipts and enhanced contact with the corporate culture.
- The challenge will be to determine how much of a market share WICA can reasonably expect, given its short history which limits the ability to project with certainty.
- WICA complies with University procedures for preparing annual budgets and for ensuring fiscal integrity.

Along with the growth of the department there has been increased marketing for women's athletics and the resultant increase in attendance and spectator awareness. Ticket revenue has increased from \$22,489 in 1984-85 to a record \$149,222 in 1994-95. Attendance has increased from an average of 608 at basketball in 1984-85 to 2,110 with the first sellout of the Sports Pavilion in 1994-95.

The Advisory Council, created in 1975, is comprised of community men and women leaders who give their time and talent to the women's athletic department continued to grow in support of the program. Since reorganization in 1989 established an assistant athletic director for external operations, corporate sponsorships have increased from a handful of companies to nearly 50 in 1994-95. Record corporate support, over \$250,000 for the 1995 Women's Final Four, has also been achieved. In 1984-85 a total of \$130,000 was raised for the annual scholarship fund. In 1994-95, \$209,000 was raised for the annual scholarship fund. As part of the University of Minnesota Capital Campaign, \$2.5 million had been raised by 1988 through estate gifts, annuity trusts, pooled income gifts and current gifts. Endowments for scholarships were at two in 1984-85, and are at eight in 1994-95 with swimming and diving almost completely endowed. The Women's Athletic Department established its own President's Club Chapter in 1988, which has grown to 70 members who have contributed \$10,000 or more for women's scholarships.

The goals of the compliance unit are to sustain and continue to build upon the firmest of commitments to compliance with NCAA and Big Ten rules at every institutional level -- from the President of the University to each athletics department employee and all constituents impacting Minnesota athletics. This commitment includes the reporting of each and every secondary and major violation to the Vice President for Student Development and Athletics, the appropriate athletics director and faculty athletics representative and the NCAA. The correction of such secondary violations and the absolute avoidance of major violations is of utmost importance and will be achieved by fully supporting this commitment through educational programs, enforcement efforts, community outreach, vigilant institutional control, and informed personnel decisions. In order to achieve these goals and maintain institutional control of athletics, the University supports an extensive compliance program which reports directly to the Vice-President for Student Development and Athletics and both serves and monitors WICA. The University is committed to do all things necessary to effectively insure its commitment to the principles of fair play by all of its personnel, student-athletes, graduates, fans, and boosters.

Student-athletes are admitted to the University of Minnesota through the institution's admission office and according to the institution's published admissions standards. The academic counseling unit, Academic Counseling-Intercollegiate Athletics, coordinates the admission of student-athletes with the athletic department by, including but not limited to, distributing bi-weekly admissions status reports on applicants who have been identified as prospective student-athletes, and representing athletics department and student-athlete questions and concerns to the admissions office.

Academic integrity of the student-athletes in the women's athletics departments is assured by several initiatives:

- Determination of academic and financial aid eligibility of student-athletes and the NCAA Graduation Report is the responsibility of the Registrar's Office.
- Coaches are expected not to call faculty or college offices regarding the academic progress of their student-athletes to guard against even the perception of coaches "pressuring" for special consideration for student-athletes.
- The faculty, represented by the Assembly Committee on Intercollegiate Athletics, reviews each sports team's academic progress every quarter and systematically audits the academic progress of individual student-athletes and teams.
- The Director meets with each coach and academic counselor to determine the plan for any prospect who will be admissible to the General College or enhancement program.
- The Director meets quarterly with each student-athlete and her head coach and academic counselor when they believe the student-athlete is not actualizing her academic performance.
- Academic Counseling-Intercollegiate Athletes, the unit which provides academic support to the student-athletes and the unit which interacts with the academic community on behalf of the student-athletes, reports outside of either athletics department, to the Vice President for Student Development and Athletics.

The academic counseling/advising initiatives available to the student-athletes on the women's sports teams focus on their first year experience and are designed to develop empowered student-athletes. Major elements of the program are:

- Comprehensive advising and counseling, including the development of a Year-long Plan which forms the framework for individual graduation plans.
- An Evening Study Program for first year students which applies cooperative learning theory in such activities as courses-in-common study groups and group tutoring; computer access; support with writing and computer literacy skills; and individual tutoring.
- An Enhancement Program which provides intensive academic support for a limited number of at-risk student-athletes. It is a highly individualized program focusing on the development of personal learning strategies through guided and repetitive practice in time management and goal setting, and the development and implementation of organizational and learning strategies.
- A Learning Center for study within the Bierman Building, including daytime, evening, and weekend computer access.
- Celebration of academic achievement, including an annual Scholar Athlete Reception and Awards Presentation to honor student-athletes with at least a 3.00 cumulative GPA; an annual *300 Club Newsletter* recognizing students who earned at least a 3.00 for any one quarter; and a quarterly First Year Student Honor Roll Banquet.

In recent years the graduation rate of student-athletes has exceeded that of the student body; the four-year graduation rate average for all students is 42 percent and that of the student-athletes' is 51 percent for men and women athletics combined. The four-year average for women is 67 percent, and for the most recent year for which information is available, 71 percent. Athletically related financial aid is awarded to student-athletes in all sports to encourage degree completion. For the past twelve consecutive quarters, women student-athletes have achieved a composite GPA above 3.0. As efforts continue to improve competitiveness of teams, it is possible that the composite GPA will drop slightly, although every effort will be made to maintain this outstanding record.

The University of Minnesota has been a national leader in demonstrating its commitment to providing the best possible competitive athletics experience for young women. This commitment is not only stated in the Philosophy and Mission Statements, but also is reflected in the size and scope of its current broad based program and in its plans to further enhance the program through the initiation of varsity ice hockey in the 1997-98 academic year and increasing opportunities for women through adding to the squad sizes of selected sports. Moreover, the University has and continues to subsidize the WICA budget at ever increasing levels to meet equity issues.

As part of its ongoing obligations to its students, the University conducts periodic reviews of compliance with Title IX of the Education Amendments of 1972 to identify areas where programs might be improved to better serve the needs of its female students and athletes. The University is currently in the process of reaching agreement with the United States Department of Education, Office of Civil Rights, on points which will assure continued progress towards achieving gender equity in intercollegiate athletics.

Minority issues. The strategic direction of Women's Athletics is to support the recruitment and retention of a diverse population of students, coaches and staff by offering and providing learning and leadership opportunities, programs and services both on campus and in the larger community. Specifically the goals are to:

- Increase diversity of student-athletes and staff of people of color in women's athletics.
- Address specific needs of female student-athletes.
- Educate staff on diversity issues and create a welcome environment within the department for all groups and individuals.
- Collaborate with greater Twin Cities diverse communities and use of university-wide resources.

Achievements to date include but are not limited to the following:

- Initiating a Cultural Diversity Task Force of 13 members in 1993. In 1996 this Task Force disbands and a standing advisory committee to WICA begins. The Task Force's charge was to: assess each sport's five year plan to recruit student-athletes of color; review administrative support strategy for people of color; and submit recommendations regarding education and training for people of color.
- Reallocating and securing new funding for: recruiting new student-athletes of color; recruiting people of color for staff positions; tutoring and enhancing academic services; and increasing salaries when hiring new staff.
- Striving toward attainable goals recommended by the Big Ten Advisory Commission including: increasing the number of student-athletes of color in non-revenue sports; increasing the participating numbers of students of color in all sports; and focusing on providing top quality academic programs which will effectively meet the needs of the student-athletes of color.
- Being aware of services and needs of people of color already within WICA and continually seeking means to improve services and environment including but not limited to: ordering and displaying publications whose audience is people of color; monitoring printed images within WICA publications such as media guides; including as a factor for annual performance evaluations success in creating culturally diverse staff and teams; initiating mentor groups for African American student-athletes; connecting with the greater Twin Cities community across all age groups; and seeking sponsorship for scholarships and internships for women of color.

Future issues/directions. Issues for Women's Athletics include the following:

- WICA announced the addition of varsity Ice Hockey scheduled to begin competing in 1997-98. A coach will be hired early during the 1996-97 academic year and will be charged with initiating all aspects of the new program. This program will bring the University closer to achieving its gender equity goals by providing additional competitive opportunities for women.

- Following the establishment of Ice Hockey, WICA will review the status of the entire program to determine whether additional new sports will be pursued. Adding new sports will depend upon the potential to increase the resources available to attract top coaches and student-athletes.
- Continue efforts to achieve proportionality.
- Move towards financial self-sufficiency by improving results in revenue production through gate receipts, fund raising, corporate sponsorship and donations.
- Improve athletic performance particularly in audience-driven sports.
- Establish consistent funding from the University (i.e., establish non-recurring funding as permanent funding).
- Build state-of-the-art facilities which will enable all sports to be conducted on campus. Necessary facilities include: second ice sheet combined with an indoor tennis facility to generate a necessary revenue stream; a new softball/soccer complex; renovation of Bierman Field Athletic Building to accommodate the increase need for office space, locker rooms, weight training and other services required to support team operations.
- Continue synergy with MICA.
- Re-engineer external affairs units within WICA.

CHAPTER VI

UNDERGRADUATE EDUCATION¹

No aspect of the institution has changed more in the last decade than the quality of the undergraduate student experience. The statistics reflective of those changes were summarized in Figure 2 and the discussion in Chapter III of certain General Institutional Requirements. Although undergraduate education was not one of the focus areas in the 1986 Accreditation Review, that self-study report described issues in the undergraduate student experience in its response to the General Institutional Requirements (GIRs) as well as in its summary statement relative to the criteria for accreditation.

Readers interested in an overview of the perceptions about how undergraduate education has changed on campus in the last decade are encouraged to view the video "Glimpses of Change: Strengthening the Undergraduate Experience." This chapter comments on those aspects of the undergraduate experience that are not more appropriately described in the institution's response to the GIRs (e.g., admissions policies and procedures) or the overview of the five criteria for accreditation. The chapters on Faculty (XIII) and Infrastructure (XIV) also include sections that address training and development opportunities for faculty and teaching assistants as well as improvements in facilities and the overall campus environment, both of which directly affect the undergraduate experience.

During the last decade, undergraduate education has become a more important and integral part of the Twin Cities campus (with research, scholarship, and creative activity; graduate and professional education; and outreach). This change has occurred gradually as part of an overall climate change relative in the role and importance of high quality undergraduate education.

Overall Undergraduate Enrollments

The Enrollment Management Committee, currently chaired by the Associate Vice President for Planning, plays an important role in the recruitment, admissions and retention activities. The Enrollment Management Committee is concerned with optimum recruitment, retention, and graduation of undergraduate students. One of the committee's major responsibilities is to recommend to the three provosts enrollment targets for the Twin Cities colleges, including targets for the new high school and new advanced standing students to be admitted each year. The committee also has responsibility for recommending revision of policies and the development of new policies regarding enrollment on the Twin Cities campus.

The University's enrollment reduction agreement with the Minnesota Legislature ended after the 1992-93 academic year, when undergraduate FYE enrollment had been reduced by approximately 6,000 students from its previous high. The Enrollment Management Committee recommended that enrollment be maintained at the reduced level through 1997-98, and has proposed specific collegiate targets, which are currently under review as part of the institution's strategic planning process. When finalized, these targets will set the overall direction for the management of undergraduate enrollment for the next six years. The targets will be reviewed annually and adjusted, as necessary.

Table 7 below indicates the total enrollments on the Twin Cities campus and undergraduate enrollments for 1980-81 through 1995-96, as well as projected enrollments for the next four years.²

¹ <http://www.opa.pres.umn.edu/specprjo/accred/undergr.htm>

² http://www.opa.pres.umn.edu/studata/headcnt/hc80_95.htm

Table 7

Total Enrollments and Undergraduate Enrollments
on the Twin Cities Campus of the University of Minnesota^a

Year	Twin Cities Campus	Undergraduate Enrollment
1980-81	47,386	32,418
1981-82	47,427	32,987
1982-83	47,383	33,367
1983-84	46,445	32,456
1984-85	44,659	30,759
1985-86	44,590	30,850
1986-87	45,006	31,066
1987-88	44,293	30,712
1988-89	42,571	29,015
1989-90	41,016	27,291
1990-91	40,972	26,736
1991-92	39,315	25,242
1992-93	38,019	24,105
1993-94	37,548	23,628
1994-95	36,699	23,002
1995-96	36,995	23,561
1996-97	38,319	24,258
1997-98	38,613	24,445
1998-99	39,101	24,753
1999-2000	39,232	24,837

^aSource: Office of Planning and Analysis, 9/4/95.

Statistics in Table 8 below indicate the number of applicants, number of admissions, and number of first-time freshmen during the period from 1985 through 1994, based on first-time freshman data. The analysis of the past 10 years of enrollments through fall 1994 indicate that the University of Minnesota has improved its selectivity, within 31 AAUDE institutions, from 29th to 9th. Comparisons among Big Ten institutions suggest that the Twin Cities campus has changed from the least selective institution in the Big Ten to the third most selective institution in a period of only nine years.

The changes in numbers of freshman applicants, as well as the ratio of acceptances/applications, reflects the increasing numbers of students who are seeking out the University of Minnesota, as well as the increase in selectivity ratios for the campus. For fall 1985, applicants numbered 9,386, admissions were 8,045, and enrollments were 5,072. Comparable figures for fall 1994 were 11,703 (an increase of 20 percent) 6,587 (an decrease of 18 percent), and 3,645 (an decrease of 28 percent), respectively. Applications have increased 20 percent during this time period, indicating a strengthening of interest to attend the University. The changes in selectivity ratios that have occurred over the past decade reflect the achievement of some of the broad goals articulated at the time of the last Accreditation Review.

The Twin Cities campus has several pathways through which undergraduates can gain access to programs and coursework at the University of Minnesota. Some enter as new freshmen in

one of seven freshman admitting colleges, others enter as transfer students, and others begin by taking credit classes through Continuing Education and Extension/University College.

Table 8

First-Time Freshman Applications, Admissions and Enrollments for 1985-94,
Compared to 31 AAUDE Institutions^a

Year	% Admits/Applications		% Enrolled/Admits		% Enrolled/Applications	
	Minnesota	Other	Minnesota	Other	Minnesota	Other
1985	86	64	63	52	54	34
1986	85	60	62	50	53	30
1987	67	58	56	49	38	28
1988	67	56	56	48	37	27
1989	76	59	50	46	38	27
1990	70	64	50	44	35	28
1991	67	62	52	44	35	27
1992	58	63	56	42	32	26
1993	58	64	55	42	32	26
1994	56	64	55	42	31	27

^aSource: Office of Planning and Analysis, Freshmen Application at Institutions in the Association of American Universities Data Exchange.

Characteristics of Entering Students³

University 2000 is premised on the assumption that “educational vitality and institutional integrity are built upon substantially greater diversity within the University’s academic community” and that “access to the University is not limited by economic and social background.” University 2000 also suggests that the University of Minnesota is best able to serve students who are ready to benefit from the University’s educational programs. The most appropriate approach to both is to summarize relevant characteristics of entering students as a way to monitor how admissions policies reflect institutional concerns about diversity and readiness to succeed. However, monitoring characteristics of entering students is only the first step; even more important is monitoring how well the University serves the diverse populations of students that it admits. Conversations about University 2000 concerning the development of institutional-level critical measures supported the use of measures that focus on characteristics of entering students as one of a comprehensive set of measures. Those conversations focused on diversity and readiness to succeed as especially important characteristics to use in setting performance goals for the institution.

The diversity of our student population may be characterized in many ways: home location, gender, age, ethnicity, disability status, part-time versus full-time status, and nature of other commitments to work and family, for example. For some aspects of diversity, monitoring the characteristics may suggest the need for specific goals (e.g., increase the enrollment of underrepresented racial/ethnic groups), whereas for other characteristics (e.g., age at entry) there may be no specific goals. Readiness to succeed also may be characterized in many ways, ranging from high motivation to succeed or

³ <http://www.opa.pres.umn.edu/studata/profiles/profiles.htm>

special talents, to more traditional predictors of college performance such as high school performance, admissions test data, or prior performance in other college-level coursework.

University 2000 focuses on two particularly important characteristics of entering students: diversity and readiness to succeed at the University. Although diversity means more than racial/ethnic diversity and readiness to succeed means more than high school rank, racial/ethnic diversity and high school rank are the two characteristics for which specific performance goals have been established. It is assumed that each campus will add to the list those student characteristics that are especially salient in defining the students to be served by that campus. More discussion is needed to identify an appropriate readiness to succeed measure for students who transfer into the University's undergraduate programs, since no high school performance information is collected routinely for transfer students.

Two specific measures are being used for undergraduates: (a) percent of entering freshmen from the top quartile (i.e., the upper 25 percent) in high school rank (i.e., relative overall grade point average compared to other students in their class); and (b) mean high school rank percentile of entering freshmen. Information for each of these measures will be used for all freshmen, by campus, and for the three underrepresented racial/ethnic groups-- African American, American Indian, Asian/Pacific American, and Chicano/Latino/Hispanic; the Asian/Pacific American group is not underrepresented.

Specific diversity goals relative to numbers and percentages of entering students of color were not included in University 2000, although specific goals have been developed in preparing the institutional-level Critical Measure: Underrepresented Groups/Diversity. The critical measure, Characteristics of Entering Students⁴, focuses on the readiness to succeed of students entering University of Minnesota programs. Insuring that students admitted to the University of Minnesota are ready to succeed in our baccalaureate degree programs requires the use of "predictors" of success. The most commonly used and best single predictor of performance for entering freshmen is high school rank, although it is important to note that the correlation between high school rank and first year grade point average is only moderate (ranging from $r=.30$ to $r=.40$). The correlation increases slightly when high school rank and admissions test scores are used as joint predictors of first year grade point average.

Two approaches can be used in suggesting how to change the high school rank characteristics of freshmen admitted to the University's campuses. In the first approach, the focus is on changing the percentage of students in a specified portion of the distribution of high school rank (e.g., percent of students in the top 25 percent of their high school class). In the second approach, the focus is on changing the average high school rank of the total group of entering freshmen (e.g., to increase the average high school rank from an average of 72 to an average of 77). In the first case, faculty would expect to see an increase in the number of the very best students in their class. In the second case, faculty would expect to see increases in the average readiness to succeed of all students in their classes. University 2000 includes the following statement that suggests using the first approach (i.e., to recruit a higher percentage of students who perform very well in high school): in this approach, it is appropriate to exclude General College, since its mission is quite different from the mission of other freshmen admitting colleges on the Twin Cities campus. So the goal is as follows: "On the Twin Cities campus, with its land-grant, research university environment, recruit a freshmen student population of which 80 percent graduated in the top 25 percent of their high school class."

To give another perspective on how changing admissions policies and practices affect readiness to succeed, it is essential to monitor average high school rank in addition to the percent in the top quartile. In the second approach, it is appropriate to include General

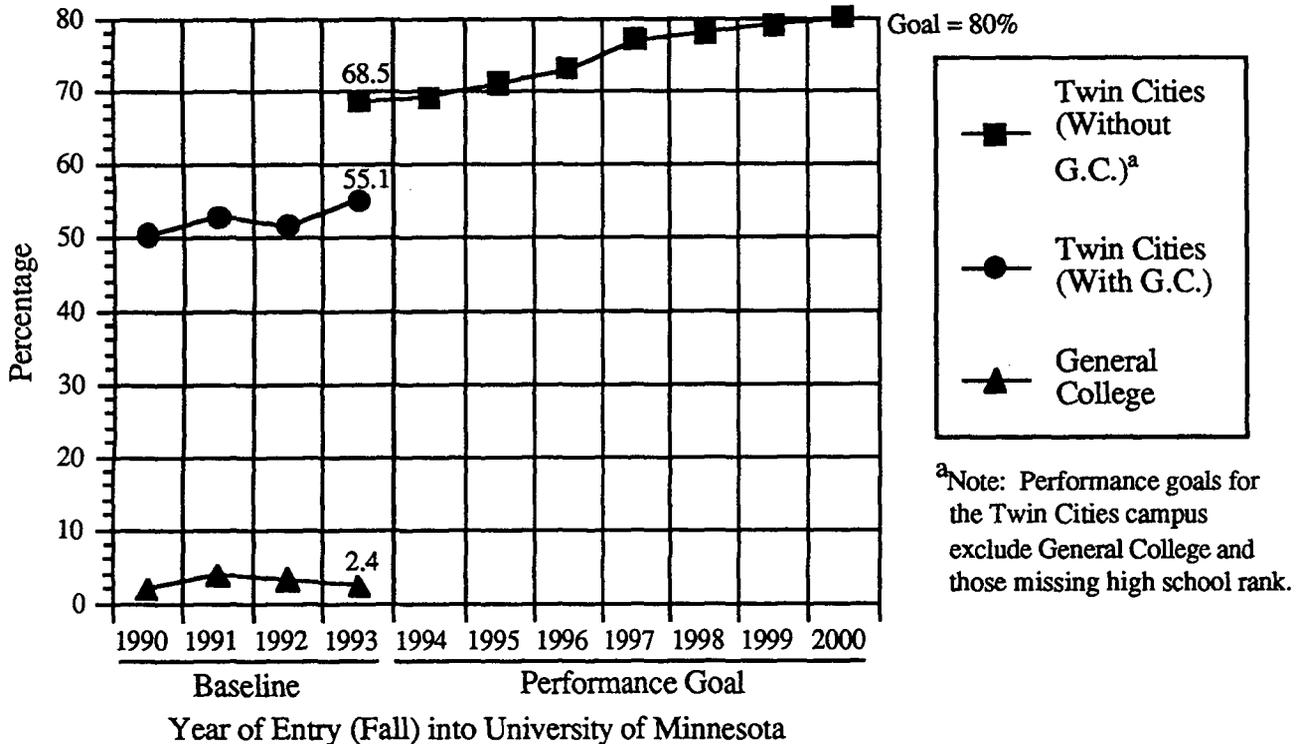
⁴ <http://www.opa.pres.umn.edu/specproj/critmeas/phase1/charac-s.htm>

College in the calculation of average high school rank, since General College students are, indeed, part of the entering class of freshmen on the Twin Cities campus and are included in the data provided to external requests (e.g., *U.S. News and World Report*) for information on the characteristics of entering freshmen students.

The left portion of Figure 10 below indicates baseline information for the percentage of entering freshmen in the top 25 percent on high school rank of their high school class. For example, for 1993, 68.5 percent of the freshmen entering the Twin Cities colleges (excluding General College) were in the top quartile. A goal of 80 percent in the top quartile has been established.

Figure 10

Baseline and Performance Goals for Percent of Entering Freshmen in Top Quartile on High School Rank



Although the performance goal “readiness to succeed” focuses on the percentage of students in the top quartile on high school rank, information on the mean high school rank of entering freshmen also was used in establishing performance since these data include all students rather than only the percentage of students in the top quartile.

The mean high school rank for freshmen entering the Twin cities campus fall quarter 1993 was 71.7. The suggested goal for the Twin Cities campus (including General College) is a mean high school rank percentile of 78 for the entering freshman class of the year 2000. By decreasing the number of students in the lower half of the distribution of high school rank, the University can increase the average preparedness of students to succeed in University programs.

Information presented to the Board of Regents in November 1995 as part of the 1995 Institutional Performance Report indicated that 66.9 percent of freshmen entering Twin Cities colleges (excluding General College) were in the upper quartile on high school rank; the performance goal was 71 percent. Mean high school rank was 73.8, compared to a performance goal of 74. Those results need to be considered within the context of a freshman class that increased by 791 students (13.1%) over the number of new freshmen for fall quarter 1994.

Cooperative Institutional Research Program

The Twin Cities campus of the University of Minnesota has participated since 1989 in the continuing national survey of entering freshmen that is conducted by the American Council on Education's Cooperative Institutional Research Program. A detailed form is completed by all incoming freshmen who participate in the University's orientation program, and the results provide a better understanding of students' characteristics, expectations, and how they are likely to be affected by their college experiences.

The most recent findings from 2,865 respondents are summarized briefly in Table 9 below to portray some of the characteristics of fall 1995 new freshmen. In general, their most important reasons for going to college were to learn more about things that interested them, to be able to get a better job and to be able to make more money. They chose the University of Minnesota in particular because of its good academic reputation and because the graduates get good jobs. The institution's comparatively low tuition was the most important reason for more than a quarter of the freshmen. The single most important concern expressed by new students included difficulty in course scheduling and large class sizes. Their particular concerns are important to note, since they have been the focus of improvement efforts in recent years as part of the President's Initiative for the Improvement of Undergraduate Education.

For the fall term, most (64%) planned to live in a college dormitory, and fewer (19%) planned to live with parents or relatives. Survey results from previous years indicated that as recently as 1989 the comparable percentages were 54 percent in dorms and 32 percent at home. The University was the first college choice for most of these respondents. English was the native language of 92 percent. For their expected primary source of funding, parents, relative and friends were first, and savings from summer work was second. Respondents reported that their political views were middle of the road (46%), with another 32 percent describing themselves as liberal, and 18 percent describing themselves as conservative.

Students are planning to take longer for completion of their bachelor's degree than they used to. Most (62%) expected to complete the degree in four years or fewer, but 33 percent expect it will take five years. In 1993 these figures were 71 percent and 28 percent respectively. The highest academic degree planned by these new freshmen while they are at this University is the bachelor's degree (53%); 27 percent expected to complete a master's degree and another 18 percent, a doctorate. The complete descriptive report for fall 1995 freshmen and more detailed analyses and implications of survey results from previous cohorts of entering freshmen are available for review.

Post-Secondary Enrollment Options Act

With the enactment of the Post-Secondary Enrollment Options Act (PSEOA) in 1985, 11th and 12th grade public school students were able to attend a Minnesota postsecondary institution at state expense. Students receive high school credit for a course successfully

completed under this program, and may apply for college credit when entering college after graduation from high school.

Although prior to the enactment of PSEOA, small numbers of high school students (approximately 200 in 1984-85) had registered for University courses through Continuing Education and Extension (CEE), the enactment of PSEOA has enabled larger numbers of high school juniors and seniors to enroll in University courses. The PSEOA has been administered through the Advanced High School Student Services (AHSSS) office in CEE to provide easy access and one-stop advising services for interested high school students. As of July 1, 1996, AHSSS will report to the Provost for Arts, Sciences and Engineering. Participants come from more than 100 high schools. Students in the top 20th percentile of their high school class are admitted routinely. Registrations through PSEOA on the Twin Cities campus increased from 91 students in the fall of 1985 to approximately 2,500-3,000 registrations in 1993-94. About one-third enroll in courses on campus, and another two-thirds enroll in University courses on 39 high school campuses through the College in the Schools program administered through CEE. About 150 high school students take University courses through Independent Study.

Approximately 50 percent of PSEOA students enrolled in courses on campus are enrolled at the University of Minnesota one year after graduating from high school; the great majority enroll on the Twin Cities campus. Almost half (43%) of participating students have A averages in high school. About one-third (30%) of PSEOA students on campus are students of color. English and social studies are the most commonly registered for classes. For on-campus registrants, mathematics and second language courses are also in high demand.

President's Initiative for the Improvement of Undergraduate Education

Although undergraduate education is one of the six strategic areas outlined in University 2000 and approved by the Board of Regents on January 14, 1994, efforts directed at improving the undergraduate experience date back to the 1984 *Final Report of the Task Force on the Student Experience*. That report identified 21 recommendations and over 200 associated specific action steps necessary to improve the undergraduate experience, and provided a foundation for the subsequent improvement initiatives on the Twin Cities campus. Focused attention to improving the undergraduate experience was only just begun when the last focused self-study was conducted.

On January 9, 1990 President Hasselmo defined the Initiative for Excellence in Undergraduate Education in terms of seven major questions, each of which was then explored by the President and Provost in subsequent presentations to the Board of Regents. A resolution supporting the Undergraduate Initiative was passed by the Board of Regents on June 7, 1990. It included a stipulation that the President report progress on the Undergraduate Initiative annually to the Board of Regents. The Vice President for Arts, Sciences, and Engineering presented to the Board of Regents a series of four annual reports, portions of which have been included in this discussion. Particular changes (e.g., revision in admissions process and procedures) are more appropriately described elsewhere in this self-study report, especially in the General Institutional Requirements.

The seven questions and portions of the January 9, 1990 text that outlined the President's Initiative are as follows:

- **Who should our students be--and why? How do we attract students and make it possible for them to attend and graduate?** (Entry to and graduation from the University must be far more straightforward than it is now. The Common Entry Point, a single honors program, definition of preparation and

Table 9
Selected Responses to the CIRP Freshman Survey^a
Fall 1995

Item Response	Percent
Single most important concern about the University	
Difficulty in course scheduling	29
Large class size	25
Lack of contact with faculty	18
Quality of teaching	13
Reasons for going to college ^b	
To learn more about things that interest me	78
To be able to get a better job	76
To be able to make more money	71
To gain a general education and appreciation of ideas	65
To make me a more cultured person	47
Most important reasons for coming here ^c	
Very good academic reputation	53
Graduates get good jobs	42
Low tuition	28
Good reputation for social activities	26
Graduates are admitted to top graduate/professional schools	26
Plan to live fall term ^d	
With parents/relatives	19
College dormitory	64
The University was my	
First choice	76
Second choice	19
English is native language	92
Political views	
Far left	3
Liberal	32
Middle-of-the-road	46
Conservative	18
Far right	1
Highest academic degree intended at the University of Minnesota	
Bachelors	53
Masters	27
Ph.D. or Ed.D.	9
Other professional doctorates	9

^aSource: American Council on Education and UCLA's national survey of entering freshmen.

^bTop five of eleven possible reasons: Percent who rated the reason as very important.

^cTop five of nineteen possible reasons: Percent who rated the reason as very important.

^dOther options were other private home, apartment or room, fraternity/sorority, and other campus student housing.

admission standards, recruitment strategies, control of tuition and increased attention to the type and amount of financial aid are essential in reaching our goals. Special strategies must be established in order to attract and graduate minority students. . .we must attract students who aspire to the kind of undergraduate education we provide, who have the motivation, skills, and values required to complete it, and who are prepared to be challenged to become active learners. We must assure broad participation in our undergraduate programs from students from every part of the state, region, and nation; by international students and students of color; non-traditional students; and by students with special talents.)

- **What should the undergraduate curriculum be like?** (Our curriculum must embody the traditional values of liberal education: analytical ability; an understanding of the fundamentals of science, the humanities and the arts throughout the academic disciplines; and critical judgment, while at the same time meeting the demands for new interdisciplinary pursuits and the changing local, national and international scene.)
- **How do we provide advising and counseling?** (Perhaps no task is more critical than to improve the quality and availability of the advising a student receives. I want all of our undergraduate students to have timely access to effective advising at all levels and stages of their undergraduate careers and to be challenged to avail themselves of such opportunities.)
- **How do we assure quality teaching?** (We must confront squarely issues having to do with hiring policies, faculty responsibilities and faculty development, access to resource centers, teaching assistant training, evaluation of teaching, and last but not least, good teaching as a requirement for tenure, promotion, sabbaticals and leaves, and salary increases.)
- **How do we provide a good learning environment?** (We must substantially improve our teaching environment. This means that our capital request to the legislature must give priority to classrooms, laboratories, and libraries that can accommodate and employ advanced instructional equipment and audio-visual technologies. The University must be a physically attractive place to come for study, work, and entertainment.)
- **How do we create a sense of community?** (The campus environment and co-curricular programming are fundamental to our creating the sense of community called for in the mission statement [on undergraduate education]).
- **How do we know that we are improving undergraduate education at the University of Minnesota?** (Retention and graduation rates are major indicators that the University is providing its students the kind of education that they want. They are measures of student satisfaction, performance, and development. Combined with other measures, they indicate that the University is providing the requisite classes, scheduling options, and resources needed to graduate.)

Investments in the President's Undergraduate Initiative totaled almost \$10 million through 1993-94, and were allocated through the Vice President for Arts, Sciences, and Engineering (now the Provost for Arts, Sciences, and Engineering). Funds allocated in each of six target areas are listed in Table 10 below. The status reports on the Undergraduate Initiative described annual progress in each of the seven areas that outlined the overall structure for the Undergraduate Initiative. What is highlighted below are those improvements that address particularly salient problems encountered by undergraduates on the Twin Cities campus.

Table 10

Financial Investments in the Twin Cities Undergraduate Initiative^a

Area	1993-94	Past 3 Years
Recruiting and Admissions	\$520,000	\$1,100,000
Advising	\$640,000	\$1,550,000
Course Access	\$920,000	\$2,210,000
Equipment	\$830,000	\$2,240,000
UROP Awards	\$350,000	\$950,000
Teaching/Course Improvements	\$400,000	\$1,650,000 ^b
Total	\$3,660,000	\$9,610,000

^aCLA, IT, and CBS also have invested heavily by using recurring funds from the Reallocation and Restructuring Plan in their undergraduate programs.

^bIncludes some recurring funds

Course Access⁵

A second course-specific initiative focused on reallocating funds to particular units for the specific purpose of offering additional sections for high student demand courses. As previously noted in the summary of CIRP results, problems with course access is a concern of entering students. Surveys of currently enrolled undergraduates as well as of recent baccalaureate graduates suggest that, in fact, course access has been a problem for undergraduates on the Twin Cities campus. Previous surveys of undergraduates had indicated course access problems as one of several factors that delay graduation, and was the basis of several recommendations included in the 1984 *Final Report of the Task Force on the Student Experience*.

A major problem faced by many students is their inability to take required courses in a timely fashion, because the institution has not been able to schedule a sufficient number of sections of course in many basic areas. As a consequence, students sometimes waited several quarters to take a specific course to satisfy the University's general education requirements. By the end of the first year of the Undergraduate Initiative, the Vice President for Arts, Sciences, and Engineering allocated approximately \$400,000 for the provision of additional sections in courses that had typically closed early in the registration schedule. As a direct result, an estimated 6,000 students were able to take courses in the additional sections provided. Another \$600,000 was allocated the second year, although the list of particular courses changed.

Periodic analyses of course closure dates, as well as informal reactions of advisers and students, suggest a lessening of course access problems. Continued attention to alleviating course access problems is particularly important, since such problems are likely to have a negative impact on retention and graduation rates. The Student 2000 System Replacement project will include mechanisms to indicate more accurate information on course demand so that units are better able to meet students' course needs.

⁵ <http://www.umn.edu/registrar/>

Advising

The third question posed in the Undergraduate Initiative was "How do we provide advising and counseling?" Improved advising was the major area of emphasis for the Undergraduate Initiative in 1992-93. The University's needs in the area of advising and counseling were as complex as the University itself. There is no one model or approach to advising that is appropriate for all colleges or for all students, so the University continues to have a variety of approaches to advising. New first-year students need to understand the University and its many opportunities; they need to develop some sense of what we mean by liberal education; and they must make the transition from high school to college life. Undecided students need to focus on the choices the University offers and to explore possible majors. Transfer students need to adjust to a new institution, new programs, and new people. Juniors and senior are delving into their majors and need guidance about those majors, doing undergraduate research, traveling abroad, and considering career or graduate school options. Added to this complexity of student needs was the varied character of the colleges and programs of study. Undergraduate colleges use a combinations of faculty, professional advisers, graduate students, and undergraduate peer advisers to meet student advising needs. Given this diversity, there was no single way to improve the quality of advising.

There had been a number of excellent reports on advising in the prior five years, although many of the recommendations had not been implemented. The Chair of the Senate Committee on Educational Policy (SCEP) and the Vice Provost for Arts, Sciences, and Engineering appointed a small committee to review these recommendations and to establish priorities for implementation. The committee identified aspects of advising which require additional attention, and also advised SCEP on the development of a statement of faculty responsibility in advising.

Several initiatives occurred to support better advising in all settings, and several efforts have been undertaken which targeted particular aspects of advising. These efforts were facilitated by improved communication among advisers across the University.

The Academic Progress Audit System (APAS) was developed by the Registrar's Office to maintain computerized records of the requirements for all our degree programs and match those requirements with a student's academic record. Thus, advisers are now able to readily assess academic progress toward the degree without tedious hand-processing. The system also supports adviser/student exploration of alternative degree program choice by providing information on the progress to date and remaining requirements in a proposed new field of study. This computerized data system has provided tremendous benefits to advisers and students alike. A major benefit of this system has been that students and advisers now have more time to explore student interests and needs. Currently under continuing development is the World Wide Web Home Page for the Office of the Registrar, described in greater detail in the discussions of Chapter XI: User Friendliness.

Special funding of more than \$450,000 was provided during 1992 (and another \$535,000 the next year) to all seven of the freshman admitting colleges on the Twin Cities campus to improve advising of lower divisions students, especially for students who are exploring changes from one undergraduate college to another on the Twin Cities campus. Such advising is of great importance, since so many students enter the University undecided about a major and eventually transfer from one college to another. A typical pattern is that students will first enroll in the College of Liberal Arts and then transfer to the College of Biological Sciences, the School of Nursing, or one of the other Twin Cities colleges that

admit only advanced-standing students. There has been a significant improvement in advising services in the College of Liberal Arts over the past several years. The ratio of lower division students to FTE advisors, for example, has decreased from 577:1 in 1987-88 to 275:1 in 1993-94.

Large Class Improvement Effort

One fact of life at many large, research institutions is that undergraduates encounter large classes, especially at the lower division level. One aspect of the Undergraduate Initiative focused on improvements in those courses that affect large numbers of undergraduates, as well as on reductions in the number of very large classes. Those investments in improving targeted courses continue through the Provost for Arts, Sciences and Engineering.

There have been significant changes in class sizes since the last accreditation review. Table 11 below summarizes more recent statistics on how course size on the Twin Cities campus has changed since the last Accreditation Review. In fall 1990, 61.8 percent of all sections systemwide had fewer than 20 students, and over half of all systemwide lower division sections had fewer than 20 students. On the Twin Cities campus, 46.5 percent of all lower division sections were smaller than 20, a 33.6 percent improvement since 1986. For freshmen on the Twin Cities campus, the improvement was especially significant even in 1990 when the Undergraduate Initiative began. The number of registrations in sections of less than 20 rose 44 percent, while the number of registrations in sections of 50 or more dropped 41 percent by 1990.

Over the past few years departments also have been moving to assign their best faculty to teach the University's largest classes.

Table 11
Changes in Course Size on the Twin Cities Campus Since 1986

40 Largest Courses	Fall 1986	Fall 1993	Percent Change
Lecture Sections			
Maximum	1,069	657	-39%
Average	378	275	-27%
Minimum	239	216	-10%
Average Section Sizes all Courses			
TC Lower Division	35.9	27.1	-25%
TC Upper Division	27.9	25.6	-8%
System Lower Division	31.4	27.4	-13%
System Upper Division	24.3	22.2	-8%

Most recent information on the instructors for the 40 largest classes for fall quarter 1995 is summarized in Table 12 below. Of the 40 courses, 72.5 percent (N=29) were taught by professors (N=25) or associate professors (N=4).

Table 12

40 Largest Classes on the Twin Cities Campus
Fall Quarter 1995

Rank	Enrollment	Course	Rank of Instructor
1	661	Psy 1001-1	Associate Professor
2	458	Th 1101-1	Associate Professor
3	444	Biol 1201-1	Professor
4	442	Th 1101-2	Professor
5	374	Hist 1302-1/H-80	Professor
6	364	Econ 1101-1	Teaching Assistant
7	361	Anth 1101-1/H-80	Assistant Professor
8	291	Pol 1001-1/H-80	Professor
9	290	Biol 1009-1	Associate Ed. Specialist
10	289	Biol 1009-2/H-80	Professor
11	284	Chem 1051-1	Professor
12	276	Chem 1051-2	Professor
13	275	CBN 5103-1	Professor
14	274	Geo 1001-1	Lecturer
15	273	Econ 1102-2	Teaching Assistant
16	261	PubH 3003-1/3004-1 (TTh)	Instructor
17	254	Psy 3604-1	Professor
18	243	Geog 3101-1	Professor
19	243	Phil 1001-1/H-80	Associate Professor
20	242	Soc 1001-3	Professor
21	241	Biol 1101-1	Professor
22	241	Soc 3101-1	Professor
23	239	Chem 3301-1	Associate Professor
24	236	Chem 3301-3	Professor
25	236	PubH 3001-1/3004-1 (MWF)	Instructor
26	235	Psy 1004-1	Instructor
27	233	Soc 1001-2	Assistant Professor
28	231	Soc 3524-1	Professor
29	226	Geo 1001-2	Professor
30	226	Anth 1002-1/H-80	Professor
31	225	HSci 1711-1/3711-1	Professor
32	222	Psy 3801-1	Professor
33	221	Chem 1051-3	Professor
34	221	CBN 3001-1/3002-1	Professor
35	218	Clas 1042-1/H-80	Professor
36	216	Hist 1011-1/H-80	Professor
37	215	Chem 3305-1	Professor
38	213	Phys 1041-1	Assistant Professor
39	210	Chem 1052-1	Assistant Professor
40	208	Phys 1104-1	Professor

In 1989-90, funds were provided for the improvement of large introductory courses in history, anthropology, political science, child psychology, biology, physics, and astronomy, and the revised courses were offered for the first time in 1990-91 and every year since then. In the second year, funds were provided for the improvement of other large introductory courses in history, classics, biology, chemistry, and food science and nutrition, and the revised courses were offered in 1992-93. More than \$500,000 of the funds provided for the Undergraduate Initiative, including funds made available through the Reallocation and Restructuring Plan, were targeted for the improvement of large courses. This included recurring funds for ongoing instructional expenditures and one-time expenditures for course development and equipment expenditures. Another \$635,000 of the funds available for the Undergraduate Initiative in 1992-93 was targeted for the improvement of large courses.

One way to evaluate the potential impact of the large class improvement initiative is based on the numbers of students enrolled in those targeted courses. As the numbers in Table 13 indicate below, over 7,000 students were enrolled in those courses during fall quarter 1993 alone, and nearly all freshmen and sophomore students benefited from the financial investments.

Table 13

Fall Quarter 1995 Students Enrolled in Targeted Courses

Course	N
Introduction to Chemistry	2,000
Introduction to Biology	1,100
Psychology	600
Introduction to Anthropology	600
Astronomy	450
Child Psychology	400
American History	355
World History	320
Introduction to Political Science	300
Principles of Nutrition	275
European Civilization	275
Greek and Roman Mythology	265
History of Architecture/LArch	250

Faculty Mentor Program

Although much of the advising of lower division students in CLA is done by professional advisers rather than by regular faculty, several recent efforts have been successful in increasing the one-to-one contact between students and faculty outside of the classroom. The Faculty Mentor programs seeks to enhance the first-year experience of students advised through Premajor Advising in the College of Liberal Arts. The program does this in two ways. First, it provides opportunities for students with similar academic interests to form small academic and social communities. Second, the program provides students meaningful contact with faculty members actively involved in academic disciplines related to these students' interests.

The program has three components: courses-in-common, a colloquium, and social activities. As a participant in the program, students register for two courses-in-common and one colloquium with a group of 24 other students. These courses include the first-year

writing practice course and another academic course related to a student's area of interest. Participating students may take an anthropology, biology, chemistry, history, sociology, or theater course in addition to their composition course. Each of the courses in the courses-in-common offerings counts towards completion of the University of Minnesota, Twin Cities campus, Liberal Education requirements.

The colloquium is a one-credit course consisting of a series of discussions led by the Faculty Mentor on liberal education, the nature of university life, major exploration, and study skills appropriate to various disciplines. The titles of the colloquia for fall quarter were as follows: Introduction to Sociology; Understanding Cultures; Evolution and Ecology Perspectives; Introduction to Theater; Chemical Principles 1; and American History.

The goals of the premajor colloquium are to help students be active learners, connect with faculty, and become aware of the opportunities and resources available to them through the University of Minnesota community. The colloquium includes a discussion of liberal education, university life, exploration of majors, and study skills. In addition to the colloquium, participating students also have opportunities to arrange and participate in a variety of social activities, including to see plays at the Twin Cities' main state, the Guthrie Theatre, and at Penumbra Theater.

The mentors in the program are members of the faculty at the University of Minnesota, and all are committed to enhancing the undergraduate experience. They come from a wide variety of personal and academic backgrounds. The program is open to student entering fall quarter, who do not have any prior college level coursework or advanced placement credits in English Composition.

Articulation Efforts with Transfer Institutions

Although initial efforts focused on improving the admission process for new freshmen, subsequent activities have begun to address similar issues for students who transfer to the Twin Cities campus. In recent years, transfer students have accounted for approximately half of the baccalaureate degrees awarded on the Twin Cities campus.

In fall 1995, 2,235 undergraduate students transferred to the Twin Cities campus of the University of Minnesota from another academic institution (see Table 14 below). Most New Advanced Standing (NAS) admissions were from a Minnesota postsecondary institution: Minnesota community colleges (N=713), Minnesota state universities (N=227) or Minnesota private colleges (N=215). Another 947 students were from outside the state. In other words, the number of transfer students entering the University's colleges/campuses slightly higher than the 4,356 new high school students who entered the University at the same time. Accordingly, policies regarding the transfer of students into the University and policies regarding students who move between the University's colleges and campuses are of great importance.

Table 14

New Undergraduate Students on the Twin Cities Campus Fall Quarter 1995

Student Type	Enrollment (N)	% of New Students
Total	6,591	
New High School	4,356	66.1
New Advanced Standing	2,235	34.2

In February 1991, the Council of Undergraduate Deans appointed a subcommittee to review issues, policies, and procedures related to transfer of credit between colleges and campuses of the University. At the same time, the University renewed its discussions regarding inter-system transfer issues with the other higher education systems in the state. Later that same year, the Minnesota Legislature passed a law requiring that "the higher education advisory council resolve differences and inconsistencies within and among the postsecondary systems relating to educationally sound transfer of credit policies . . . The legislature intends that credit transfer policies provide for the broadest and most simple mechanisms that are feasible while protecting the academic quality of institutions and programs." The University has been actively engaged in resolving both intersystem and intrasystem transfer issues so that students throughout the state will be better served.

While the vast majority of students make the transition from one institution to another without encountering any serious difficulties in transferring their credit, the three initiatives described below are designed to ease transfer for those students who may have encountered some difficulty in moving from one public postsecondary system to another. Representatives of the four public, postsecondary systems worked collaboratively to develop and implement each of these initiatives. Staff, faculty, and administrative representatives have been involved in this process. Three major initiatives are in various stages of development.

- **The Minnesota Transfer Curriculum.** This effort was not truly a curriculum, but rather a set of common criteria for lower division general education. Each college or campus assures that its lower division general education courses meet these criteria, and certifies when a student has completed the appropriate "package" of courses. The receiving institution accepts the sending institution's certification, and does not review courses individually.
- **Minnesota Standards and Procedures for Transfer.** This is an agreement about common practices and common information for students in all systems. One key feature is a Transfer Specialists' Network to provide better information; each campus now has designated a "transfer specialist" who can answer questions for current or prospective students. All institutions have agreed to develop clear and understandable appeal processes for students.
- **Minnesota Articulation Councils.** Groups of faculty have met across systems to review how courses are taught in their disciplines, with a particular focus on the liberal education disciplines that are at the heart of the Minnesota Transfer Curriculum. Faculty recommend appropriate content and level of achievement for introductory courses in each discipline, which will mean that students who transfer will have a more coherent educational experience.

The many students each year who transfer within the University from one college or campus to another are also potentially at risk of encountering problems. In recent years, the University of Minnesota reached several agreements to help students change more easily from one college to another within the University. The agreements have been approved by all colleges and campuses and were fully operational as of fall 1992.

- Every college and campus of the University of Minnesota system honors each other's lists of courses that satisfy liberal education requirements. If a student in a University of Minnesota college takes a course that meets that college's group distribution requirements, a college to which the student subsequently transfers will also accept that course.

- Every college and campus of the University of Minnesota system honors the courses used by other colleges to satisfy lower division writing requirements.
- Colleges and campuses clearly distinguish in their literature between major requirements and liberal education requirements.
- For courses transferred from another institution, Twin Cities colleges agreed to accept credits to meet distribution requirements, if any college on the Twin Cities campus accepts the equivalent course for its distribution requirements.
- All colleges on the Twin Cities campus now use a common appeal process for transfer decisions, and publicize that process to students.

The institution has made substantial progress, both within the University and across the state, in addressing important issues affecting transfer students, and continues to work both within the University and with other systems to resolve remaining issues with the newly formed MnSCU system.

Freshman to Sophomore Retention and Graduation Rate

The Twin Cities campus loses approximately 19 percent of the freshman class between the start of the freshman year and the beginning of the sophomore year. Retention is one of those goals that has tended to be everyone's responsibility, but no one in particular is held accountable, and thus retention has tended to fall through the cracks. Retention is particularly important to the College of Liberal Arts, General College, and the Institute of Technology, since those three collegiate units collectively account for over 90 percent of the entering freshmen on the Twin Cities campus. Other motivators for addressing the retention problem were the institution's commitment to enhancing the student experience, increasing competition, greater scrutiny from the public, and generally rising expectations regarding service and customer satisfaction. For these reasons, and many others, retention has become particularly important for undergraduate colleges on the Twin Cities campus.

University 2000 focused on the need to increase graduation rates, and the Critical Measure: Graduation Rate⁶ specified a five-year graduation rate of 50 percent for freshmen entering fall 1996 and thereafter. Identifying the factors that contribute to students' decisions to leave the University after their freshman year has been viewed as a first step in increasing graduation rates. The project on increasing freshman-to-sophomore retention rates brought together more specific data on factors contributing to retention, and focused collective efforts to increase retention rates for the three largest colleges on the Twin Cities campus.

A recent report (September 1994) *National Graduation Rate Study: Report One* described data from fifty-two public universities classified as land-grant, Research I, universities. The purpose of this study was to examine the extent to which individual student background characteristics are related to retention at land-grant and public research universities, and to assess the effect of institutional characteristics. The descriptive data from the fifty-two universities showed that the mean four-year graduation rate for women was 13 percent higher than the rate for men; the graduation rate for underrepresented minority students was about 20 percent lower than for white students. The Twin Cities campus of the University of Minnesota had a four-year graduation rate of 14.9 percent, ranking 42nd of the 52 institutions. In a logistic regression analysis of five-year graduation rates, the predicted rate for Minnesota was 58.9 percent, and the actual rate was 41.8 percent, a difference of -17.1 percent, ranking Minnesota as 43rd of 44 institutions in predictability based on student characteristics.

⁶ <http://www.opa.pres.umn.edu/specproj/critmeas/phase1/gradrt-s.htm>

For the State of Minnesota, one of the Minnesota Milestones associated with the goal "Minnesotans will have the advanced training to make the state a leader in the global economy" focuses on the graduation rate of students entering bachelor's degree programs. The target specified for the year 2000 is a five-year retention rate of 43 percent, with a long-term goal of exceeding the Big Ten average graduation rate of 59 percent. Some of the Minnesota Legislature's concerns have been that delayed graduation has resulted in higher state appropriations and in greater expenses for students, and these concerns are also consistent with our goals articulated in University 2000.

The state has enacted financial incentives for the University of Minnesota to increase its retention and graduation rates. Specifically, the 1995 Minnesota Legislature (Chapter 212, Article 1, Section 4, Subdivision 2.) approved the following legislation:

The Commissioner of Finance shall place \$5,000,000 of the second year appropriation in a performance incentive account. The commissioner shall release \$1,000,000 of this amount to the Board of Regents each time the University presents evidence that it has achieved one of the following performance measures:

- Increases at the Twin Cities campus, excluding General College, in the percent of 1996 new entering freshmen ranking in the top 25 percent of their high school class.
- Increases in the rate of retention of 1995 new entering freshmen.
- Increases in the number of 1996 new entering freshmen who are minority students and increases in the percent of faculty hired in 1995-1995 who are women or minorities.
- Increases in the five-year graduation rate measured between August 1994 and August 1996.
- Increases in the number of credits issued through telecommunications between fiscal year 1995 and fiscal year 1996.

Experience and results of periodic surveys have suggested that students drop out for a number of reasons, only some of which are caused by the quality of their student experience. Some students leave because the institution is not a good "fit," others leave for personal reasons or poor grades, some either need or prefer to work full-time for a quarter or a year, others need to "stop out to get their life together." We expect to identify those additional *institutional* experiences that negatively affect our retention rates at the freshman-to-sophomore level. These experiences might include items related to academic life as a student (e.g., classrooms, registration, advising); elements of the ancillary campus experience (e.g., transportation, dorms, food service, safety); and the general campus environment. The purpose of this project on freshman-to-sophomore retention is to determine the percentage of students who drop out because of particular performance and quality factors, so that we might prioritize and initiate additional efforts to improve the freshman year experience.

Of the 3,645 students who started as new freshmen fall quarter 1994 on the Twin Cities campus, based on past statistics approximately one-fifth were unlikely to return for their second year. In early October of 1995, the retention data base indicated that 19.7 percent had not returned for fall quarter 1995. National research findings suggest that five common factors relate to a student's decision not to return:

- **Personal Issues:** Some students leave for a diverse set of unanticipated reasons beyond the control of either the individual or the institution.
- **Institutional Fit:** For some percentage of students, the expected fit between the student's educational and social needs and what the institution provides does not occur. There is little the institution can do to retain these students, but can be clearer with students during the admission process.
- **Academic Performance:** For a variety of reasons, some students do not perform at a level acceptable either to them or the institution. Some students leave and return much later often after their academic motivation increases, or seek out institutions that provide more support to help academically at-risk students.
- **Social and Academic Integration:** One of the predictors of staying at an institution is the degree to which students are well connected to the social, academic and employment opportunities available on campus. Students who feel part of a campus, through contacts with faculty and peers, by living in a dormitory, by being involved in campus activities, or by having a job on campus are much more likely to be retained than students without such connections.
- **Institutional Quality and the Student Experience:** A final set of factors relates to negative campus experiences that range from inaccessible library resources to inaccessible or poor quality advising, from course availability problems to long registration lines, and from mediocre instruction to shoddy classroom and study space.

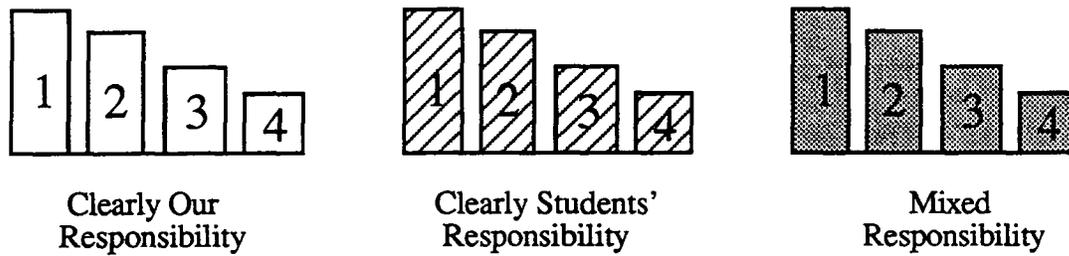
In the first component of this project, the focus is on detailing the specific institutional performance and quality factors that contribute to students decisions to leave during or after their first year on the Twin Cities campus of the University of Minnesota. The second component of the project will be to implement those changes in the student experience that are likely to have the greatest impact on retention.

The current concerns about retention and graduation rates, including the prominence of the Graduation Rate Critical Measure as one of the first five institutional-level critical measures approved by the Board of Regents on December 8, 1994, provides an ideal opportunity for a campus-wide retention effort. Although there is considerable data on the freshman-to-sophomore retention rate by freshman-admitting colleges on the Twin Cities campus, there is not a precise understanding of the most important factors that contribute to not returning for the sophomore year. The purpose of the project is to describe those reasons that are listed above by the standard classification approach described in Figure 11 below, frequently used in quality improvement initiatives. The goal is to identify those retention factors that are "clearly our responsibility" and for which the institution can take action to address issues related to a student's decision to leave the institution.

The overall focus for this retention data analysis phase of the project is the freshmen class of students who started fall quarter 1995 as new freshmen on the Twin Cities campus, although most of the information will pertain to the experiences of students in the three largest collegiate units. Periodic analyses of students' academic records, telephone interviews, focus group discussions, and follow-up surveys are being used to identify the targeted improvement areas in the second phase of the project.

Preliminary analysis for the group of freshmen entering fall quarter 1994 indicates that numbers of new freshmen come into and out of the institution during their first year, but there is only speculation about what accounts for their registration patterns. Figure 12 on the following page portrays that pattern for freshmen students who entered fall quarter 1994.

Figure 11
Classification of Retention Factors



The total group of new students fall quarter 1995 is described by college and racial status in Table 15 below. The fact that the vast majority of new freshmen enters through either CLA, IT, or GC suggests that the project focus on those three collegiate units. Although the project includes all students in those units, particular attention will be given to identifying those factors that correlate with drop-out behaviors for students of color.

Figure 12
Twin Cities Fall 1994 New Freshmen
First Year Registration Patterns

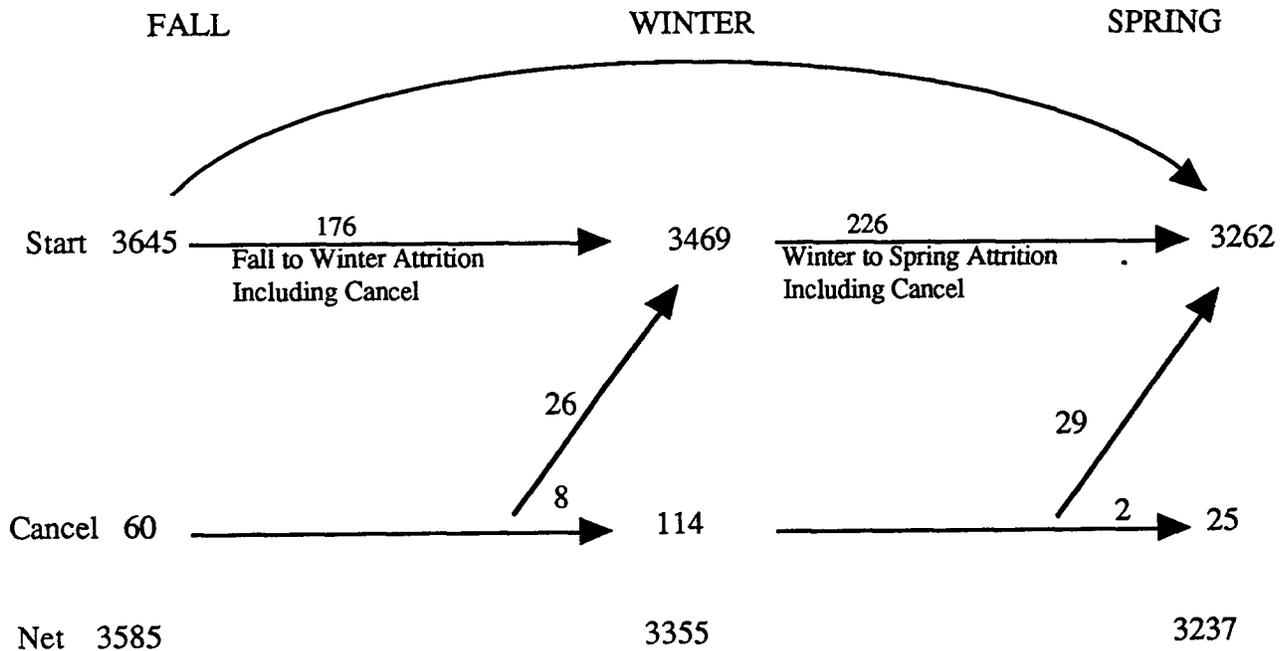


Table 15
College and Racial Characteristics of Entering Freshmen
Fall Quarter 1995

	N	%
<u>College</u>	<u>4,356</u>	
Agricultural, Food and Environmental Sciences	163	3.7
College of Liberal Arts	2,583	59.3
General College	802	18.4
Human Ecology	61	1.4
Institute of Technology	697	16.0
Natural Resources	50	1.1
<u>Racial/Ethnic Category</u>		
African American	211	4.8
American Indian	50	1.1
Asian American/Pacific Islander	398	9.1
Chicano/Latino/Hispanic	101	2.3
Total Students of Color	760	17.4
White/Other	3,557	81.7
International	39	0.9

In addition to the telephone and mailed questionnaire surveys noted above, three additional strategies are being used to determine factors contributing to a student's decision not to return for the second year.

STRATEGY 1: To obtain more detailed information on the interests and expectations of entering freshmen, students completed during New Student Orientation the Freshman Survey of the Cooperative Institutional Research Program (CIRP) plus additional campus-specific questions. A total of 2,832 students completed the Freshman Survey, and highlights from that survey are presented elsewhere in this report.

STRATEGY 2: The academic performance of returning versus non-returning students will be compared, by college, to determine which students do not return, presumably, because of academic performance issues.

STRATEGY 3: Focus group discussions will be held with six groups of non-returning freshmen students (one from IT, four from CLA, one from GC) to discuss students' decisions not to return to the Twin Cities campus.

President's Forums on Teaching and Learning

As part of the President's Initiative on Undergraduate Education, a series of forums have been held for faculty to engage them in discussions about specific aspects of teaching and learning. The forums highlighted examples of excellence from across the campus, and provided a venue for an active exchange of ideas about innovative practice in teaching. Each forum was hosted by the President and was intended to showcase local talent,

highlight issues in teaching and learning, and build community. Faculty participated in teams, of three or four teams from a single department, with deans deciding which departments to invite. While this was logistically complex, the intent was to try to build a critical mass of people in a department who have been exposed to the same ideas, rather than having isolated participation from across campus. To a large extent, this strategy has been successful. Each forum has had about 100 faculty in attendance; there was considerable overlap (a few have come to all of them), but more than 300 different faculty have participated in one or more of the forums.

The following is a list of topics:

- Fall 93: Cooperative Learning
- Winter 94: Using Decision Cases in Teaching
- Spring 94: Technology and Teaching
- Fall 94: Teaching in Large Classes, mini-teaching demonstrations from physics, history, food science and nutrition, and horticultural science
- Spring 95: Added a local component to a national teleconference on evaluation of teaching
- Spring 96: Approaches to effective use of teaching assistants

In a related effort, the President and the Chair of the Senate Consultative Committee jointly appointed a 12-member Committee on Teaching and Learning, that was co-chaired by the chair of the Senate Committee on Teaching and Learning and the Vice President for Arts, Sciences and Engineering. The report, submitted on April 7, 1995 offered five key recommendations and 29 associated specific action items. Although most required redirection of efforts with little associated implementation costs, some required additional funding. The five key recommendations were:

- Support the development of a University-wide culture of teaching and learning centered at the departmental level.
- Develop guidelines that allow colleges and departments to offer flexible, differential assignments for faculty.
- Assure that the reward structure supports departmental responsibility for the quality of teaching and the atmosphere for learning.
- Support department-based initiatives to use effective techniques and technologies for teaching and learning.
- Improve the physical environment for instruction.

Survey of Currently Enrolled Undergraduates

During the past decade, numerous surveys have been conducted on the Twin Cities campus. Some undergraduate surveys have been general surveys on a broad set of issues, whereas others have focused on particular topics (e.g., experiences and opinions about campus diversity). What follows is a brief overview of selected results from the most recent general survey of undergraduates on the Twin Cities campus as described in

the draft report *Undergraduates' Views of the Student Experience of the Twin Cities Campus during the 1990-91 School Year*. The implementation of the Student Experience Critical Measure will include an annual survey of a random sample of currently enrolled students (undergraduates, graduate and professional school students, and students enrolled in credit classes in Continuing Education and Extension/University College).

Concerns within the University about the student experience mirror external forces that call for greater attention to the need for systems that provide feedback about the quality of the student experience. The *Report of the Commission on Postsecondary Education* (January 1992) made the suggestions that "Quality should be determined by the customer and be stated in customer terms. Definable and measurable outcomes should be used to measure progress." While some might argue that the customer is but one of the stakeholders to be involved in defining quality, the emphasis on educational quality and measurable outcomes is consistent with the goals for implementing an annual survey.

There were three broad purposes for the pilot survey. The first purpose was to obtain a reliable picture of the student experience for a random sample of undergraduates. The second purpose was to enable comparisons amongst undergraduate colleges on the nature of the student experience. The third purpose was to contrast the experiences of students of color and other students on campus.

Three sampling strategies were used to select students who were asked to complete the survey. First, a random sample of 2,000 undergraduates enrolled during spring quarter 1991 who also had been enrolled for a least one of the two previous quarters was selected. Second, to insure adequate numbers of students in those colleges with small numbers in the random sample, additional students (N=503) were selected from those colleges for use in the college-by-college comparisons. Third, for those student of color populations with fewer than 100 students in the random sample, additional students (N=262) were selected for each of the four subgroups of students.

The eight-page survey instrument was designed to address all of the major issues of concern relative to the student experience on the Twin Cities campus. It was designed to provide, when possible, comparative information with other surveys (e.g., Bachelor's Degree Candidate Survey and the CIRP Freshman Survey). The response rate for the overall sample of students was 70 percent. Characteristics of the random sample of undergraduates who responded to the survey follow: the majority (55.2%) were enrolled in CLA; the largest percentage (42.2%) were seniors; slightly more than half (52.9%) were female; 11.8 percent were students of color; the mean age was 22.6 years; most (87.6%) were single; and most (81.3%) worked for pay during the 1990-91 academic year.

The most general results of the survey come from a series of questions focused on different aspects of students' satisfaction with their educational experiences on the Twin Cities campus. Those results summarized in Table 16 indicate that about one-fourth of the currently enrolled undergraduates were dissatisfied with their overall campus experiences. College-by-college comparisons indicated slightly higher levels of satisfaction in several of the smaller collegiate units. Although there are differences of opinion about whether or not student satisfaction is an appropriate measure of the student experience, the results suggested major student concerns about campus life. The survey was conducted before the implementation of many of the components of the Undergraduate Initiative.

Table 16

Undergraduates' Expression of Satisfaction with the 1990-91 School Year

Question Response ^a	N	%	Mean	Median	SD
Satisfaction with campus experience since fall quarter started	1,362		4.2	4.5	1.31
Very dissatisfied	66	4.8			
Moderately dissatisfied	111	8.1			
Slightly dissatisfied	190	14.0			
Slightly satisfied	295	21.7			
Moderately satisfied	546	40.1			
Very satisfied	154	11.3			
Satisfaction across years on campus ^a	1,350		4.2	4.5	1.29
Satisfaction with participation in campus life ^a	1,345		4.0	4.2	1.45
Overall life satisfaction (work, school, personal relationships, etc.) ^a	1,356		4.7	5.0	1.24

^aResponses obtained on a six-point scale from 1=Very dissatisfied to 6=Very satisfied.

Assessment of Critical Thinking

The University of Minnesota initiated in the 1990-91 academic year a project to form the foundation to assess the impact of baccalaureate education on students' critical thinking abilities. The two-year project "Discipline-Based Assessment of Critical Thinking Outcomes in Baccalaureate Education" was funded (\$174,550 total across two years) with special allocations from the Minnesota Higher Education Coordinating Board, the Minnesota Legislature, and internal reallocation of staff and resources. The University of Minnesota project was one of six projects funded in both public and private postsecondary institutions as a result of funding guidelines established by the Task Force on Postsecondary Quality Assessment.

The project involved the Duluth, Morris, and Twin Cities campuses in an effort to assess the impact of baccalaureate education on students' critical thinking abilities. It included the collection of baseline data using the Watson-Glaser Critical Thinking Appraisal (WGCTA) and other measures of critical thinking, and proposed the development of discipline-based assessment of critical thinking modeled on the approach used in the WGCTA. The six goals of the pilot project were as follows: (a) to contribute to an assessment ethic relative to critical thinking; (b) to gain a greater understanding of how assessing critical thinking can contribute to the improvement of undergraduate education; (c) to help shape University-wide discussions concerning the nature of liberal education requirements for baccalaureate graduates; (d) to contribute to the assessment of learning outcomes in those colleges/ campuses that have already revised their liberal education requirements; (e) to gain additional experience in using externally developed instruments to assess critical thinking; and (f) to give faculty additional experience in developing procedures to assess higher level thinking skills.

The overall project had two components: (a) a data collection project to establish baseline critical thinking scores for students entering the three campuses; and (b) an effort to bring together teams of faculty to assess the development of critical thinking within the context of courses taught in their discipline. Only the results pertaining to the use of WGCTA on the Twin Cities campus are described here.

In developing the WGCTA, critical thinking was conceptualized as a general ability that could be measured independently of context and subject matter. That is, no specific knowledge or information is required beyond that provided by the test items themselves. According to the test manual, the WGCTA was designed to measure five distinct abilities related to critical thinking:

- The ability to define a problem
- The ability to select pertinent information for the solution of a problem
- The ability to recognize stated and unstated assumptions
- The ability to formulate and select relevant and promising hypotheses
- The ability to draw valid conclusions and judge the validity of inferences

Of the 3,661 entering freshman who participated in Fall 1990 Orientation on the Twin Cities campus of the University of Minnesota, 2,685 were targeted to participate in the testing process. About 91 percent (N=2,432) took the WGCTA. This group represents nearly 89 percent of the student pool available for participation during Fall Orientation. Of the 2,387 students, 1,082 women (45.3%) and 1,290 men (54.0%) participated in the study. Information about age was obtained from 2,347 students: age ranged from 17 to 40 years (M=18.6). The majority of participants (98.8%) were under 24 years of age. Of the 2,154 students who indicated their college, enrollment was distributed as follows: the College of Liberal Arts (CLA) (N=1,438, 66.7%); Institute of Technology (IT) (N=580, 26.9%); College of Agricultural, Food and Environmental Sciences (CAFES) (N=34, 1.6%); and College of Human Ecology (CHE) (N=33, 1.5%).

A comparison of distributions for gender, age and college showed that the participants in this study were similar to those of the newly enrolled students at the University of Minnesota during fall quarter 1990, and therefore, this group was considered representative of the larger group.

The initial data analysis focused on the following five questions: (a) How do entering freshman on the Twin Cities campus, University of Minnesota, perform as a whole on a standardized test of critical thinking like the WGCTA? (b) How does their performance compare to performances obtained using the same instrument with comparable groups at other institutions? (c) What can be learned from this particular instrument about how entering freshman perform? (d) To what extent are differences in performance related to selected student characteristics? and (e) What has been learned about the structure of the WGCTA?

Overall total test scores ranged from a low score of 26 to a high of 78 points (out of a total of 80 possible points). The average score was 55.9 with a standard deviation of 8.8. Another way to look at the results is the percent of items answered correctly. The average percent correct for the total group was 69.9 percent (55.9/80).

An additional perspective on the scores comes from comparative data. In comparison to other groups who have taken the WGCTA, the mean score for entering freshman on the Twin Cities campus was slightly higher (about 2 points) than a comparison group of freshmen on four-year colleges reported in the technical manual for the test (M=53.8, SD=9.2).

Although it is not advisable to use sub-test scores on the WGCTA to evaluate individual proficiency, the average scores for each of the five sub-tests can be used meaningfully to make inferences about the critical thinking abilities of the larger group (and on this basis to ascertain possible general strengths/weaknesses in group abilities or areas where additional instructional emphasis might be placed).

As a group, the students (N=2,387) did better on some types of items than others. They had the highest scores on Interpretation and the lowest for Inference. That is, they did best on items asking them to weigh evidence and decide if generalizations or conclusions based on the given data are warranted. In contrast, they performed least well on items asking them to discriminate among degrees of truth or falsity of inferences drawn from given data. In order from lowest to highest are the average sub-test scores and standard deviations for the entire group on the five types of items included on the WGCTA: Inference (M=9.11, SD=2.7); Recognition of Assumptions (M=11.16, SD=3.7); Deduction (M=11.25, SD=2.5); Evaluation of Arguments (M=11.98, SD=2.4); and Interpretation (M=12.38, SD=2.4).

To check whether differences in entering student performance were related to selected student characteristics or some combination of characteristics, analyses were performed using the following variables: age, gender, college. First, with respect to age, although statistically significant Pearson product-moment correlation coefficients were obtained between age and two of the sub-tests, their magnitude was very small and not meaningful. Comparisons between male and female students indicated there were statistically significant gender differences on the total score and four of the sub-tests (i.e., Inference, Recognition of Assumptions, Deduction, and Interpretation). The average total score and the sub-test scale scores for male students were slightly higher than those for female students.

As indicated in Table 17 below, there were statistically significant differences among the five colleges on all of the sub-tests and the total scores. As was expected, the average scores of students enrolled in IT were higher than those of students enrolled in other colleges on the Twin Cities campus.

Table 17
Differences among Freshmen Admitting Colleges for Entering Freshmen
Fall 1990

Scale	College									
	CLA (N=1,438)		IT (N=580)		CAFES (N=69)		NRES (N=34)		CHE (N=33)	
	M	SD	M	SD	M	SD	M	SD	M	SD
Inference	9.03	2.65	9.67	2.58	8.46	2.58	9.00	2.39	7.61	6.62
Recognition of Assumptions	11.05	3.69	11.81	3.44	10.30	4.21	12.35	3.33	9.12	4.05
Deduction	11.10	2.46	12.05	2.50	10.48	2.32	10.79	2.90	9.94	2.36
Interpretation	12.23	2.33	13.05	2.24	11.58	2.37	12.77	2.03	11.58	2.61
Evaluation of Arguments	11.97	2.37	12.39	2.14	10.83	2.80	11.29	3.29	11.55	1.95
Total	55.38	8.73	58.96	8.35	51.65	8.08	56.21	7.28	49.79	7.85

The average percent correct for the total group was 70 percent, suggesting that there is moderate room for improvement in test performance as a result of college experiences. Differences as a function of admitting college were consistent with differences in admission test data and high school performance of students entering those colleges, and were not a function of gender differences in test performance. Analysis of scale intercorrelations and the results of the factor analysis suggested that the five dimensions included in the WGCTA combine to yield a total score that represents a single critical thinking factor. Although it appears that administering the WGCTA to entering freshmen yields results that might be useful in assessing the development of students' critical thinking skills in college, additional studies will address the extent to which critical thinking scores do predict college performance. Depending on future assessment initiatives, results from this baseline testing may be used to assess the effects of differential college experiences on students' critical thinking skills.

The Teaching Assistant English Program

Given the substantial role that teaching assistants have in instructing lower division students, it is essential that the institution has in place a systematic process to evaluate and prepare teaching assistants for their instructional responsibilities. The institution's overall efforts to help teaching assistants are described elsewhere (The Faculty and Teaching Assistant Enrichment Program). The Teaching Assistant English Program (TAEP) works with non-native-English-speaking teaching assistants on the linguistic, cultural, and teaching skills they need to become successful teachers in the U.S. university classroom. The TAEP is part of the Minnesota English Center, in the Department of English as a Second Language (ESL). About one-half of the current \$204,000 annual budget is provided by the Office of Human Resources (Academic Affairs); the remainder is contributed by the College of Liberal Arts (CLA), the Institute of Technology (IT), the departments hiring the teaching assistants (TAs) enrolled in TAEP courses, and, in a few cases, the enrollees themselves.

The first course for non-native-English-speaking TAs was offered in 1979 and subsequent courses were funded by the ESL program, the Graduate School, departmental fees, and a NAFSA grant. In 1983, the Minnesota Legislature mandated that the University develop a plan to insure that non-native-English-speaking teaching assistants "are proficient in speaking, reading, and writing the English language as it is spoken in the United States." Since that time, funding for the required oral proficiency screening and TAEP coursework has been through the Office of the Senior Vice President for Academic Affairs; in 1989-91, a \$250,000 matching grant was provided by the Minnesota Legislature. There are currently 4.5 FTEs (Assistant Education Specialists and Teaching Specialists) providing instruction and testing during the nine-month academic year and one FTE administrator. All have M.A.s in Teaching English to Speakers of Other Languages (ESL).

The mission of the TAEP is to assess and develop the classroom communication skills of non-native English speaking Teaching Assistants on the Twin Cities campus of the University of Minnesota by: (a) screening non-native-speaking graduate students who may be appointed as TAs for oral English proficiency using the Educational Testing Service's SPEAK Test; (b) providing quarter-long courses including weekly video-taped practice teaching sessions and one-to-one tutorials to help graduate students fulfill the university's employment requirements for TAs who are not native speakers of English; (c) providing a quarter-long classroom observation and tutorial course for TAs who are teaching their own lecture, lab, or recitation sections after completing one or more quarters of TAEP coursework; (d) offering a three-week pre-academic orientation course funded by the Institute

of Technology for its new international graduate students each summer; and (e) responding to undergraduate concerns and complaints about their non-native-English-speaking TAs and disseminating information about the contributions of these TAs.

The components of the program include the following:

- Oral proficiency testing
- Coursework (non-credit)
- Classroom observations and tutorial
- Individual consultations
- National publications and presentations

Program evaluation methods have included tracking oral proficiency tests and TAEP course enrollments, and distributing evaluation surveys to TAEP enrollees at the end of each quarter. Table 18 below summarizes the evaluation of enrollees in TAEP. Undergraduate complaints are also tracked. In 1990, a study was done comparing undergraduate ratings of TAs who had fulfilled the University requirements through enrolling in a TAEP course or courses and passing a final teaching test with ratings of TAs who had passed the oral proficiency test and did not need to enroll. In 1992, the TAEP distributed a questionnaire to 90 departments who had sent TAs to the program for testing or coursework.

Table 18
Satisfaction of Teaching Assistants with TAEP Courses and Instructors

	Fall 89-Spring 94 ^a	Fall 94	Winter 95	Spring 95
Total evaluations submitted	857	61	83	64
Number of enrollments	908	68	61 ^b	43 ^b
Overall satisfaction with course	4.4	4.3	5.2	5.7
Language improvement satisfaction	3.9	3.7	4.8	5.3
Teaching improvement satisfaction	4.0	3.8	5.2	5.5
Instructor rating	4.6	4.6	5.9	6.2
Amount learned	NA	NA	5.0	5.4

^aIndividual years from Fall 89 to Spring 94 are not broken out.

^bIn Winter 95 some TAEP courses were redesigned to include both a large group and a videotaping group session; some enrollees had different instructors for each component of the course and submitted two evaluations. The program also switched from a 5 to a 7 point evaluation, to parallel the format of the university's standard course evaluation forms, and added the question about amount learned in the course.

Several issues and continuing challenges have been identified: (a) increase departmental involvement in international teaching assistant training and testing; (b) arranging for at least one shared classroom observation of the TA with a representative from the department and the TAEP instructor or an exchange of comments about a videotape of the TA's section; (c) using the University's standard end-of-quarter course evaluation in sections taught by TAEP enrollees while they are in the program; (d) encouraging departments to develop tracking and referral systems for student complaints; (e) supporting departments and colleges in their efforts to fulfill the testing and coursework policy for non-native-English-speaking TAs; (f) clarifying the legal status of oral proficiency testing of non-native speakers as a requirement for employment and organizing standard setting sessions to receive input from departments about the cut-off score for the revised Test of Spoken English and the revised SPEAK Test; and (g) improving appreciation of the need for and contributions of non-native English speaking and international TAs and faculty.

Grade Distributions

An analysis of grades received does not, in and of itself, address directly concerns about learning outcomes, although some monitoring of grade distributions and grading policies and procedures is necessary. Two specific concerns have been raised in recent years. The first concern is that grade inflation has occurred, a concern that is shared with other institutions. The second concern is the need for uniform grading systems across all collegiate units. The Senate Committee on Educational Policy has spent considerable time during the 1995-96 academic year discussing campus grading policies and practices, with the goal of adopting a single grading system for all campuses and colleges of the University of Minnesota.

Grade distributions can be examined in several ways, two of which might focus on the overall GPAs of undergraduates or the grades received by all students during a particular quarter. Both types of analyses were considered to be important, especially given the discussion of retention and graduation rates.

The distribution of overall GPAs for baccalaureate graduates from spring 1987 through spring 1995 is summarized in Table 19 below. These results suggest, for example, that the percentage of students with GPAs of 3.81 or higher increased from 5.7 percent in spring 1987 to 9.4 percent in spring 1995.

Table 19

Overall GPA distribution for Baccalaureate Graduates
Spring 1987 through Spring 1995^a

Spring Term	N	GPA Range			
		< 3.00 %	3.00-3.50 %	3.51-3.80 %	3.81-4.00 %
1987	1811	44.1	36.5	13.6	5.7
1988	1746	43.6	37.6	13.6	5.2
1989	1691	41.1	39.0	13.8	6.1
1990	1715	41.5	37.5	14.1	6.9
1991	1825	38.9	38.7	17.0	5.4
1992	1851	37.2	38.6	16.3	7.9
1993	1843	34.2	41.2	16.8	7.7
1994	1737	33.9	40.5	17.6	8.1
1995	1781	30.6	41.8	18.2	9.4

^aIncludes all baccalaureate graduates from all undergraduate colleges for spring quarters 1987 through 1995.

The data on cumulative GPAs of graduates as well as the GPA means for currently enrolled students brought into focus questions about grading practices. One aspect of the discussion resulted in a proposal to create a uniform grading system across all campuses and colleges of the University of Minnesota, since there were nine variations in place at the start of the 1995-96 academic year. The second issue focused on whether or not grade inflation had occurred, rather than that grade changes in the last decade reflected the increased ability levels of undergraduates entering the Twin Cities campus.

Participation in Study Abroad⁷

Another aspect of the Undergraduate Initiative focused on increasing opportunities for students to participate in certain types of co-curricular programs and activities. As the results in Table 20 indicate below, student participation in Study Abroad has not increased in recent years, however.

Table 20
Undergraduate Participation in Study Abroad

Location	<u>1991-92</u> N	<u>1992-93</u> N	<u>1993-94</u> N	<u>1994-95</u> N
Total	551	603	585	612
Western Europe	320	319	261	274
Latin America	122	155	170	190
East Asia	46	62	48	55
Africa	12	14	10	22
Eastern Europe	22	15	22	32
Mideast	13	12	34	9
Other	17	26	40	39

Since the time of the last Accreditation Review, there has been considerable effort given to offering selected credit courses at international sites. Whereas only classes held at the facilities of the International Program in Toledo, Spain (owned by the Foundation Ortega y Gasset in Madrid, Spain) noted in 1985, there are now 18 formal programs coordinated by the University of Minnesota Global Campus, offering University of Minnesota credit at eighteen locations across the world. The review and evaluation procedures for these programs are coordinated through the College of Liberal Arts. Procedures for the approval and evaluation of international programs have been modeled on procedures governing the review of the institution's academic programs offered on campus. In addition to the programs listed below, all of which offer University of Minnesota credit, and collectively enroll annually approximately 450 University of Minnesota students and 250 other students, the institution has numerous exchange programs (about 65 enrolled students annually) and co-sponsors with many other institutions to offer opportunities for our own students to study abroad and

⁷ <http://www.isp.acad.umn.edu/>

transfer credit (about 60 enrolled students annually.) The institution offers University of Minnesota credit to students enrolled on programs at the following locations abroad:

- Graz, Austria (classes held at Karl Franzens University)
- Freiburg, Germany (classes held at the Institute of European Studies, University of Freiburg)
- Tianjin, China (classes held at Nankai University)
- Hargzhou, China (classes held at the China National Academy of Fine Arts)
- Copenhagen, Denmark (classes held at facilities of the Denmark International Studies Program)
- Montpellier, France (classes held at Paul Valery University)
- Nantes, France (classes held at the Institute of European Studies in Nantes)
- St. Petersburg, Russia (classes held at the Herzen Pedagogical University)
- Cuernavaca, Mexico (classes held at the Cemenahuac Language Institute)
- Merida, Venezuela (classes held at the VENUS A Institute of Latin American Studies and Modern Languages facility at the Universidad de Las Andes)
- Toledo, Spain (classes held at the facilities of the International Program in Toledo, Spain which is owned by the Fundacion Ortega y Gasset in Madrid, Spain)
- Madrid, Spain (classes held at the Centro Fundacion Ortega y Gasset)
- Nottingham, England (classes held at Nottingham Trent University)
- London, England (classes held in Central London at the Centres for Academic Programmes Abroad)
- Ecuador (classes and internships held in various locations in Ecuador, arranged by a development agency in Quito, Ecuador)
- India (classes and internships held in various locations in India, arranged by a development agency in Pune, India)
- Kenya (classes and internships held in various locations in Kenya, arranged by a development agency in Nairobi, Kenya)
- Senegal (classes and internships held in various locations in Senegal, arranged by a development agency in Dakar, Senegal)

Student Employment

At any given time, there are 7,000 to 8,000 student employees on the University payroll. These student workers perform a wide range of tasks within the University, working as everything from lab assistants to clerical staff to food service workers. For most of these students, a job is essential to their continuation in college, and the availability of a wide range of positions at competitive pay rates offers a frequently unacknowledged source of financial aid to students.

Student employees at the University of Minnesota earned more than \$138 million in 1994-95. Graduate students, considered collectively, will earn the most in their capacity as teaching assistants and research assistants; this is how most graduate students fund their education. Undergraduate students, considered collectively, will earn more than \$35 million, approximately one quarter of their collective annual tuition bill.

In addition to the pay, there is another advantage to working on campus: national studies have shown that those students who hold jobs on campus develop a closer connection to the institution, and are more likely to be successful in their pursuit of a degree.

One of the distinguishing features of the University of Minnesota is its location in a large metropolitan area that offers students the opportunity for employment while they are attending school. There are numerous on-campus jobs, both for graduate and professional students and for undergraduates. The Student Employment Center reported a total of 8,578

campus hires for 1994-95. Most of the University's employment dollars (75%) go to graduate and professional students in academic employment classifications (e.g., TAs, RAs, Medical Fellow Specialists).

An extensive 1991 study about students' work situations, *Employment Experiences of University of Minnesota Twin Cities Campus Undergraduates*, provided information about the relationship between students' employment experiences and their academic success and progress.

Statistics in Table 21 describe overall results for the total group of respondents as well as comparisons across four year-in-school groups. Additional highlights from the report included:

- Most undergraduates on the Twin Cities campus were employed. Of the total group, 83 percent had worked for pay at some point during the academic year, and the mean hours per week in paid employment was 17.9 hours. The average number of hours employed increased as year in school increased, from 13.9 hours for freshmen to 19.6 hours for seniors. Students spent more hours each week working at a paid job than they did studying (15.8 hours) or attending classes (12.4 hours). There were statistically significant differences among colleges in the percentage of students who worked (lowest was Education and Human Development at 72 percent and highest was Biological Sciences at 93 percent) and the average number of hours worked each week (lowest was the Institute of Technology at 12.9 hours and highest was Natural Resources at 20.6 hours).
- Undergraduates had considerable work experience before coming to the University. Over two-thirds of the students reported that they had a steady job at some point while in high school.
- Students were employed in a variety of settings. Students were most likely to be employed in service and clerical positions: service (27%), clerical (22%), sales (19%), professional/managerial (17%), and unskilled/skilled labor (13%).
- Students perceived both positive and negative effects of working. The five most frequently indicated benefits were: increased ability to work with people (68%), helped to manage time more effectively (55%), made me take more personal responsibility (50%), better understanding of how to apply knowledge (38%), and helped me to speak effectively (34%). The five most frequently indicated negative effects were: tiredness because of work schedule (61%), not done as well in school as I wanted (58%), insufficient time to study for exams (53%), taken fewer credits to have time to work (44%), and received lower grades on courses (44%). Students reported that they experienced a moderate amount of conflict between their school and work responsibilities.
- Students said that they work primarily to cover educational expenses. The three most important reasons for working were "to cover current living expenses," to pay for college expenses," and "to learn new skills."
- Students with jobs on campus versus off campus reported similar work experiences, but different educational experiences. The majority (61%) of the students worked off campus, and there were no significant differences in average salary or overall job satisfaction for the two groups. Students who worked off campus spent more time working, and less time studying than students who worked on campus. Students who worked on campus had slightly higher University GPAs and were slightly more satisfied with their University experiences.

- Students reported that they are satisfied with their jobs. On a six-point overall job satisfaction item, the mean response was between satisfied and moderately satisfied, and was more highly correlated with intrinsic job factors (e.g. nature of the job) than with extrinsic factors (e.g., pay). Job satisfaction was almost identical to students' overall satisfaction with their University experiences.
- Working had a slight effect on grades but a major impact on credits completed. The mean overall GPA for students who worked was 2.84 compared to 3.00 for students who did not work. The greatest impact on credits completed was for students who worked 31 or more hours each week. Students who did not work for pay took an average of 11.5 credits in spring quarter 1990, while those who worked 31 or more hours took 7.6 credits.

Table 21
Paid Work Experiences
Since Fall Quarter 1989 for Undergraduates

Question Response	<u>Total Group</u>		<u>Freshman</u>		<u>Sophomore</u>		<u>Junior</u>		<u>Senior</u>		Chi-sq
	N	%	N	%	N	%	N	%	N	%	
Worked for pay any time since classes started fall quarter 1989	<u>2,548</u>		<u>392</u>		<u>527</u>		<u>648</u>		<u>981</u>		36.32 ^a
Yes	2,122	83.3	292	74.5	427	81.0	545	84.1	858	87.5	
No	426	16.7	100	25.5	100	19.0	103	15.9	123	12.5	
U of M work study	106	4.2	23	5.9	25	4.7	19	2.9	39	4.0	5.87
U of M campus	588	23.1	71	18.1	112	21.3	159	24.5	246	25.1	9.38 ^b
Within mile of campus	239	9.3	41	10.5	49	9.3	43	6.6	106	10.8	8.68 ^b
More than mile from campus	1,325	52.0	168	42.9	262	49.7	349	53.8	546	55.7	20.31 ^a
Primary job	<u>2,018</u>		<u>272</u>		<u>405</u>		<u>515</u>		<u>826</u>		135.81 ^a
Sales	387	19.2	71	26.1	106	26.2	100	19.4	110	13.3	
Service	561	27.8	91	33.5	128	31.6	137	26.6	205	24.8	
Skilled trades	115	5.7	8	2.9	20	4.9	34	6.6	53	6.4	
Unskilled	156	7.7	31	11.4	28	6.9	44	8.5	53	6.4	
Professional	351	17.4	16	5.9	37	9.1	76	14.8	222	26.9	
Clerical	448	22.2	55	20.2	86	21.2	124	24.1	183	22.2	
Other	63	3.0									

^ap<0.001

^bp<0.05

^cp<0.01

Because of the extensive scope of student employment at the University and the importance of student employment as a form of financial aid, current policies and procedures are under review. Two objectives of this review are to explore ways of turning this large number of student employees to be an advantage by creating community, and to encourage employers to undertake a more active and supportive role in their relationship with their student workers, so that they can better understand and thrive in the institution's academic environment.

Community Building Efforts

A sense of community is created when students and faculty treat one another with justice and civility, when students and faculty recognize shared academic purpose, and when students and faculty work together to create a vision for the future.

A number of efforts have been undertaken to support the creation of a better sense of community on campus, mostly under the leadership of the Office of the Vice President for Student Affairs, now the Office of the Vice President for Student Development and Athletics. There are over five hundred student organizations at the University, including a large number of departmental and collegiate academic clubs, boards, and honoraria, all of which help to foster a sense of community. Efforts have continued this year to improve communication regarding the existence and activities of these organizations, through a number of different calendars. It is clear that while students may eventually identify with the University, with a particular college, and with a particular department, it is often their participation in extracurricular activities, whether a student organization or an intramural athletic program, that may first create the sense of belonging that is so important to student success.

The Office of the Vice President for Student Affairs assumed responsibility for the University Community Building Project in 1990, and obtained initial funding from the Fund for the Improvement of Postsecondary Education, and the reallocation and restructuring plan provided \$150,000 annually to support community building projects designed by students, faculty, and staff.

The objectives of the effort have been to provide community building services, including the dissemination of information, to serve as an advocate for community building efforts, and to provide direct financial support to community building projects through a small grants program. A pilot program in the College of Liberal Arts was launched in the fall of 1993 to build bridges between students and faculty. Special programming also focused on commuters, students of color, and students who have transferred from other institutions. The University Community Building Project has held the following types of events:

- "Lunch with Leaders," where members of the Board of Regents, administrators, and politicians served lunch to students
- "New Student Convocation," where new and returning students and their parents were welcomed to the University by members of the University community
- "Student Appreciation Day," where individual units showed appreciation for their students
- Publication of the monthly calendar (What's on Wednesday of events on campus)
- The *Gopher Guide* of campus events which is distributed to students during orientation.

Boynton Health Service offers many programs that contribute to campus community. Their programming brings together groups of students, staff and faculty who share an interest in health. Over the course of the 1992-93 academic year, Boynton Health Service sponsored a Women's Health Fair, Nutrition Month, Alcohol Awareness Week, and Condom Week. Each of these events drew large crowds from all sectors of the campus community. More than 100 students have been involved in a peer education program whereby they provide advice and referrals on health-related issues to students within the Greek System, Residence Life, and throughout campus. Boynton Health Service has entered into a collaborative programming arrangement with Recreational Sports in order to create a more healthy community. In addition, Boynton Health Service makes a concerted effort to work with various student groups, University departments, and programs whenever new projects and initiatives are undertaken.

Disability Services offers a myriad of services to help integrate disabled students into the larger campus community. These services include orientation programs, academic accommodations, advocacy, financial aid advising and guidance and counseling. Disability Services increases the level of understanding and support for disabled students within the University community. During the 1993-94 fiscal year, the University has implemented the first disabled student cultural center in the nation.

The Minnesota Women's Center has undertaken a number of initiatives to facilitate the creation of community. For example, a resource room providing information and referrals, resources and meeting space for women students and women's groups has been established. A monthly calendar of activities entitled "Of Interest to Women" has been developed and distributed to women student organizations, University offices and programs. The student initiative helps to create community by bringing together students, staff and faculty who are interested in positively affecting the campus climate for women students. The student initiative also funds a small grants program which awards \$10,000 to student-focused projects to improve the classroom climate for women students.

The Sexual Violence Program contributed to the community by helping to create a sexually secure environment for students, staff and faculty. They have done so by actively educating the community about sexual violence and related issues. Additionally, the Sexual Violence Program has tried to increase the diversity of its volunteers by actively recruiting students through the various student cultural centers.

Attention to Residential Life

One of the "myths" about the Twin Cities campus is that it is a commuter campus. Although the majority of the students across our undergraduate, graduate and professional programs do not live "on campus," a substantial percentage lives in the areas surrounding the Minneapolis and St. Paul campuses. Statistics for fall 1994 and fall 1995 indicated that 70 percent of new freshmen live in University residence halls.

Residential College, begun in the fall 1994, is another initiative to make the Twin Cities campus a friendlier and more effective way to complete a baccalaureate degree. In its first year, about 100 new freshmen participated in the pilot project. The pilot project was expanded to 160 students in fall 1995 from the Institute of Technology and the College of Liberal Arts who live in specified corridors in Sanford and Territorial Halls. Participants enroll in courses in common with other students, including courses designed specifically for Residential College Students (e.g., "Fiction, Art, Ethics, and U.S. Public Life"). Students also have opportunities to have some of their meals with faculty mentors, and participate in selected events in the Twin Cities (e.g., attend the Guthrie Theatre).

Residential College is expected to expand to 300 new freshmen for next fall, and is a particularly attractive option for new freshmen. In the fall of 1995, a contract was signed with Dinnaken Properties to build a private apartment house to house students in Residential College, and the Board of Regents also endorsed the construction of a new student residence hall.

Initiatives in Student Development and Athletics

Although the Office of the Vice President for Student Development and Athletics has system-wide responsibilities, initiatives are closely linked with collegiate and departmental efforts to improve the student experience on the Twin Cities campus. Some of the major recent initiatives can be summarized as follows:

- Catalog reengineering. A task force has been charged to examine the current practice of publishing and distributing 14 different undergraduate college bulletins. The group has been asked to develop proposals or recommendations that coordinate with the semester conversion time line and that enhance undergraduate academic planning.
- Community building programming. Initial community building efforts have been very successful at the University. Plans are being developed to move into the next phase of community building to include centralization of funding and programming campus-wide events.
- Diversity partnerships. In an effort to coordinate diversity programming in Student Development and Athletics, a unit-wide initiative has been developed. The project will enhance the recruitment and retention of diverse populations of students, staff, and faculty. This initiative will strive to foster relationships within the University and the greater community to create partnerships and strengthen University visibility.
- Residential housing. Housing Services has been authorized to proceed with the planning and construction of additional residential housing to meet the needs of students on the Twin Cities campus. Appropriate agreements with other public parties for the construction of additional residential housing consistent with the needs of the Twin Cities campus will be identified.
- Counseling reengineering. A working group will be appointed to examine the current structure of counseling and related activities on the Twin Cities campus. Programs and procedures that support student needs and concerns will be addressed. Focus will include possible process streamlining, new revenue sources, and new partnerships.
- First-year Experience: University 1001. The First-Year Experience program will be a comprehensive, University-wide orientation program for first-year students. This effort is in collaboration with the Provost for Arts, Sciences, and Engineering. Plans include consultation with the University of South Carolina, a leader in this field. The program is designed to acclimate new students to all aspects of the University and campus life as well as create a sense of community membership. Plans include a for-credit class during fall quarter. The program will stress academic skill building, campus and community values, and campus services and leadership opportunities.

- Transition from school to work. A team of faculty, staff, and students will be charged to assess and formulate a model or initiative to address the issue of how well the University prepares students for the transition from school to the world of work.
- Wellness. The Student Development and Athletics Wellness Initiative will represent a coordinated effort to promote and facilitate the development of a healthy and productive campus community. The program will represent an organized, campus-wide approach to the mental, physical, social, and community health for all members of the University community. Through the Wellness Initiative, the quality of life on campus will be enhanced for students, staff, and faculty, and a campus culture will be created that values and appreciates health and wellness. In addition, a form will be developed to create public policy issues regarding the campus mental, physical, and social health.
- Athletic departments synergy. Men's and Women's Athletics departments have been charged with creating a higher level of synergism between the departments and with working together to enhance services to student athletes. Athletic support units are being analyzed to determine if there are ways to integrate some services to enhance delivery while reducing costs. In particular, joint fundraising and corporate sales opportunities will be renewed.
- Campus safety improvement program. Continuing partnerships with the University Police, Health and Safety Department, and the Minnesota Women's Center enhance this proactive initiative to address concerns about campus safety. Comprehensive physical audits of the West Bank, St. Paul campus, and residence halls are nearing completion, and short-term and long-term solutions are being prioritized. Plans include auditing the entire campus.
- Service learning. We are striving to enhance our current community service endeavors to include partnerships with provosts and collegiate units. The undergraduate experience will include more formalized opportunities for students to learn and benefit from community service experiences.
- System-wide initiatives. A system-wide approach to address issues surrounding Title IX compliance, in addition, system-wide procurement and corporate plans will enhance University buying power. Also system-wide efforts will address student service fees, student conduct code, programs against sexual violence, public health, and legislatively mandated programs.

Undergraduate Research Opportunities Program

The Undergraduate Research Opportunities Program (UROP), currently under the auspices of the Office of the Vice President for Research and the Dean of the Graduate School, is designed to give undergraduate students and faculty members the opportunity to work together on research, scholarly, or creative activities. Started in 1985, this competitive program provides approximately 375 students a year with financial support in the form of a stipend (up to \$800) and/or an expense allowance (up to \$250) while they assist with a faculty member's work or carry out projects of their own.

Full-time undergraduates enrolled in each college on all four University of Minnesota campuses are eligible to apply. Similarly, all University faculty members, whatever their college, rank, or nature of appointment, may serve as UROP sponsors. Students may choose to work with faculty members from their own colleges or from other colleges and campuses thus giving students access to the University's wide range of faculty and research facilities.

Over 5,000 students and faculty across the University have already discovered the benefits of these hands-on research opportunities in laboratories, studios, libraries, and field sites. Participating students have developed detailed knowledge of research methods while their faculty sponsors have gained the assistance of enthusiastic and capable students.

The italicized comments from UROP participants indicate how overall program objectives translate into valuable educational experiences for undergraduates.

- Provides highly motivated undergraduate students with active, in-depth research experiences and opportunities to pursue topics of special interest

"I will readily state that I learned more in one quarter than I have in any class I have taken. In my opinion there is just no beating hands-on experience. I think what sets this kind of research apart from research done in labs for a course is that the student is brought out of his clockwork cocoon and is able to use his own ideas."

- Provides students and faculty with a context for close interaction

"I feel lucky to have been able to work directly with a faculty member. I gained insight into the work and research of the professor. Also I was able to work one to one with the professor which allowed me to really learn and question what I learned."

- Provides students with practical experience, including the design of a project and preparation of a grant proposal, competition for funding, experience with handling unexpected research problems, and development of the expertise necessary to secure further research employment through a faculty member's grant

"The experience of writing a proposal, carrying out the project, and writing a summary of results has given me a better understanding and knowledge of what is involved in a formal social-scientific research endeavor."

- Provides students an opportunity to develop research results worthy of publication and presentation at professional meetings

A College of Natural Resources undergraduate, working on a UROP project to study the effects of suburban expansion on a diversity of wildlife habitats, published a piece in an issue of the *Journal of Forestry*. His career plans include the development of a non-profit organization to build long-lasting homes on suburban woodlots without destroying the wildlife.

- Encourages students to work closely with a faculty mentor who can advise on and assist with future educational and employment options

"For the students I know who have participated, UROP has provided their most meaningful educational experience at Minnesota. It has encouraged them to take themselves, their undergraduate work, and their future seriously."

- Provides opportunities for students to establish contacts with and have their work critically reviewed by professionals in their field of interest

Three UROP undergraduates in Medical Technology competed against M.D.s, Ph.D.s, and post doctoral fellows from the Academy of Clinical Laboratory Physicians and Scientists for Young Investigators Awards. Two of the students won.

- Provides students with employment that will make them more attractive to a graduate/professional school

"The program is vital for students who want to learn whether a research career is appealing to them and also vital for the faculty to learn whether a student has the potential to carry out research."

- Recruits faculty who are strong scholars/teachers to bridge the gulf between faculty research and undergraduate teaching

"I think that this program allows undergraduate students the opportunity to understand the true nature of knowledge gaining that at least for me is extremely difficult to teach in the classroom setting."

The initial phase of UROP included participation from four colleges: Agricultural, Food, and Environmental Sciences; Biological Sciences; the College of Liberal Arts; and the Institute of Technology. Ninety-four students were funded in the spring 1985 round. The program was then expanded for the November 1985 round to include all the undergraduate colleges on the Twin Cities campus as well as students from the Duluth, Morris, and Crookston campuses. Table 22 below indicates the history of proposals received and funded, as well as the allocated and actual funding for UROP. These statistics suggest that the institution has made considerable progress in incorporating research opportunities into the undergraduate student experience.

Table 22

Undergraduate Research Opportunities Program
Proposals Received and Funded

	Proposals Received	Funded	Percent Funded	Allocations	Funding
1985-86	385	285	74.0	\$200,000	\$287,219
1986-87	431	363	84.2	\$200,000	\$257,731
1987-88	356	299	84.0	\$200,000	\$260,280
1988-89	337	266	79.0	\$200,000	\$238,450
1989-90	362	284	78.5	\$250,000	\$255,139
1990-91	382	331	86.6	\$250,000	\$292,739
1991-92	403	349	86.6	\$300,000	\$322,834
1992-93	425	352	82.8	\$350,000	\$338,280
1993-94	442	389	88.0	\$350,000	\$383,939
1994-95	399	362	90.7	\$400,000	\$354,168
1995-96	194	168	86.6	\$400,000	

Evaluation of Teaching

Since the early 1970s, the University of Minnesota has had in place a Senate policy concerning the evaluation of teaching, which includes a statement on how student evaluation of teaching can play a role in certain personnel decisions relating to promotion and tenure and how those evaluations can lead to instructional improvement.

Revised Senate Policy on the Evaluation of Teaching

The University of Minnesota has in place an appropriate policy on the evaluation of teaching that has been recently revised by the Senate Committee on Educational Policy and subsequently approved by the University Senate. On May 14, 1992 the University Senate adopted the Policy on the Evaluation of Teaching Contributions. The purpose of the policy is to facilitate evaluation of teaching for promotion and salary decisions by defining what shall constitute adequate documentation for peer review of faculty teaching contributions. The two key elements are as follows:

- The teaching performance of all faculty, regardless of their academic rank or tenure status, must be subject to evaluation.
- The required evaluation of teaching and promotion decisions must have two major components, peer review and student surveys.

The five standard questions to be included in student surveys are as follows:

- How would you rate the instructor's overall teaching ability?
- How would you rate the instructor's knowledge of the subject matter?
- How would you rate the instructor's respect and concern for students?
- How would you rate the physical environment in which you take this class, especially classroom facilities, including your ability to see, hear, concentrate, participate?
- How much would you say you learned in this course?

Overall Summary of Student Evaluation of Teaching

The insitution believes that the overall quality of teaching at the University of Minnesota is quite good, but certainly acknowledge that there are particular courses for which student evaluations are poor. Chapter XIII describes the programs and services available to faculty and teaching assistants to help them improve their teaching. Results summarized in Table 23 below are the aggregation of 169,027 student evaluations obtained in 3,692 course sections on the Twin Cities campus for 1993-94. For the question "How would you rate the instructor's overall teaching ability?", class means were at the "exceptional" level for 26 percent of the classes and the next highest response category for another 36 percent. The percent of means at the lowest ("very poor") or next lowest category totaled about three percent. We will continue to monitor overall results to track the effects on the various programs and services directed at the continual improvement of teaching.

Student Evaluation of Teaching Assistants

Although there are important public perception factors that must be considered in monitoring the extent to which instruction is provided by teaching assistants, empirical data on the effects of that instruction must be considered. The two central types of data are "customer" levels of satisfaction and measured student learning. Because of the different approaches used to measure student learning across a wide range of courses, it is virtually impossible to compare the learning outcomes achieved by teaching assistants versus tenured and tenure-track faculty.

As indicated previously, the University of Minnesota has in place policies and procedures that enable students to indicate their satisfaction with instruction provided. The results in Figure 13 are informative in that they indicate that, in the aggregate, there are no significant differences in how students evaluate instruction provided by teaching assistants and assistant professors, versus professors. The only item, "instructor's knowledge of subject

Table 23

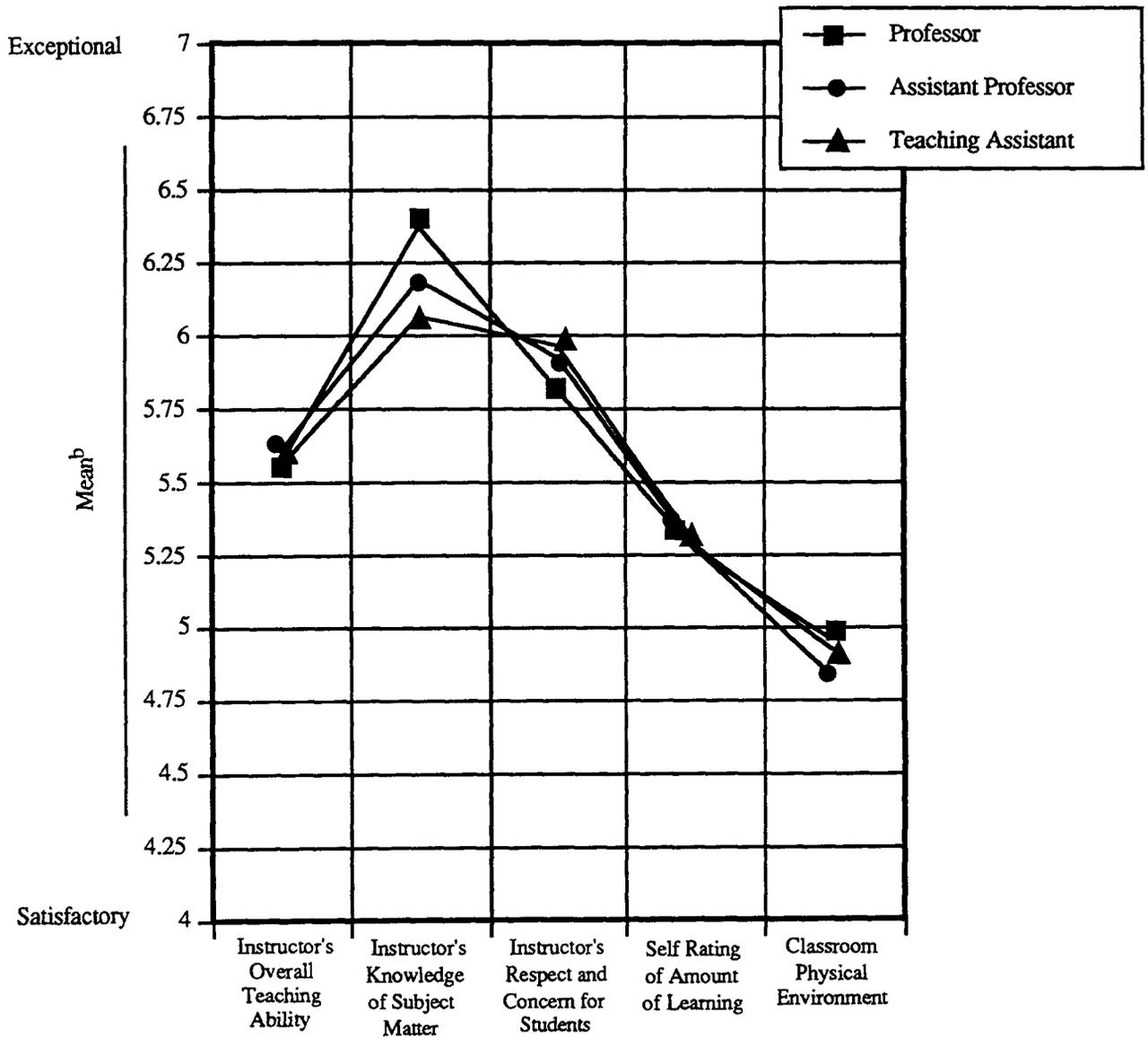
Student Evaluation of Teaching
Class Averages for Five Required Questions
for Twin Cities Campus for 1993-94^a

Question	Response Percentages							Mean
	Very Poor (1) %	(2) %	(3) %	Satisfactory (4) %	(5) %	(6) %	Exceptional (7) %	
How would you rate the instructor's overall teaching ability?	1	2	4	12	19	36	26	5.58
How would you rate the instructor's knowledge of the subject matter?	<1	<1	1	5	10	33	50	6.25
How would you rate the instructor's respect and concern for students?	1	1	3	9	14	31	41	5.91
How much would you say you learned in this course?	1	2	7	19	22	31	20	5.27
How would you rate the physical environment in which you take this class, especially the classroom facilities, including your ability to see, hear, concentrate, and participate?	2	4	8	24	21	25	15	4.95

^aThe results reflect the two major changes in the revised University Senate policy on the evaluation of teaching: (a) the policy requires that each course taught by each instructor be evaluated by students at least once each year; (b) the policy specifies that the five evaluation questions must be included in the questionnaire. The summary statistics reflect evaluation results for 114 units, 3,692 courses, and a total of 169,027 individual evaluation forms. In this table the class mean, rather than individual questionnaires is the unit of analysis; classes with fewer than five questionnaires were excluded.

Figure 13

Students' Rating of Evaluation of Instruction Received During 1993-94 on the Twin Cities Campus^a



^a The results reflect the two major changes in the revised University Senate policy on the evaluation of teaching: (a) the policy requires that each course taught by each instructor be evaluated by students at least once each year; and (b) the policy specifies that the five evaluation questions must be included in the questionnaire. The summary statistics reflect evaluation results for 114 units, 3,962 courses, and a total of 169,027 individual evaluation forms. In this table the class mean, rather than individual questionnaires is the unit of analysis. Classes with fewer than five questionnaires were excluded from the analysis.

^b The rating scale was coded from 1=very poor to 7=exceptional

matter," for which a small but statistically significant difference was found is consistent with the different levels of experience and scholarship of the three levels of instructors. Also worth noting in Figure 13 is the consistently low rating for the item "classroom physical environment." The institution has identified classroom renovations as a significant institutional priority, and have incorporated an appropriate measure and performance goal in the Second Phase Critical Measure: Infrastructure.

Evaluations by Graduates

Periodically, surveys of recent graduates as well as students graduating several years earlier have been conducted. Colleges and universities throughout the nation have become increasingly concerned with the quality of undergraduate education and the assessment of quality. In the late 1980s, several task forces at the University of Minnesota have addressed issues of undergraduate educational quality. In particular, the implementation of the *Final Report of the Task Force on Undergraduate Education on the Twin Cities Campus of the University of Minnesota* (1987) recommended that the Office of the Provost gather and distribute additional information concerning the quality of undergraduate education, including information on how University graduates perceive the quality of the education they received.

The Bachelor's Degree Candidate Survey was a direct result of the Task Force's recommendation. The survey was initiated and funded by the Office of the Provost and Vice President for Academic Affairs, and administered by Data and Reporting Services, located within Student Support Services in the Office of the Vice President for Student Development, but now part of the Office of Planning and Analysis. The survey was first done in the spring of 1988 and repeated in the spring of 1989, with the plan that in the future, the survey would be conducted periodically, depending on funding.

The survey had two primary purposes: (a) to give graduating students an opportunity to comment on their experiences at the University; and (b) to give departments and colleges some consumer feedback on their curricula, student services, and quality of instruction. The survey should be regarded as a consumer satisfaction study, akin to those conducted by many other types of organizations, and sharing the strengths and limitations of this type of study.

The questionnaire was distributed to all candidates for bachelor's degrees on the Twin Cities campus of spring quarter 1989. (Across all colleges, spring graduates make up about a third of all the bachelor's graduates for the year.) Identifiable responses were received from 2,061 of the 2,655 bachelor's degree candidates for a response rate of 77.6 percent. The questions on the survey included the following:

- Ratings of overall satisfaction with University experiences
- Assessments of the quality of instruction in introductory courses, along several dimensions thought to be important quality indicants
- Assessments of instruction in the individual's major field
- Reports of involvement in campus activities
- Assessments of the quality of advising
- Reports of problems with administrative procedures and services
- Assessments of the friendliness of the campus environment
- Assessments of gains made in various areas of knowledge
- Free response comments

Highlights from the report *University of Minnesota, Twin Cities Spring 1989 Bachelor's Degree Candidate Survey: Guide to Interpreting Collegiate and Departmental Data* are presented in Table 24 below. Overall campus results and results for each department were prepared for distribution by the collegiate unit to their departments.

Table 24

Undergraduates' Responses to Selected Items
on the Bachelors Degree Candidate Survey^a

Question	N	%	Mean
Overall Satisfaction ^a			4.6
Very dissatisfied	45	2.2	
Moderately dissatisfied	132	6.5	
Slightly dissatisfied	148	7.2	
Slightly satisfied	303	14.8	
Moderately satisfied	1,087	53.2	
Very satisfied	329	16.1	
Overall Quality of Institution ^b			3.8
Very poor	16	0.9	
Poor	91	5.0	
Fair	575	31.3	
Good	826	45.0	
Very good	306	16.7	
Excellent	23	1.3	
Size of Class ^b			2.6
Very poor	307	16.9	
Poor	556	30.5	
Fair	565	31.0	
Good	304	16.7	
Very good	73	4.0	
Excellent	17	0.9	
Extent to which Courses were Challenging ^b			3.7
Very poor	32	1.7	
Poor	148	8.1	
Fair	613	33.4	
Good	697	38.0	
Very good	302	16.5	
Excellent	43	2.3	
Amount of Instruction Done by Regular Faculty, Rather than Teaching Assistants ^b			3.3
Very poor	166	9.0	
Poor	336	18.3	
Fair	511	27.8	
Good	476	25.9	
Very good	279	15.2	
Excellent	68	3.7	
Availability of Study Space ^b			3.2
Very poor	263	13.4	
Poor	376	19.1	
Fair	482	24.5	
Good	485	24.7	
Very good	264	13.4	
Excellent	95	4.8	
Benefits and Acquired Knowledge and Skills Applicable to a Career ^c			2.7
Very little	211	10.4	
Some	667	32.8	
Quite a bit	702	34.6	
Very much	452	22.2	
Ability to Think Analytically and Logically ^c			3.1
Very little	47	2.3	
Some	394	19.3	
Quite a bit	904	44.3	
Very much	696	34.1	

^aResponses obtained on a six-point scale from 1=Very dissatisfied to 6=Very satisfied.

^bResponses obtained on a six-point scale from 1=Very poor to 6=Excellent.

^cResponses obtained on a six-point scale from 1=Very little to 6=Very much.

CHAPTER VII

GRADUATE AND PROFESSIONAL EDUCATION¹

Graduate and professional education and faculty research and scholarship are part of the same enterprise: both lead to the creation of new knowledge of different types. Each constitutes different activities and requires different programs to support mutually reinforcing activities. Effective graduate instruction involves a rich and vital research environment, and productive faculty research requires the participation of bright graduate students interested in research. Effective professional instruction also requires an environment that supports research and scholarship related to professional practice, and that engages students in a process of discovery that leads to the improvement of practice. Graduate and professional level teaching can be viewed as an extension of a faculty member's research and scholarship.

Graduate and professional education in a comprehensive Ph.D. level institution has these characteristics: (a) the doctorally trained faculty are research-oriented in their interests; (b) graduate students assist in faculty research, thereby receiving their own research training; (c) the institution supports graduate students through fellowships and research assistantships; and (d) graduate students assist with instruction of undergraduates. In recent years the University of Minnesota has given more attention to preparing graduate students for careers in teaching (e.g., the Teaching Opportunities Program for Doctoral Students described elsewhere in this self-study report).

In the United States, about 25 major public and private institutions provide the majority of the educational programs to meet the national demand for specialized graduate training, and there is a somewhat larger number of institutions that deliver specialized professional training programs. Publicly funded doctoral institutions, in particular, supported by a mix of federal, state and private contributions, often have multiple missions and purposes. The University of Minnesota is one of the few land-grant, research, and graduate institutions in the country that combines a basic core of the sciences, literature and the arts, with professional programs in agriculture, education, health sciences, law, management, public affairs, and veterinary medicine. These diverse programs offer graduate students multiple opportunities for interdisciplinary study: bioengineering, human learning and perception, and biomedical ethics. In addition, many special research centers (e.g., Institute for Mathematics and Its Applications, Center for Interest Measurement Research, Minnesota Research and Development Center for Vocational Education, Immigration History Research Center, Limnological Research Center, Dight Institute of Human Genetics, and the Center for Northwest European Language and Area Studies) provide special learning opportunities for research-oriented graduate students. (A more complete listing of centers at the University of Minnesota is included in Chapter XIII: Faculty.)

The recently released national rankings of graduate programs (National Research Council, 1995) indicate that the University of Minnesota has declined slightly in national rankings since the 1982 rankings. The decline is more marked if comparisons are made with institutional rankings in the 1960s. At the time of the last Accreditation Review, the University of

¹ <http://www.opa.pres.umn.edu/specproj/accred/graduate.htm>

Minnesota and the University of Texas at Austin were similar in their rankings based on the composite score. Both had the same number of programs in the top ten, and were tied for sixteenth place among the institutions with the country's best graduate programs. The hopes to expand its base of excellence articulated ten years ago have not been realized, and as the recent results indicate, the University of Minnesota has slipped in national ranking of its doctoral programs. Results from the most recent rankings are discussed in detail later in this chapter.

One of the goals articulated in *A Commitment to Focus* was to change the ratio of undergraduate to graduate students on the Twin Cities campus from approximately 4.5 to 1 to 3.5 to 1 (if all graduate students, including those in programs not under the jurisdiction of the Graduate School are included) or 3.0 to 1 (if only students enrolled in the Graduate School are included). Considerable shift in the relative emphasis given to graduate versus undergraduate education has occurred in the last decade: the current ratios is 2.6 to 1 (if students enrolled in the Graduate School and post-baccalaureate or professional programs are included). Although this change could have altered the public's and prospective graduate students' perceptions of the University of Minnesota, there is little evidence that any dramatic shifts have occurred.

This chapter begins with a descriptive overview of selected information about the institution's graduate and professional education activities and initiatives within the context of University 2000. Second, selected changes in graduate education on the Twin Cities campus since 1986 are noted in four separate sections on graduate student characteristics; faculty; program curriculum and graduates; and program quality. Third, current information about graduate education is contrasted with statistics in the 1986 Accreditation Review (graduate education was one of the three focus areas). This chapter also identifies a number of significant issues relative to graduate and professional education at the University of Minnesota. Other issues specific to professional programs are noted in Chapter V: Collegiate Overviews, Plans, Actions, and Concerns. Although issues concerning the structure and responsibilities of the Graduate School could have been included in this chapter, discussions about the future of the Graduate School were occurring during the same time period that this self-study report was being prepared, and the Advisory Committee chose not to duplicate discussions already underway.

Connections to University 2000

The institution's continuing contributions in graduate and professional education is one of the six strategic areas identified in University 2000. A hallmark of graduate and professional education at the University of Minnesota is that it emanates from research, scholarship, and artistic activity. Faculty at the University of Minnesota are researchers/scholars/artists and teachers. The University's strength as a world-class research institution makes it possible to provide an appropriate range of graduate and professional education programs that are among the very best available in the world.

As with research, a major implication of this strategic area will be to focus the University's programs using the criteria of quality, centrality to the state and academic disciplines, comparative advantage, efficiency/effectiveness, and future demand. It is essential that the University's graduate and professional programs be of the highest quality, so that its students become leaders in their professions. To make the most of its resources, the University will explore ways to promote cooperation regionally and internationally, including the use of distance education to offer certain very specialized programs collaboratively with other research institutions. Discussions are currently underway between the Graduate School and the University of Wisconsin, Madison.

The U2000 strategic planning process identified four sets of interrelated initiatives and associated action plans focused on graduate and professional education, to be accomplished jointly by the Graduate School and the three provostal areas on the Twin Cities campus. The four sets of initiatives are as follows:

- Actively recruit, support, graduate and place the best students from the state, the nation, and the world, recognizing that the excellence of its graduate and professional programs is dependent upon the quality of their students. Targeted in this effort will be members of traditionally underrepresented populations.
- Maintain and enhance the quality of core-discipline graduate and professional programs. The University must: ensure, by maintaining or improving their levels of program quality, that its graduate and professional programs are top-ranked; educate and prepare a new generation of the highest quality professionals, researchers, and faculty, by enhancing the teacher education programs for graduate and professional students who aspire to teaching careers; and support graduate and professional students in successfully completing their programs and finding placements appropriate to their training.
- Recognize the great potential of interdisciplinary programs to make breakthroughs in basic and applied research, and actively improve the educational role of and access to interdisciplinary programs. The University will develop and promote interdisciplinary degree programs; and increase interdisciplinary opportunities for students by encouraging student affiliation with University, national, and international research centers.
- Increase the number and quality of practitioner-oriented/applied professional programs, especially at the master's level, in response to state and national needs. The University will provide incentives to offer practitioner-oriented/applied postbaccalaureate professional programs in strong research areas where they can build upon and enhance the University's research mission, while remaining conscious of mission differentiation within and between the state's higher education systems; and ensure that its professional programs are closely tied to their respective professional communities, for example, the agriculture, business, education, health, legal, government, and social service communities. The University will encourage special postgraduate programs to enhance lifelong learning opportunities for professional work forces in business and industry and in public and private agencies and organizations.

The reorganization into three provostal areas on the Twin Cities campus in July 1995 has implications for the institution's graduate and professional programs. The Provost for the Academic Health Center has operational responsibility for the following collegiate units: the School of Dentistry, University of Minnesota Health Systems, the Medical School, the School of Nursing, the College of Pharmacy, the School of Public Health, and the College of Veterinary Medicine. The Provost for Arts, Sciences, and Engineering has responsibility for the following units: the College of Biological Sciences, General College, the Institute of Technology, the College of Liberal Arts, and University College. The Provost for Professional Studies has direct operational responsibility for the following collegiate units: the College of Agricultural, Food, and Environmental Sciences, the College of Architecture and Landscape Architecture, the College of Education and Human Development, the Minnesota Extension Service, the College of Human Ecology, the Humphrey Institute of Public Affairs, the Law School, the Carlson School of Management, and the College of Natural Resources. Although the majority of the institution's professional programs are in the Academic Health Center and Professional Studies, several (e.g., communication disorders, clinical psychology, journalism, and engineering) are in Arts, Sciences, and Engineering. Brief discussions of each of those collegiate units are provided in Chapter V of this self-study report.

Changes in Graduate School Policies and Procedures

Detailed descriptions of policies and procedures of the Graduate School are contained in the several publications of the Graduate School. The Graduate School informational brochure gives an overall picture of the Graduate School, and the bulletin of the Graduate School provides the necessary details that primarily affect students. The Director of Graduate Studies Handbook outlines procedures that apply to departments that offer graduate level instruction. The decade since the 1986 accreditation review of the University's Twin Cities campus has been a period of considerable change for the Graduate School. The following are the major changes and events that occurred subsequent to that review.

Change in Administrative Title

Until the 1980s, the Graduate School Dean functioned in the broader research coordination capacity, although the title was not reflective of those responsibilities. With a new appointee in 1992, the position of Graduate School Dean was redefined as "Vice President for Research and Dean of the Graduate School," giving visibility to some functions previously only informally carried out by the Dean. Additional functions were added to make the position clearly responsible for leadership and coordination of University research initiatives and policy.

Changes in Decision-Making Authority and Enhanced Data Management Services

In 1992, an internal committee of graduate faculty and graduate students was asked to review the Graduate School with the general goal of making recommendations to improve graduation education. The committee reviewed policies and practices of the Graduate School that enhance program efforts and effectiveness. In its report of December 1992, the committee made 23 recommendations covering a wide range of issues related to the Graduate School and graduate education. The Graduate School's governance committees considered the recommendations and adopted most of them in 1993. Most significantly, adoption of the recommendations gave programs decision-making authority with respect to admission, and the appointment of individuals to the graduate faculty and Limited Teaching Status. The changes were subject to cumulative review and oversight rather than to case-by-case review. Before this change, decision-making authority in these key areas was transferred to programs; each program's standards, processes and goals were reviewed and approved by a Graduate School committee.

Significant Budget Reductions in O&M Funding

Significant reductions in the O&M budget of the Graduate School has occurred in recent years. A sizable portion of these cuts has been taken from staff positions. As a result, the number of Graduate School staff is believed by some to be at the very minimum required to carry out its responsibilities at a time when the Graduate School is expected to assume increased responsibility for enhanced data management for its programs.

Changes in Recruitment, Funding and Diversity

Procedures for recruiting high-quality graduate students have been expanded, in part to attract students from other states and countries. One of the comments in the 1966 NCA Accreditation report addressed the questions of the composition of the student population: "here again (referring to the Graduate School) there is unusually homogeneity, 378 of the 1,267 graduate students entering in the fall of 1965 having been Minnesota graduates." At

the time of the 1986 Accreditation Review, about 50 percent of graduate students were from the State of Minnesota; currently, about 44 percent of graduate students come from Minnesota. Funding for some functions of the Graduate School (e.g., tuition reimbursement policies for graduate students employed by the University of Minnesota and fellowships for graduate students) have increased in the last decade, making the University a more attractive competitor for high-quality graduate students. As part of a broader University plan to become a more diverse institution, increasing numbers of graduate students of color have enrolled in graduate programs, although considerably more progress is needed in the coming years. Recent efforts to attract and retain graduate students of color are discussed in Chapter X: Diversity.

Graduate Student Characteristics

This section is a synopsis and discussion of information that pertains primarily to graduate students; similar program specific information for professional programs is contained in the description of the collegiate unit in Chapter V. Overall descriptive characteristics of students enrolled in the Graduate School, as well as in specific professional programs, are available for review.

Recruitment of Graduate Students

The University of Minnesota is a leader in the research productivity of its faculty and is among the better graduate institutions in the country. While a number of programs are highly regarded, as a whole the University of Minnesota is not among those very few institutions considered to be "among the best in the country." Results from the recent NRC ranking of doctoral programs indicated that the University of Minnesota ranked 15th in institutional rankings based on the sum of scores for programs having ratings of 3.5 and above for educational effectiveness. Although there are numerous other criteria that might be useful in assessing how good the University of Minnesota is as a place to receive a graduate level education, one critical index is the number and quality of potential graduate students who seek admission to the Graduate School.

The numbers of applications to the Graduate School have fluctuated somewhat over the last decade, from a low of 8,928 in 1985-86 to a high of 12,219 in 1993-94. Much of the decrease of applicants is attributed to a decline in applications from international students coinciding with a 1994 increase of \$20 in the application fee for international students (the increase for U.S. students was \$10). Applications from international students represent approximately 40 percent of our applicant pool. Statistics in Table 25 for three time periods from 1984-85 through 1994-95 also indicate the percentages of students applying to the Graduate School who are admitted and, of those who were admitted, the percentage that subsequently enrolled at the University. Across all colleges, somewhat over half of those who apply are admitted, and of those admitted, slightly over half actually enroll. Of more importance than overall figures, which can mask important differences among units, are similar percentages for the several colleges on the Twin Cities campus and for the separate graduate programs in each of the colleges. College percentages vary widely, and departmental percentages (too detailed to report in this self-study report) vary even more widely. International students represent approximately 24 percent of the total graduate enrollments at the University of Minnesota. In 1993, the national average for enrollment of international students at research universities was 21 percent. The proportion of enrolled international students has been quite constant during the past 10 years. Countries having major representation in the University graduate student body include: the People's Republic of China (23 percent of international students registered), India (11%), and Taiwan (9%).

Test Scores of Interested Potential Graduate Students

Although there are variations among large research universities in the extent to which they use standardized test scores as the basis for admitting students, the Graduate Record Examination (GRE), developed and operated by the Educational Testing Service (ETS), continues to be the most widely used test for admitting students to graduate school. The summary test scores provided by ETS are one index of the quality of potential graduate students at the University of Minnesota.

Programs' practices continue to vary with respect to the use of GRE scores as a prerequisite for admissions, as they did at the time of the 1986 Accreditation Review. Of the 150 graduate programs surveyed, 98 (65%) currently require GRE scores for admission, either for all applicants or for a subset of applicants (e.g., domestic applicants or Ph.D. applicants). Fifteen programs (10%) recommend, but do not require, submission of GRE scores as part of the application, and 25 (17%) programs, including all of the clinical medical fields, do not require the GRE. Some of these require other test results, however, such as the Graduate Management Admission Test, Medical College Admission Test, or the Miller Analogies Test, and 12 programs require either GRE scores or scores from one of these other tests. Although not included in detail in this report, test scores are an element in admission decisions in many graduate programs.

Applications and Admissions²

Whereas the numbers of applicants to graduate programs has increased for most years from 1985-86 to 1994-95 (N=8,928 versus N=11,799, respectively), the number of new enrollees has remained relatively constant over the past ten-year period (N=2,680 for 1985-86 versus N=2,607 for 1993-94, respectively). New enrollees for 1994-95 declined to 2,430.

More detailed statistics, by three-year periods and collegiate unit, are contained in Table 25. This table also indicates the percentages of students applying to the Graduate School who are admitted and, of those who were admitted, the percentages that subsequently enrolled at the University. Across all colleges, somewhat over half of those who apply are admitted, and of those admitted, slightly over half actually enroll. Of more importance than overall figures, which can mask important differences among units, are similar percentages for the several colleges on the Twin Cities campus and for the separate graduate programs in each of the colleges. College percentages vary widely, and departmental percentages (too detailed to report in this self-study report) vary even more widely.

Enrollments and Degree Production³

Statistics on the number of degrees awarded by major field/graduate program areas were compiled for the 14 years preceding the 1986 Accreditation Review and have been updated for each of the past ten years. As the figures in the summary Table 26 indicate, there have been 15,709 master's degrees, 6,143 doctorate degrees, and 141 other degrees awarded by the Graduate School during the ten-year period since the last Accreditation Review. The number of master's degrees ranged from 1,150 in 1973-74 to 1,638 in 1994-95. The number of doctorates ranged from 459 in 1981-82 to 707 in 1993-94. These figures do include non-Graduate School graduate degrees such as those offered by the College of Agricultural, Food, and Environmental Sciences, the College of Education and Human Development, the School of Public Health, and the Law School.

² <http://www.grad.umn.edu/grad/admis/html>

³ <http://www.opa.pres.umn.edu/studata.stix/f9502w.htm>

Table 25

University of Minnesota Graduate School Applications and Percentages Admitted and Enrolled
for the Last Three-Year Period in the Previous Accreditation Review
and the Three-Year Time Periods from 1985-86 through 1994-95 by College^a

College	1982-83 to 1984-85			1985-86 to 1987-88			1988-89 to 1990-91 ^d			1992-93 to 1994-95		
	Total Applications	Percent Admitted ^b	Percent Enrolled ^c	Total Applications	Percent Admitted	Percent Enrolled	Total Applications	Percent Admitted	Percent Enrolled	Total Applications	Percent Admitted	Percent Enrolled
Academic Health Center												
Dentistry	661	15.2	49.9	791	14.2	64.3	794	12.1	84.4	699	15.6	37.6
Medical School	581	51.1	45.2	652	39.4	45.1	831	30.7	48.2	1,053	25.4	56.6
Nursing	644	79.9	64.9	321	70.7	74.9	306	75.8	72.8	589	74.0	78.4
Pharmacy	254	63.3	42.9	280	52.1	48.6	313	45.7	38.5	350	41.1	43.1
Public Health	530	64.3	38.1	282	59.2	74.9	349	56.2	65.8	472	52.1	54.1
Veterinary Medicine	180	72.6	54.6	188	67.6	56.7	180	55.0	80.8	204	53.4	78.9
Arts, Sciences, and Engineering												
Biological Sciences	452	44.9	42.0	358	35.2	48.4	358	33.2	56.3	504	16.5	57.8
General College	-	-	-	-	-	-	-	-	-	-	-	-
Institute of Technology	7,136	55.7	38.6	7,594	53.0	42.7	7,606	61.5	30.8	7,178	42.4	45.7
Liberal Arts	6,867	50.2	43.4	6,628	50.7	43.8	8,279	40.9	43.9	11,120	26.5	47.7
Professional Studies												
Agr, Food, & Environ Sciences	1,538	57.4	43.8	1,295	61.9	48.6	1,141	55.3	55.2	1,083	53.7	47.6
Architecture/Landscape Architecture ^e	-	-	-	-	-	-	-	-	-	2,889	60.8	64.0
Education & Human Development	2,119	64.0	60.1	2,070	66.9	67.2	1,929	55.2	67.5	1,799	44.9	65.8
Human Ecology ^f	353	57.0	53.1	846	53.2	69.8	913	39.3	73.3	977	39.9	60.0
Humphrey Institute of Public Affairs	530	64.3	38.1	676	68.9	47.4	768	57.6	46.6	1,050	57.8	40.5
Law School	6	41.7	33.3	-	-	-	-	-	-	-	-	-
Management	3,978	66.4	62.9	4,196	64.2	70.9	4,638	54.6	69.2	4,718	59.0	28.2
Natural Resources ^g	248	73.9	33.9	461	52.7	41.6	422	43.4	61.7	1,329	38.6	65.5
Total ^h	27,010	56.6	47.9	27,716	54.6	52.9	30,092	45.8	53.6	35,951	39.3	54.1

^aPercentages for the four 3-year categories were calculated based on percentages for each of the years.

^bPercent of the total applicants who were admitted.

^cPercent of those admitted students who subsequently enrolled.

^d1991-92 is not reported here to maintain three-year aggregates

^eArchitecture and Landscape Architecture data are for two years only: 1993-95

^fFormerly Home Economics.

^gFormerly Forestry

^hAbout five percent of the applications each year were coded as "inter collegiate." These are not described on a line but are retained in the totals.

Comparative enrollment and degree production in programs in the Graduate School provided the overall context for the Advisory Committee's discussion of graduate education at the University of Minnesota. As the information in Table 27 indicates, the University of Minnesota was ranked 14th when compared with 50 institutions in the Council of Graduate Schools with its 1994 enrollment of 8,497. The institution was 4th for the number of doctorates awarded (N=706) and 24th for master's degrees granted (N=1,731).

Table 26

Numbers of Graduate School Degrees Awarded
on the Twin Cities Campus of the University of Minnesota,
1971-72 through 1994-95

Year	Masters	Doctorates	Other
1971-72	1,304	594	33
1972-73	1,183	564	34
1973-74	1,150	558	33
1974-75	1,275	541	35
1975-76	1,235	493	23
1976-77	1,403	510	43
1977-78	1,491	494	22
1979-80	1,231	484	10
1980-81	1,316	511	15
1981-82	1,434	459	29
1982-83	1,421	467	25
1983-84	1,500	495	17
1984-85	1,427	514	14
1985-86	1,448	556	16
1986-87	1,443	507	14
1987-88	1,578	527	13
1988-89	1,544	541	15
1989-90	1,605	633	16
1990-91	1,611	706	17
1991-92	1,591	651	12
1992-93	1,626	629	14
1993-94	1,625	707	14
1994-95	1,638	686	10
Total 1971-72 - 1980-81	12,889	5,212	271
Total 1975-76 - 1984-85	13,759	4,890	221
Total 1971-72 - 1984-85	18,671	7,147	356
Total 1985-86 - 1994-95	15,709	6,143	141
Total 1971-72 - 1994-95	34,380	13,290	497

Table 27

Comparative Graduate Enrollments and Doctorate and Masters Awarded
for 30 Largest Graduate Schools^a

Institute	Fall 1994 Enrollment		1993-94 Doctorates Awarded		1993-94 Masters Awarded	
	N	Rank	N	Rank	N	Rank
University of Texas, Austin	11,503	1	712	3	2,609	5
Ohio State University	10,734	2	702	6	2,408	7
Pennsylvania State University	10,513	3	530	13	1,772	22
Wayne State University	10,000	4	—	—	2,239	9
University of Wisconsin, Madison	9,919	5	782	2	2,053	13
University of Southern California	9,905	6	504	16	2,851	2
University of Michigan	9,816	7	704	5	2,572	6
University of South Carolina	9,629	8	288	44	1,947	17
Boston University	8,980	9	281	47	2,725	3
University of Illinois, Urbana/Champaign	8,875	10	663	7	2,621	4
University of Maryland, College Park	8,769	11	526	14	1,524	31
George Washington	8,607	12	—	—	2,304	8
University of California, Berkeley	8,511	13	891	1	1,807	20
University of Minnesota	8,497	14	706	4	1,731	24
University of Pittsburgh	8,023	15	329	36	2,170	11
University of California, Los Angeles	7,994	16	619	8	1,966	15
Georgia State	7,892	17	—	—	1,460	34
Michigan State	7,820	18	418	23	1,605	27
University of Washington	7,815	19	455	19	1,959	16
Arizona State	7,632	20	—	—	1,877	18
Harvard University	7,436	21	551	12	2,055	12
Nova Southeastern University	7,399	22	415	24	1,833	19
Texas A&M	7,066	23	588	9	1,470	33
Temple University	7,058	24	289	43	3,377	1
Rutgers New Brunswick	7,053	25	375	27	—	—
University of Florida	6,857	26	436	22	1,737	23
University of Arizona	6,543	27	442	20	1,365	47
University of Cincinnati	6,520	28	272	48	—	—
Stanford University	6,476	29	551	11	1,995	14
Purdue	6,416	30	495	17	—	—

^aSource: Council of Graduate Schools/GRE Survey of Graduate Enrollment.

Teaching Opportunity Program for Doctoral Students/Preparing Future Faculty

Funded by the Bush Foundation in the fall of 1992, the Teaching Opportunity Program for Doctoral Students (TOPDS) is a year-long program offered to doctoral students in participating departments or graduate programs. The program's goal is to provide opportunities for students to receive training in good teaching practices -- combined with mentoring by successful teachers -- in preparation for their future roles as college and university teachers. Approximately 100 students participate in this program per year. Table 28 describes the distribution of campus and program affiliations of the TOPDS participants. TOPDS is discussed in some detail because it reflects the increasing attention that doctoral programs are placing on preparation of graduates for being as effective in teaching as in research and scholarship.

TOPDS emerged from a Bush Foundation invitation to the University of Minnesota to propose a grant to prepare future faculty to serve more effectively in the colleges and universities of the region. This invitation was inspired by statistics gathered in 1989 to support the Bush Faculty Development Program for Excellence and Diversity in Teaching. The statistics indicated that prior to accepting their first faculty position, 44 percent of current University of Minnesota faculty had no preparation in teaching and 34 percent no experience in teaching. TOPDS was developed to offer doctoral students and postdoctoral fellows the chance to develop their teaching skills, receive mentoring from graduate faculty, and prepare for the academic job search through the development of a teaching portfolio.

Preparing Future Faculty program (PFF), funded by the PEW Charitable Trusts, is an outgrowth of the success of TOPDS. The Minnesota PFF cluster consists of the University of Minnesota-Twin Cities and five partner institutions--the University of Minnesota-Morris, Macalester College, Minneapolis Community College, Metropolitan State University, and St. Olaf College.

TOPDS was funded by the Bush Foundation in November 1992 for an initial two-year period and was refunded for another three-year period. TOPDS participants select a course in teaching in higher education, choose a faculty mentor, prepare for and teach a minimum of three class sessions of an existing course as a teaching assistant or apprentice teacher, receive feedback on their teaching from the faculty mentor and a TOPDS teaching consultant, and create a teaching portfolio with the help of the teaching consultant.

The Minnesota cluster of Preparing Future Faculty was funded by the PEW Charitable Trusts in June 1994 and began operation in September 1994. The program is administered by the Association of American Colleges and Universities and the Council of Graduate Schools. Participants work with cluster campus faculty mentors, develop a learning plan to examine the faculty role, participate in a videotaped teaching opportunity on the cluster campus, take part in workshops on the faculty role, and interact with other participants in discipline-based cooperative learning groups.

Beginning with the 1995-96 academic year, the objectives of the consolidated TOPDS/PFF program have been as follows:

- Assist doctoral students in acquiring basic information about the teaching and learning process and faculty role at a variety of types of institutions of higher education.
- Help participants gain a realistic, balanced perspective on the skills, tasks, and commitment required for successful careers as faculty members and help them examine their own fit with a career in higher education.
- Provide participants with a faculty mentoring experience at the type of institution in which they plan to seek a faculty position.
- Provide participants with an opportunity to demonstrate and document their teaching skills.
- Help participants market themselves in competition for faculty or other professional positions.
- Improve the quality of undergraduate and graduate instruction at the University of Minnesota and at the institutions where graduates of the University are employed by preparing doctoral students to teach and fulfill multiple aspects of the faculty role.

Table 28

1993-95 Program Participation in Teaching Opportunity Program for
Doctoral Students/Preparing Future Faculty

College	<u>Grad Program Approval</u>	<u>Participants</u>	
		Finished	Current
<u>Teaching Opportunity Program for Doctoral Students</u>			
Carlson School of Management	6	7	7
College of Agr., Food, and Environ. Sciences	2	3	6
College of Biological Sciences	2	10	20
College of Education and Human Development	4	7	29
College of Human Ecology	2	14	10
College of Liberal Arts	12	24	56
College of Natural Resources	3	8	4
College of Veterinary Medicine	3	10	8
Institute of Technology	9	19	32
Graduate School	1	3	8
Medical School	1	2	12
School of Public Health	2	0	4
Total	47	107	196
Total Participants to Date (10/15/95):			303
<u>Preparing Future Faculty</u>			
<u>Cluster Campus</u>	<u>Year One</u>	<u>Year Two</u>	<u>Total</u>
Macalester College	5	7	12
Metropolitan State University	3	1	4
Minneapolis Community College	4	3	3
St. Olaf College	4	9	14
University of Minnesota-Morris	3	1	4
Total	19	21	40

To complete the program and receive a letter of recognition and certificate of program participation from the Graduate School, students enroll in GRAD 8100: Teaching in Higher Education and GRAD 8150: Practicum for Instructors in Higher Education. These three-credit courses are scheduled for fall, winter, and spring quarters. An additional three-credit course, GRAD 8200: Presentation and Verbal Interaction Skills for the Future Professoriate, is available for work on classroom, small group, and one-on-one communication skills.

TOPDS participants and mentors completed an overall program evaluation at the end of spring 1994. Participants mentioned the multidisciplinary and the community-building orientations of the program as important features. A number of participants expressed the opinion that the program should be required of all doctoral students graduating from the University of Minnesota.

The relationships participants established with their faculty mentors also contributed to participant satisfaction with the program. The primary factors contributing to these successful relationships were the mentor's enthusiasm for mentoring and teaching. According to the doctoral students, faculty mentors provided field-specific feedback that cannot be gained elsewhere.

During the spring of 1994, faculty mentors who had completed work with TOPDS participants met in focus groups to discuss their evaluations of the doctoral candidates, reflect on the past year, and suggest changes for the future. Overall, four themes emerged from these meetings: (a) mentors are frustrated with the research orientation of the University; (b) TOPDS helps make teaching a topic of conversation among faculty; (c) TOPDS improves doctoral student and mentor teaching; and (d) undergraduates potentially benefit from TOPDS activities if they are instructed by teaching assistants who participated in TOPDS. Mentors repeatedly articulated the need for changing attitudes toward teaching. They voiced lingering concerns about propelling new doctoral graduates into environments where they are expected to teach well, yet have not been trained for and will not be rewarded for the task. Mentors also talked about the impact TOPDS had on their own teaching and mentoring skills.

Graduate School Fellowships and Doctoral Dissertation Fellowships

The purpose of the Graduate School Fellowship program is to assist directly in the recruitment of outstanding students to University of Minnesota graduate programs by providing the incentive of an academic-year merit fellowship. Graduate programs are given an allotment which they can use to nominate students. Awards are based on the following criteria: strength of the nominee's undergraduate academic record, recommendations, and test scores -- in the context of the rigor and reputation of the undergraduate college and major; the strength and informativeness of the nominee's career statement; the extent and level of the nominee's preparation and suitability for the proposed program; and the overall effectiveness of the nominating program's presentation. Programs nominate their best applicants as potential recipients of these fellowships. Last spring 233 offers were made and of those offered, 84 accepted and came to the University. It is anticipated that approximately 90 to 100 students per year will accept one of the Graduate School fellowships. Funds left remaining from unfilled first-year fellowships are allocated to the Graduate School Doctoral Dissertation Fellowship (DDF) program.

The purpose of the DDF program is to give outstanding Ph.D. candidates an opportunity to devote full-time effort to the research and writing of the dissertation. The program is competitive, with about one-third of the nominations receiving funding. Awards are based on the following criteria: the importance of their research and the clarity with which it is conveyed to the non-specialist; the potential for significant contribution to the field; the degree to which the research manifests the student's independence, originality, and resourcefulness; the strength of the academic record; the publication record, in the context of norms for the field; the soundness of methodology; and the timeliness of progress toward the degree. Table 29 indicates the number of Graduate School Fellowships and Doctoral Dissertation Fellowships awarded over the last decade.

Table 29

Graduate School Fellowships and Stipends and Doctoral Dissertation Fellowships
1986-87 through 1995-96^a

Year	<u>Graduate Fellowships</u>		<u>Dissertation Fellowships</u>	
	Number Awarded	Stipend	Number Awarded	Stipend
1986-87	74	\$7,200	53	\$8,400
1987-88	90	\$8,000	66	\$9,000
1988-89	78	\$9,000	55	\$10,000
1989-90	81	\$9,200	59	\$10,500
1990-91	89	\$9,600	55	\$11,000
1991-92	75	\$9,800	42	\$11,000
1992-93	53	\$10,000	46	\$11,200
1993-94	66	\$10,500	44	\$11,200
1994-95	81	\$11,000	51	\$11,200
1995-96	68	\$11,200	57	\$11,700

^aThese awards were for three years; awardees are counted only in the first year of their award.

Each year the Graduate School Fellowship Office surveys graduate school applicants who declined the Graduate School Fellowship. The two most frequently noted reasons for choosing another institution were: greater compatibility with faculty research interests at other institutions; and higher scholastic reputation of departments at other institutions. Many of the students who declined were of the opinion that there was nothing that the University organization could have done to significantly increase the probability of their attending the University of Minnesota. Surveys sent to those who accepted the Graduate School Fellowship indicate that their reasons for choosing Minnesota were identical to those who chose other schools -- academic reputation of the program and compatibility with faculty research interests.

The Graduate School also awards block grant funds on a competitive basis to the graduate programs to allow them flexibility in recruiting and retaining high quality students. A total of almost \$1.9 million was awarded for 1994-95 through a competitive process.

Employment Opportunities

The University provides employment opportunities to graduate students principally in the form of appointments as either research assistants or teaching assistants. These employment opportunities provide graduate students with valuable experience for their subsequent careers, many of whom will themselves become faculty members, as well as give financial support to graduate students. As of fall quarter 1995, there were a total of 2,366 individuals appointed as graduate research assistants and 1,492 individuals appointed as graduate teaching assistants on the Twin Cities campus. This combined figure of 3,858 represents 45 percent of the fall quarter 1995 enrollment of 8,497 in the Graduate School. Table 30 contains further breakdowns of enrollment by collegiate unit and gender.

Table 30

Graduate Student Employment Opportunities as a Research Assistant or a
Teaching Assistant for Fall Quarter 1995, by College and Gender

College	Research Assistant				Teaching Assistant			
	Male		Female		Male		Female	
	N	%	N	%	N	%	N	%
Total University	1,443	60	956	40	834	52	762	48
Twin Cities Campus	1,422	60	939	40	773	52	716	48
Academic Health Center								
Dentistry	5	56	4	44	20	74	7	26
Medical School	170	56	134	44	7	64	4	36
Nursing	1	6	16	94	0	0	3	100
Pharmacy	10	40	15	60	8	47	9	53
Public Health	33	37	57	63	3	43	4	57
Veterinary Medicine	20	48	22	52	10	40	15	60
Arts, Sciences, and Engineering								
Biological Sciences	68	52	64	48	24	60	16	40
General College	1	100	0	0	13	28	33	72
Institute of Technology	660	83	136	17	259	76	82	24
Liberal Arts	70	47	79	53	306	45	378	55
Professional Studies								
Agr., Food, and Environmental Sciences	150	57	115	43	4	44	5	55
Architecture/Landscape Architecture	6	40	9	60	13	62	8	38
Education and Human Development	68	36	120	64	35	36	62	64
Human Ecology	13	25	40	75	5	22	18	78
Humphrey Institute of Public Affairs	21	47	24	53	2	29	5	71
Law School	0	0	3	100	0	0	0	0
Management	52	68	24	32	29	64	16	36
Natural Resources	52	59	36	41	3	50	3	50

Health Care and Fringe Benefit Changes

A graduate assistant health care plan was made available to graduate assistants beginning in 1989-90. This plan is available to graduate assistants holding appointments of 25 percent or more (12.5 percent or more during the summer) as teaching assistants, research assistant, or administrative fellows. Certain fellows and trainees enrolled in the Graduate School are also eligible. (The University pays a percentage of the premium equal to twice the percentage of the appointment -- e.g., 50 percent is paid for a student with a 25 percent appointment); 100 percent is paid for students with an appointment of 50 percent or more.

The fringe benefits structure has changed for graduate assistants. Prior to 1993-94, the University combined all academic employees in calculating the tuition fringe benefit for this broad group of employees. As a result, the tuition fringe benefit rate for graduate assistants was very low. In 1993-94, changes in federal (Circular A21) guidelines forced the University to change this method of calculation to include only graduate and professional student salaries in determining the fringe benefit rate for this particular group. The overall fringe benefit rate for graduate assistants rose dramatically to its current level of 35.5 percent for students

excluded from paying the FICA tax; the rate for students subject to FICA withholding is even higher. The effect of this change has been to reduce the number of available teaching assistantships and to cause the cost of an Research Assistant (RA) to exceed that of a post-doc, resulting in a decrease in the number of RAs supported on research grants of University faculty. Discussions are underway with a variety of constituencies to identify a solution to the current situation. (FICA withholding for graduate assistants was in itself a notable change for the Graduate School. A new University policy, effective in July 1994, stipulated exclusion criteria to avoid FICA withholding. The current exemption criteria are enrollment for at least six credits per quarter [one credit for Ph.D. students working on their dissertation] and employment for not more than 20 hours per week or on appointments not exceeding 50%.)

Enhancing the Quality of Graduate Student Life

One of the issues identified by the Advisory Committee concerned the "quality of student life" for those students enrolled in graduate programs on the Twin Cities campus. In December 1993, each graduate program was asked to provide the Graduate School with information on the Program Management Evaluation Form about program standards, processes and goals, including goals that related to the overall quality of graduate student life. This exercise was a prerequisite to a program's assuming decision-making authority in the areas of admissions and graduate faculty appointments which was one of the recommendations in the 1992 review of the Graduate School. One of the questions asked was what activities or opportunities the program offers to enhance the quality of student life. Responses to this question have been summarized for each graduate program. What follows below is a brief summary of the results reported by programs regarding the question: "Indicate any processes, structures, etc., that are used by the program to add to the quality of the life experience (e.g., student club, regular outside trips, etc.)." The results obtained indicate that the majority of graduate programs sponsor activities that enhance student life. Departments emphasized that a good all-around academic experience is vital to the strength of their programs. Examples of activities that enhanced students' graduate experiences included the following:

- A new student orientation to introduce students to faculty, staff, and other students
- Fraternities, student clubs and organizations, etc.
- Pizza parties and pot-lucks
- Funding students who present papers at regional, national, and international professional meetings
- Encouraging students to attend seminars, symposiums, and conferences
- Intramural sports and music clubs
- Organizing farewell gatherings -- faculty members invite students to dinner who successfully completed the degree
- Student organized newsletter
- Mentorship programs -- students mentoring other students, faculty mentoring students, and industry personnel mentoring students
- Graduate student lounge or common area
- Common computer room where students have access to computers, the Internet and World Wide Web, departmental list-serves, e-mail, etc.
- Faculty organizing gatherings at their homes for dinners, discussions, etc.

The nature of some programs requires graduate students to participate in certain activities, such as in a clinical practicum or in the laboratory of the University Theater. In addition, some of the results illustrated that the small size of some programs foster a close-knit connection among its faculty and students. Other programs indicated that because of the nature of their graduate programs -- wherein, for example, students work part-time -- little time remains to develop additional outside activities.

Common meeting areas are important to enhance graduate students' experiences. Several programs noted the lack of space for their graduate students and stated that students should have a common space such as a graduate student lounge. Lastly, Graduate School competitive block grants to programs are important resources. Without such resources, some programs indicated that it would be difficult to enhance student professional involvement, such as assisting students who present a paper at a professional conference.

Graduate students in each degree-granting program are entitled to elect one representative to serve on the Council of Graduate Students (COGS), which also recruits student representatives for University committees such as the University Senate, Graduate and Professional Student Assembly, and the Graduate School's Executive Committee and Policy and Review Councils. In addition, COGS disseminates information, in part through the *Gradletter* and through meetings held twice a quarter, and assists the Student Dispute Resolution Center in resolving grievances and other issues relating to graduate education. Graduate School administrators hold regular scheduled meetings with COGS to identify critical needs. COGS is an important resource for the Graduate School, to provide vital input on formulating policy decisions that affect graduate students.

The Graduate School believes that the quality of life and student development play an essential part in improving the retention and graduation rates for graduate students. Other student development activities include:

- Quarterly presentations of NSF Fellows' research projects, and an annual welcome for all recipients of fellowships it administers.
- With the New Student Programs Office, participation in workshops for new graduate students, covering such topics as financial aid and student degree progress.
- Plans to develop a survey instrument to ensure graduate student input to program reviews.
- Programs provided through the Graduate School's Equal Opportunity Office, including minority fellowship support, new student welcomes, and social events.
- Maintenance of a Graduate Student Services Office to answer students' questions related to their degree progress.
- With the Office of the Vice President for Student Development and Athletics, assistance in producing the *Graduate Student Handbook*, a comprehensive information source for students covering such diverse topics as Minnesota's seasons, registration procedures, and child care.
- Provision of assistance to directors of graduate studies and program faculty in the development of program-specific graduate student manuals to ensure that each student is apprised of degree requirements and other information necessary for successful progress.
- Construction comprehensive information on the World Wide Web, including Graduate School policies, roster of graduate faculty members, and important dates.

Graduate School Faculty⁴

The key to high quality graduate and professional programs is faculty dedicated to the linkages between research and scholarship and graduate and professional education. Characteristics of faculty in each of the professional schools are described in Chapter XIII: Faculty.

Levels of Appointment

The criteria for the several levels of appointment vary somewhat across the six Policy and Review Councils of the Graduate School. The Director of Graduate Studies Handbook contains specified descriptions of each rank for each of the six Policy and Review Councils. The following brief descriptions highlight the differences among the four appointment categories:

Limited Teaching Status. This category is intended to be used for individuals whose responsibilities will be restricted to teaching graduate students. Appointment is for a specified period and does not permit the bearer to serve on examining committees or advise graduate students. Limited Teaching Status does not constitute membership on the graduate faculty.

Examining Member. The category entitles the faculty member to teach graduate level courses and to serve on examining committees for students seeking Graduate School degrees, but not to advise graduate students. It is an option available only to programs that have been authorized by the appropriate Policy and Review Council to use it. It is not intended as a preliminary step toward associate membership.

Associate Member. This appointment entitles and obligates the faculty member to teach graduate level courses, to advise students seeking the master's degree, and to examine candidates for both master's and doctoral degrees. Associate members are expected to have sufficient knowledge of their discipline to prepare and to define feasible research projects appropriate for theses. Associate members may co-advise doctoral candidates, but only with a full member of the graduate faculty.

Full Member. This category entitles the faculty member to advise doctoral candidates, in addition to the rights and responsibilities of associate membership. Full members of the graduate faculty are expected to have a strong record of research, publication, and teaching and advising at the graduate level.

The numbers of University faculty appointed at the various graduate faculty ranks vary by disciplinary grouping (biological sciences; education and psychology; health sciences; language, literature, and arts; and social sciences) as a result of several factors: the number and size of programs within a grouping, the degrees offered by these programs, and the appointment criteria used by the different groups.

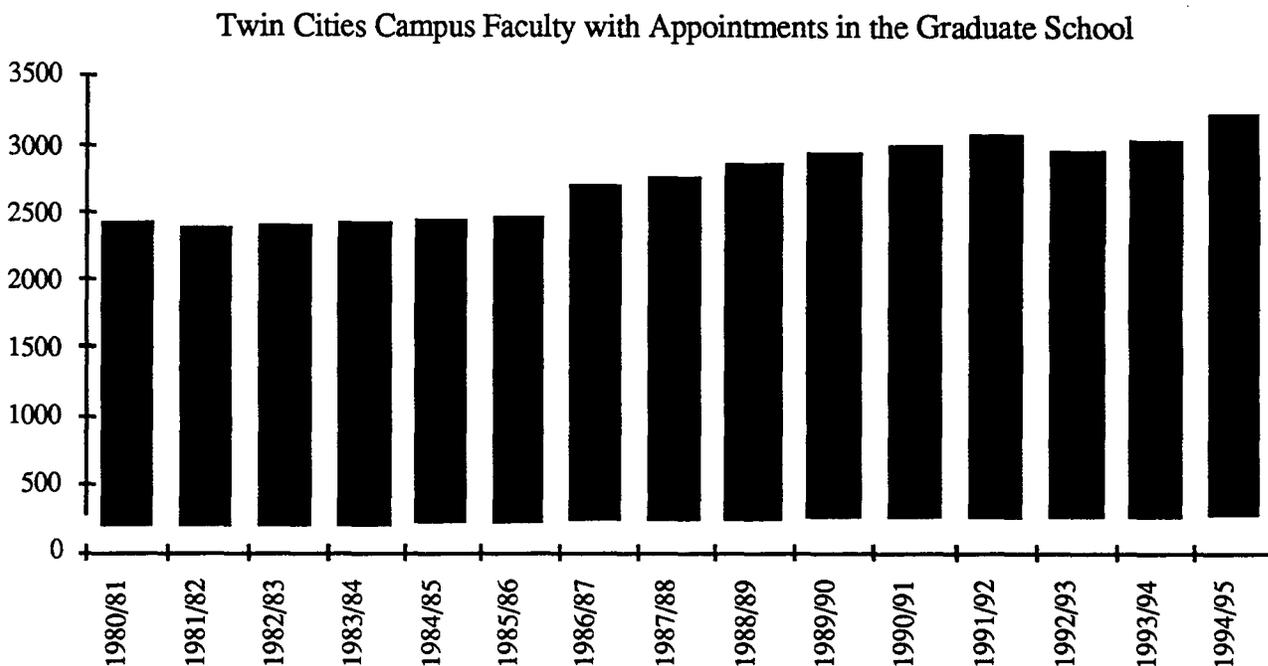
Faculty Members of the Graduate School

A faculty member at the University of Minnesota may or may not be a member of the faculty of the Graduate School. For the 1994-95 year, there were 3,216 faculty with Graduate School appointments, 2,841 of whom were members of the graduate faculty (i.e., appointed to full, associate, or examining membership) and another 375 who held

⁴ <http://www.grad.umn.edu/cgi/roster.html>

Limited Teaching Status. Comparable figures for the 1984-85 indicated 2,697 faculty with Graduate School appointments, 2,434 members of the graduate faculty, and another 263 held Limited Teaching Status. As Figure 14 below shows, the number of faculty on the Twin Cities campus with Graduate School appointments has risen in recent years, due in part to the hiring of non-tenured individuals who contribute to the teaching, research, and examination aspects of graduate programs. The 2,841 graduate faculty members represent over 90 percent of individuals with faculty appointments on the Twin Cities campus.

Figure 14



Graduate School Programs, Curriculum, and Graduates⁵

More changes in Graduate School programs have occurred in the past decade than in the preceding decade. Whereas 36 programs were added or deleted during the prior decade, 88 programs were added or deleted during the most recent decade. When the number of additions (16 and 46, respectively) versus deletions (20 and 42, respectively) are compared for the two decades, there were proportionately slightly more additions than deletions in the most recent decade. Appendix I is a list of program additions and deletions in the Graduate School during the past decade.

Programs of Study and Curricula

At the time of the 1986 Accreditation Review there were 170 fields of study available to graduate students on the Twin Cities campus. Today there are 214 master's degrees, 116 doctoral degrees and 6 professional degrees available. Appendix J contains a list of the graduate majors and degrees available as of December 31, 1995.

⁵ <http://www.grad.umn.edu/grad/gradprog.html>

The list in Appendix I has changed more in the last decade than in the previous decade: 29 names changed during this period compared to 31 in the previous decade, 18 programs were added, compared to 16 in the previous decade, and 44 programs were discontinued compared to 20 in the previous decade. Twenty-six new minor-only programs were added during this period and one such program was discontinued. Several of the minor-only programs resulted from the elimination of master's program in the same field.

The Graduate School offers the following degrees:

- Doctor of Philosophy (Ph.D.)
- Doctor of Education (Ed.D.)
- Doctor of Musical Arts (D.M.A.)
- Doctor of Philosophy (designated) in clinical medical fields
- Master of Arts (M.A.)
- Master of Science (M.S.)
- Master of Architecture (M.Arch.)
- Master of Business Administration (M.B.A.)
- Master of Business Taxation (M.B.T.)
- Master of Fine Arts (M.F.A.)
- Master of Forestry (M.F.)
- Master of Geotechnology (M.Geo.T.)
- Master of Landscape Architecture (M.L.A.)
- Master of Music (M.M.)
- Master of Planning (M.Plan.)
- Master of Social Work (M.S.W.)
- Master of Science (designated) in clinical medical fields
- Designated professional master of engineering degrees
- Specialist Certificate in education fields

A new curriculum development is the introduction of free-standing minor-only programs. At the time of the 1986 Accreditation Review, the Graduate School offered a single minor-only program in Neuroscience. The program's strength and uniqueness was in its organization of faculty and courses in established departments into a coherent and visible study opportunity for students majoring in other disciplines. The minor also served to gauge student interest in this area, and within two years of its inception, the minor evolved into a Ph.D. degree program. Since this pilot undertaking, free-standing minors have become a popular means of "testing the waters" in emerging areas of scholarly inquiry before creating full-fledged degree programs. Because they reconfigure existing faculty and courses in new ways, minor-only programs require only modest operational costs, often underwritten by special Graduate School funds. The process of moving from a free-standing minor to a full program needs to be monitored closely, since the costs involved in a separate doctoral program are extensive. Currently, 24 free-standing minors are offered under Graduate School aegis.

Fifteen Graduate School degree programs in clinical medical fields were discontinued since the 1986 accreditation reviews. (Some of these represented the deletion of master's degrees in programs whose Ph.D. component had been eliminated in the early 1980s.)

There has been increased demand for distance education programs. The past decade has witnessed increased demand for post-baccalaureate, master's level education, and the development and availability of technology to deliver graduate programs (or components of graduate programs) off-campus, sometimes at great distance from the Twin Cities. These phenomena have spurred growth in programs that utilize "face-to-face" instruction at off-campus sites, combined with interactive television or other distance education technology to

deliver all or parts of the master's degree program to a geographically remote clientele (e.g., the M.S. degree in Electrical Engineering and in Computer and Information Sciences at Rochester, and the M.S. in Nursing and M.S.W. degrees at Moorhead). Many of these programs are offered through a partnership with Continuing Education and Extension. At the doctoral level, the Ed.D. degree has also been offered through a combination of "face-to-face" instruction and distance delivery. Two of these distance education initiatives have involved formal collaborative arrangements with Moorhead State University and one with St. Cloud State University.

Requirements

Requirements for the doctorate degree have changed in the last decade and include courses in the major field, coursework in a minor or supporting field, written and preliminary oral examinations in the candidate's general and special subject fields, a dissertation completed with registration for 36 thesis credits, and a final oral examination. Nine quarters of full-time registration (7 or more credits) are required. In an effort to account for faculty time working with doctoral students, students must register for 36 thesis credits. Doctoral thesis credits may be used to fulfill this residency requirement. The master's degrees are offered under two options, both of which require a minimum of 20 quarter credits in the major field: (a) Plan A involves a thesis requiring registration for 16 thesis credits; and (b) Plan B substitutes additional coursework and special projects for the thesis. Four quarters of registration are required for the master's degree and 6 quarters for the specialist certificate.

University courses at the 8-xxx level and most at the 5-xxx level are considered graduate level when taught by an approved member of the graduate faculty or by someone holding limited teaching status. Both undergraduates (juniors and seniors and graduate students may register for 5-xxx level courses (with the exception of some courses in Dentistry and the Medical School). Only graduate students may enroll in 8-xxx level courses without special permission of the Graduate School. Courses taught through Continuing Education and Extension/University College must be specifically designated, and students must make a request for graduate credit. Courses at the 5-xxx level are approved through the administrative mechanisms of the collegiate unit and the Graduate School is informed of all such actions. Course proposals at the 8-xxx level are submitted directly to the Graduate School and are subject to review by the appropriate Graduate School Policy and Review Council and approval by the Graduate School dean.

Need for Additional Professional and Practice-Oriented Master's Programs

An increase in the number of practitioner-oriented master's degrees is one of the actions called for in U2000, and in the past year new graduate degrees have been approved by the Board of Regents and are now available to students. The gradual transition to Responsibility Center Management is likely to provide additional incentives for collegiate units to propose new master's degree programs, especially for working adults in the Twin Cities metropolitan area.

As part of this institutional self study, the 1994-95 collegiate strategic planning documents were reviewed for their analyses of the need for additional professional and practice-oriented master's degrees. Although several collegiate units, (the Institute of Technology, the College of Human Ecology, the Carlson School of Management, the Humphrey Institute for Public Affairs, the Law School, the College of Architecture and Landscape Architecture, and the College of Biological Sciences), addressed the issue and provided specific action plans to address the needs, other units did not address the issue at all. The question remains with respect to the overall balance of masters and doctoral degrees, especially in light of the comparative statistics from other similar institutions.

The Institute of Technology (IT). IT's strategic plan identified the need for more professional and practice-oriented master's degrees in its external environmental analysis. It noted that "at the post-graduate level, there is an evident need for education and training leading to professional and practice oriented master's degrees. There is current evidence to suggest that a national surplus of doctoral degree recipients exists in some areas of science and engineering. It may be expected that market conditions for the employment of advanced degree holders will ultimately drive enrollment, as in the case of baccalaureate graduates. Owing to the reality of how the majority of graduate students in science and engineering are supported, the policies of the Federal Government on the funding of university-based research, and the willingness of industry to seek out universities for basic and applied research may have the greatest influence on the persistence of highly achieving undergraduates in science and engineering graduate studies."

IT's strategic plan also identified the need for professional and practice-oriented master's degrees as a strategic issue. The plan noted that "working professionals involved in the industrial setting prefer specialized master's degrees to the traditional single-discipline degree. There is a need for specialized master's degrees in areas that cut across disciplines. The success of the Master of Science in Management of Technology can provide a model for such new degree."

IT's strategic plan also identified the need and importance of distance education programs in reaching students, particularly at the post-graduate level. The College's UNITE Instructional Television program has been offering graduate courses in engineering and science since 1971. Currently about 90 courses and seminars are broadcast to 37 sites. Currently, about 300 students take courses and about 25-30 receive their master's degrees. The plan also identified the delivery of education through distance education, particularly at the graduate level, as a strategic issue. It noted that "the College's strategic issues in this area include coursework only for master's degrees, the viability of programs offered at the Rochester Center, and the further development of interactive instruction."

Action plans in IT related to master's degrees included the following:

- Introduce professional and practice oriented masters degree programs in several IT departments.
- Implement masters level interdepartmental degree programs in computer engineering and environmental engineering and science.
- Extend the course work of only masters degrees to all areas of engineering.
- Establish interdisciplinary practitioner oriented masters programs.

College of Human Ecology (CHE). CHE's strategic plan noted that there will be an increasing student demand for professional master's degrees in family social science, nutrition, social work, interior design, design communications, and retailing. Instruction will be necessary through evening, weekend, and distance education. Action plans related to master's degrees include the following:

- Schedule more MSW degree opportunities through CEE/UC in the evenings, and deliver through distance education technology MSW courses throughout the state and region.
- Increase number of quality applied professional programs at the graduate level by offering more MSW classes through extension and distance education.
- Explore the feasibility of offering a CEE master's program in interior design and Marriage and Family Therapy.
- Seeks ways to increase collaboration with the UMD social work program.

College of Biological Science (CBS). CBS's strategic plan noted the continuing and expanding need for education in biology. Regarding master's level programs, the College will:

- Look for markets for the M.S. in Biology as well as short courses in biotechnology and the environment.
- Explore the role of distance education in these offerings.
- Explore the possibility of professionally oriented departmental M.S. programs.

College of Architecture and Landscape Architecture (CALA). CALA's environmental analysis indicated that there is a strong demand for professional education at the master's level. The College is phasing out undergraduate programs and increasing the number of students at the graduate level. The College has two specific action plans regarding master's degrees:

- Introduce post-professional/continuing education masters in specialized areas.
- Increase the number of graduate students and thus the numbers of M.Arch and M.L.A. degrees granted.

Humphrey Institute for Public Affairs. The Institute identified the need for the new Master of Science in Science and Technology and the possible future Ph.D. program:

- Establish a Master of Science program in Science and Technology Policy.
- Consider a Ph.D. program in public affairs.
- Develop an effective mid-career program.
- Add a number of graduate school minors and collaborative joint programs.
- Establish one or more part-time degree programs.

Carlson School of Management (CSOM). CSOM's strategic plan indicated the following plans:

- Operationalize and recruit the first class for the Carlson School Global M.B.A. program.
- Expand the size of the Carlson Executive M.B.A. program in three academic tracks (general management, health care and medical technology, and information systems and technology).
- Implement a new evening M.B.A. program.

Law School. The Law School is developing two programs for post-professional instruction:

- Establish an LL.M. program for domestic students; and
- Establish an LL.M. program for international students.

Quality of Graduate Programs

One of the institutional-level critical measures currently being developed focuses on the Reputation of Undergraduate, Graduate, and Professional Programs. The graduate and professional education strategic area states that the University will ensure, by maintaining or improving their levels of program quality, that all of its graduate and professional programs are top-ranked. The Sponsored Funding critical measure assumes that the amount of outside funding received and the University's national ranking in this regard are a reflection of the quality of the University's faculty and programs. The Scholarship, Research, Artistic Accomplishments measure is a more direct measurement of the results of faculty scholarly work.

The critical measure "reputation," is both subjective and comparative; reputation is essentially a judgment of relative quality as perceived by others. For this reason, the University's reputation is important to consider -- regardless of whether one agrees with the criteria (implicit or explicit) that were used to arrive at a reputational opinion, rating, or ranking. Reputation is also a function of numerous input, process, and outcome factors, including the kinds of students enrolled, the experiences students and faculty have in the institution, the success of faculty, and the success of students and graduates.

Because "reputation" is ultimately subjective and perceptual rather than objectively measured, there are also "time lags" to consider in understanding reputational ratings and rankings. For example, when a program improves in quality, there is likely to be a time lag before this shows up in a rating increase; and when a program declines in quality, it may keep its better reputation for a period of time before the downward change is perceived by others.

Reputation of Graduate and Professional Programs⁶

The University of Minnesota has been one of the leading research universities of the nation since the turn of the century, and has been rated among the top 20 universities for the quality of its faculty during most of its history. But for over a decade, the University of Minnesota has been faced with two critical trends. The first is that the University has increasingly relied on private resources for finance as state support has declined and tuition rates have risen faster than the rate of inflation. The second trend is increasing competition among higher education institutions for faculty, students and funding. In response to these challenges, the University of Minnesota, like many other leading universities, has engaged in major planning, reorganization and reallocation efforts.

The National Research Council's (NRC) study examined more than 3,600 doctoral programs in 41 fields in the biological sciences, the physical sciences and mathematics, the social and behavioral sciences, engineering, and the arts and humanities at 274 universities. The study based its analysis on many objective and subjective reputational measures that varied by discipline. The objective measures were related to the achievements of faculty in each program (such as research support and publication records in science and engineering, or awards and honors in the arts), characteristics of graduates, program size, and library size. The reputational measures were related to faculty reputation for "scholarly quality" and "effectiveness in doctoral education."

In order to evaluate the reputational quality of graduate programs, the NRC surveyed approximately 10,000 faculty members who were asked to rate about 50 randomly selected programs within their fields on two dimensions of quality: (a) scholarly quality of program faculty, and (b) effectiveness in educating research scholars and scientists. Raters were given a list of each program's faculty and asked to rate their scholarly quality based on the following scale: 0.00-0.99 = not sufficient for doctoral education; 1.00-1.99= marginal; 2.00-2.50= adequate; 2.51-3.00 = good; 3.01-4.00 = strong; and 4.01 or higher = distinguished. Ratings of each program on the "effectiveness in educating research scholars and scientists" was based on the following scale: 0.00-1.49= not effective; 1.50-2.49= minimally effective; 2.50-3.49= reasonably effective; and 3.5-5.0= extremely effective. The mean ratings of each program were used to assess its reputational quality and to rank graduate programs within the field.

⁶ <http://www.opa.pres.umn.edu/specproj/critmeas/phase3/phase3.htm>

Institutional Rankings on Scholarly Quality

There are numerous ways to measure overall institutional strength in doctoral education. One approach is to rank institutions based on the sum of their reputational scores in each discipline. In order to indicate the overall strength of the University in comparison with other leading institutions, the analysis used two institutional rankings based on the sum of rating scores for programs having rankings above 3.0 and 3.5 for faculty quality. While the first ranking will indicate a "lower" threshold for faculty quality, the second will indicate a substantially higher threshold for it. Table 31 shows rankings of the 25 leading institutions based on their total scores for programs having ratings of 3.0 or higher for the scholarly quality of the program faculty. Based on this measure, the University of Minnesota dropped slightly from 16th in 1982 to 17th in 1993, although the basis for calculating rank differed. Among public research universities, the University of Minnesota dropped from 8th in 1982 to 9th in 1993.

Table 31

Ranking of Universities Based on the Sum of Their Rating Scores for Programs Having Ratings Above 3.0 for the Faculty Quality in the 1993 NRC Study

University	1993 Rank	Change from 1982	Number of Programs with Ratings Above 3.0
Stanford University	1	+1	38
University of California-Berkeley	2	-1	36
University of Michigan	3	+1	36
Cornell University	4	+1	35
University of California-Los Angeles	5	-2	34
University of Wisconsin-Madison	6	-2	34
Columbia University	7	-3	33
Harvard University	8	-1	29
University of Pennsylvania	9	+4	33
University of Texas-Austin	10	+4	34
Princeton University	11	-4	29
University of Chicago	12	0	29
University of Illinois-Urbana/Champaign	13	-7	33
University of Washington	14	+1	32
Yale University	15	-4	27
University of California-San Diego	16	+7	29
University of Minnesota	17	-1	30
Massachusetts Institute of Technology	18	-1	23
Duke University	19	+14	28
Northwestern University	20	-2	27
Johns Hopkins University	21	0	26
University of North Carolina-Chapel Hill	22	0	26
University of Virginia	23	+16	26
Pennsylvania State University	24	+19	26
Rutgers State University-New Brunswick	25	+1	25

Table 32 shows the 25 leading universities on the basis of their total scores for programs with a rating of 3.5 or higher for the scholarly quality of the faculty. This method indicates a higher threshold for the faculty's scholarly quality than the previous one. Based on this measure, the University of Minnesota slipped from 16th in 1982 to 20th in 1993. This suggests that the University's reputational quality of its graduate faculty in the 39 programs slipped over the last decade when a stronger faculty quality rating is used. Although the

overall results indicate that the University of Minnesota is still among the top 20 research universities based on its faculty's scholarly quality reputation, the decline in the 1993 rankings should be a concern about the University's comparative position. In comparison with other Big Ten Universities, Minnesota is exceeded by Michigan (3), Wisconsin (12), Illinois (19), and followed by Northwestern (21), Penn State (26), Purdue (27), Ohio State (35), and Indiana (39). Iowa and Michigan State were not ranked among the top 40 universities.

Table 32

Ranking of Universities Based on the Sum of Their Rating Scores for Programs Having Ratings Above 3.5 for the Faculty Quality in the 1993 NRC Study

University	1993 Rank	Change from 1982	Number of Programs with Ratings Above 3.0
University of California-Berkeley	1	0	36
Stanford University	2	0	34
Cornell University	3	+5	32
University of Michigan	4	+2	31
Harvard University	5	0	27
Princeton University	6	-3	28
University of Chicago	7	+2	27
University of California-Los Angeles	8	-4	27
University of Pennsylvania	9	+5	27
Massachusetts Institute of Technology	10	+3	23
Yale University	11	-4	24
University of Wisconsin-Madison	12	0	26
Columbia University	13	-3	25
University of Texas-Austin	14	+1	25
University of California-San Diego	15	+14	21
University of Washington	16	+3	20
California Institute of Technology	17	+1	18
Johns Hopkins University	18	+5	19
University of Illinois-Urbana/Champaign	19	-8	18
University of Minnesota	20	-4	18
Northwestern University	21	-1	18
Duke University	22	+12	17
University of North Carolina-Chapel Hill	23	-6	16
New York University	24	+2	13
Brown University	25	-4	12

Relative to their numbers, private research universities usually fare much better than public ones in reputational rankings. For example, in the recent NRC rankings, 11 of the 20 highest-ranked institutions are private, and six are Ivy League institutions (Cornell (3), Harvard (5), Princeton (6), Pennsylvania (9), Yale (11), and Columbia (13)). Only four of the Big Ten universities ranked among the top 20 universities (Michigan (4), Wisconsin (12), Illinois (19), and Minnesota (20)).

Ratings and Rankings of University Programs Based on Faculty Quality

Table 33 shows rank orders and mean rating scores of all of the 39 University of Minnesota programs based on the faculty's scholarly quality. Of the 39 programs assessed by the NRC study, five graduate programs were ranked among the top ten programs in the nation with respect to faculty quality. These programs are: Chemical Engineering (1), Geography (3), Psychology (7), Mechanical Engineering (8), and Economics (10).

Table 33

Rating and National Rank of University of Minnesota Doctoral Programs Based on the
Faculty Quality and Change from 1982

Programs	1993 Rating	1993 Ranking	Change in Rating from 1982	Change in Ranking from 1982
Chemical Engineering	4.86	1.0	0.03	0.0
Psychology	4.46	7.0	-0.13	1.0
Economics	4.22	10.0	0.14	-3.0
Geography	4.22	3.0	0.34	-2.0
Mechanical Engineering	4.09	8.0	0.04	-3.0
Mathematics	4.08	14.0	-0.18	2.0
Political Science	3.95	13.0	-0.19	-3.0
Statistics	3.91	13.0	-0.2	1.0
Chemistry	3.89	21.0	-0.26	2.0
Ecology Evolution and Behavior	3.88	15.0	n/a	n/a
Civil Engineering	3.76	13.0	-1.05	16.0
Pharmacology	3.76	21.0	n/a	n/a
Physics	3.76	22.5	-0.23	0.5
Electrical Engineering	3.73	18.0	-0.51	2.0
German	3.68	11.0	-0.67	12.0
History	3.66	21.5	-0.28	4.5
Materials Science	3.64	17.0	n/a	n/a
Cell and Development Biology (Medicine)	3.54	34.0	n/a	n/a
Biomedical Engineering	3.49	17.5	n/a	n/a
Cell and Development Biology	3.49	37.0	n/a	n/a
Biochemistry and Molecular Biology	3.46	39.0	n/a	n/a
Neuroscience	3.43	34.0	n/a	n/a
Aerospace Engineering	3.40	12.0	n/a	n/a
Geology	3.35	31.0	-0.08	-6.0
Sociology	3.29	24.0	0.02	-1.0
English	3.24	36.0	-0.56	6.0
Molecular and General Genetics	3.23	39.0	n/a	n/a
Music	3.16	30.5	-0.58	0.5
Spanish	3.06	27.5	-0.05	-5.5
Philosophy	3.01	32.0	0.01	-6.0
Physiology	3.00	72.5	0.54	-52.5
Astrophysics and Astronomy	2.89	24.0	n/a	n/a
French	2.88	26.5	-0.55	5.5
Computer Science	2.67	47.0	0.01	-23.5
Comparative Literature	2.53	28.0	n/a	n/a
Biostatistics	2.52	45.0	-0.35	-5.0
Anthropology	2.49	50.0	-0.01	-9.0
Art History	2.47	30.0	-0.16	-4.0
Classics	2.43	24.0	-0.06	-2.0

"n/a" = ratings not reported in 1982.

The 1993 study added ten new programs for assessment and reorganized the programs in the biological sciences. Therefore, it is not possible to make comparisons among these programs with the 1982 rankings. Based on faculty quality, changes in the rankings of 26 of the 39 University programs which are common to both the 1982 and 1993 studies are presented in Table 34. In each field, several programs rose or fell markedly in faculty reputation for scholarly quality. The most impressive progress in the faculty quality was reported for the Civil Engineering and German programs. In 1982 Civil Engineering ranked 28th, whereas the 1993 study ranked it 13th. Similarly, German increased from 23rd to 11th place over the decade. The other programs that have improved in reputational rankings include: French, from 37th to tied 27.5th; and English, from 41st to 36th. Several programs (such as Psychology, Physics, Electrical Engineering) remained stable or moved only slightly upward or downward in the 1993 rankings.

Overall, University of Minnesota doctoral programs were considered "strong" on the basis of faculty's reputation for scholarly quality compared with the national average. For example, while only about 62 percent of the 3,634 programs in the study were rated "distinguished," "strong," or "good," 93 percent (or 36) of the 39 University programs had faculty rated in one of those three categories. Of the 39 programs in the study, six (15%) were considered to be "distinguished" for the scholarly quality of program faculty, 25 (65%) "strong," five (13%) "good," and three (7%) "adequate." It is also notable that none of the University programs was considered "marginal" or "not sufficient for doctoral education." Of the five broad fields, the University was ranked relatively high in the social and behavioral sciences and engineering, low in the arts and humanities and the biological sciences, and moderate in the physical sciences. Four of the highest scoring top ten programs are in the social and behavioral sciences, three are in engineering, two are in the physical sciences and mathematics, and one is in the arts and humanities. The University has only one high ranked and strong program in the arts and humanities (German) and none in the biological sciences. Of the six distinguished programs, three are in the social and behavioral sciences (i.e., Psychology, Economics, and Geography), two are in engineering (Chemical Engineering and Mechanical Engineering), and another is Mathematics. These differences in disciplinary ratings clearly suggest that the University's strength in doctoral education is concentrated in the social and behavioral sciences and engineering and mathematics.

Some programs performed better in the objective measures, and others in the reputational ones. Programs in the social and behavioral sciences (e.g., Geography, Economics, Political Science) ranked much higher in the reputational measures than in the objective measures. By comparison, programs in engineering and sciences (e.g., Aerospace Engineering, Biomedical Engineering, Materials Science, Physics) performed better in the objective measures than in the reputational measures. This difference suggests a possible visibility problem for these programs. The only exception is the Chemical Engineering program which was ranked the best program in the nation according to both purely reputational and objective measures (i.e., publication and citation).

Ratings and Rankings of University Programs Based on the Educational Effectiveness

The second reputational measure in the NRC study assessed the effectiveness of doctoral programs in training research scholars and scientists. The University of Minnesota ranked 15th in institutional rankings based on the sum of scores for programs having ratings of 3.5 and above for educational effectiveness. Moreover, the University's judged effectiveness in educating Ph.D.'s is higher than the national average. While nationally only 68 percent of the programs were rated "extremely effective" or "reasonably effective"

Table 34

Rating and National Rank of University of Minnesota Doctoral Programs Based on the
Educational Effectiveness and Change from 1982

Programs	1993 Rating	1993 Ranking	Change in Rating from 1982	Change in Ranking from 1982
Chemical Engineering	4.57	1.0	0.13	0.0
Psychology	4.33	4.0	-0.13	0.0
Economics	4.08	6.0	0.04	-1.0
Geography	3.95	4.0	0.30	-3.0
Political Science	3.92	7.0	-0.05	2.0
Mechanical Engineering	3.85	11.0	0.10	-5.0
History	3.83	16.5	-0.50	7.0
Ecology Evolution and Behavior	3.77	13.0	n/a	n/a
Chemistry	3.75	21.0	-0.20	3.0
English	3.68	18.0	-0.78	21.0
Mathematics	3.65	17.0	0.02	0.0
Statistics	3.65	14.0	-0.15	-3.0
Civil Engineering	3.62	14.0	-0.99	17.5
Pharmacology	3.61	26.5	n/a	n/a
Electrical Engineering	3.59	18.5	-0.46	5.0
Physics	3.54	27.5	-0.21	-4.5
Materials Science	3.53	14.0	n/a	n/a
Biochemistry and Molecular Biology	3.52	40.0	n/a	n/a
German	3.48	10.0	-0.31	10.0
Cell and Development Biology (Medicine)	3.45	40.0	n/a	n/a
Geology	3.42	24.0	-0.14	2.0
Cell and Development Biology (Biology)	3.41	43.0	n/a	n/a
Molecular and General Genetics	3.39	37.5	n/a	n/a
Biomedical Engineering	3.38	17.0	n/a	n/a
Neuroscience	3.37	40.5	n/a	n/a
Aerospace Engineering	3.33	12.0	n/a	n/a
Sociology	3.20	23.0	0.13	-7.0
Physiology	3.14	80.5	0.09	-46.5
Spanish	3.00	30.0	0.22	-14.0
Philosophy	2.98	29.0	0.09	-10.0
Astrophysics and Astronomy	2.94	21.0	n/a	n/a
French	2.91	20.0	-0.43	12.5
Computer Science	2.87	45.0	-0.14	-22.0
Comparative Literature	2.75	26.0	n/a	n/a
Music	2.74	34.0	-0.34	-3.5
Biostatistics	2.72	41.0	-0.69	-2.0
Art History	2.43	29.0	-0.16	-2.5
Anthropology	2.35	53.0	-0.10	-2.5
Classics	2.33	22.0	0.15	-2.5

"n/a" = ratings not reported in 1982.

in preparing scholars and scientists, more than 92 percent or 36 of the 39 University programs in the study were considered to be in one of those categories. Only three University programs (i.e., Classics, Anthropology, and Art History) were considered to be "minimally effective" in this regard, and none were considered "not-effective in doctoral education."

The following six programs were ranked in the top-ten programs in the nation based on educational effectiveness: Chemical Engineering(1), Geography (4), Psychology (4) Economics (6), Political Science (7), and German (10). The lowest ranked University programs for educational effectiveness are: Physiology (81), Anthropology (53), Computer Science (45), Cell and Development Biology (43), and Biostatistics (41).

The data also suggest disciplinary differences between how the social and behavioral sciences and the biological sciences are ranked in the faculty quality and educational effectiveness rankings. Overall, the University was ranked much higher in the effectiveness in educating research scholars and scientists than the scholarly quality of program faculty in the fields of social and behavioral sciences and art and humanities. For example, the English, political science, history, and economics programs were ranked significantly higher in the preparation of scholars and scientists than in the scholarly quality of the program faculty.

Changes in Quality

Overall, there have been substantial changes in the quality of programs over the past decade. For example, the NRC's analysis of 1993 program ratings indicated that most programs improved their relative standing between 1982 and 1993. The most remarkable shift has occurred from the bottom half of the quality groupings to the second or third quarters, while the top and bottom quarter in 1982 remained very stable in their standings. This finding is particularly important because the top quarter of graduate programs is extremely competitive, and it is very difficult to make a significant gain in the rankings.

From the available data, two measures were employed to analyze the changes that have occurred in the quality and relative standings of University programs since 1982. One is to compute the difference between ratings for faculty quality in the 1993 study and a similar rating in the 1982 study. The second measure of change in quality is provided by the NRC study as a third reputational measure. This measure indicates the judged change by raters in quality of a program in the last five years. Scores on this measure were converted to a scale of -1 to 1 with -1 representing "poorer than 5 years ago," 1 representing "better than 5 years ago," and 0 being "no change." This measure permits us to examine whether the University has improved the quality of its doctoral programs in the last five years as judged by the 1993 raters.

Excluding the programs in the biological sciences and new programs in the 1993 study, we computed the difference between the mean ratings for the "scholarly quality of program faculty" in the 1993 study and a similar rating in the 1982 study. Table 34 presents the data on the changes in ratings for faculty quality between 1982 and 1993. The results for faculty quality indicate that the majority of University programs (19 of the 26 programs) were considered to have improved the scholarly quality. Civil Engineering, Electrical Engineering, and Statistics were also considered to have made substantial improvements in their quality. Based on the quality of faculty, two programs (Economics and Geography) were rated lower in 1993 than in 1982.

Table 35 presents the rated change in quality in the last five years for 39 University doctoral programs. The results indicate that the University has made general improvements in the quality of the doctoral programs as a whole. Raters considered that 26 of the 39 programs showed substantial improvement in their quality, seven declined sharply, and three showed little or no improvement in the last five years.

Table 35

Rating and National Rank of University of Minnesota Doctoral Programs Based on Change
in Quality in the Last Five Years

Programs	Rating	Rank
Biomedical Engineering	0.61	3
Materials Science	0.52	4
Pharmacology	0.50	16
Neuroscience	0.48	18
Civil Engineering	0.47	4
Cell & Development Biology (Medicine)	0.47	26
Biostatistics	0.47	4
Cell & Development Biology (Biology)	0.43	35
Physics	0.42	19
Aerospace Engineering	0.40	2
German	0.38	2
Electrical Engineering	0.36	21
Ecology Evolution and Behavior	0.33	43
History	0.33	19
Chemistry	0.30	25
Music	0.30	7
Political Science	0.26	22
Statistics	0.26	14
Physiology	0.25	49
Molecular and General Genetics	0.23	51
Philosophy	0.22	18
Mathematics	0.21	50
Geology	0.19	26
Chemical Engineering	0.18	24
English	0.13	71
Biochemistry and Molecular Biology	0.12	104
Psychology	0.02	86
Sociology	0.02	40
French	0.00	29
Mechanical Engineering	-0.01	82
Astrophysics and Astronomy	-0.05	29
Classics	-0.06	21
Spanish	-0.18	44
Economics	-0.22	97
Geography	-0.24	28
Art History	-0.25	33
Anthropology	-0.26	65
Computer Science	-0.51	107
Comparative Literature	-0.57	44

Although the University did not have any programs among "distinguished" programs in the biological sciences, all were considered to have made gains in quality in the last five years. The other disciplines in which there have been a general improvement in quality are engineering (except Mechanical Engineering) and the physical sciences (except Computer Sciences and Astronomy). The rated change scores were mixed in the arts and humanities and the social and behavioral sciences. In the arts and humanities, the German, Music, and English doctoral programs showed an impressive increase in quality, and Comparative Literature, Art History, and Spanish declined. In the social and behavioral sciences, the highly ranked Economics and Geography programs and low ranked Anthropology program all showed considerable decline in quality, as also reflected in their lower rankings in 1993. Several programs showed little or no change in quality in the last five years (e.g., Mechanical Engineering, Psychology, and Sociology).

Difference in Rankings Between Objective and Subjective Measures

Table 36 presents University of Minnesota graduate programs' rankings in various reputational and objective measures in the 1993 NRC study. The difference in rankings between objective and subjective measures in Table 36 suggest notable difference between how some programs ranked in the reputational measures and in the objectives measures. Several University programs performed far better in the mostly objective rankings than in the reputational ones, or vice versa. Programs that fared far better in the objective measures (such as publication and citation per faculty) than in the reputational ones are Materials Science, Aerospace Engineering, Biomedical Engineering, Astrophysics and Astronomy, and Physics. The most striking was for the Biomedical Engineering program, which ranked 17th for faculty quality, but second and third for per faculty citation and publications measures, respectively.

On the other hand, several programs performed much better in the faculty quality ratings than in the faculty productivity measures. Programs that ranked lower in the objective measures than in the reputational ones include: Economics, Geography, Political Science, and Mechanical Engineering. The largest difference was for Economics, which ranked tenth for the quality of its faculty and sixth for its effectiveness in preparing scholars, but ranked 47th and 40th for the per faculty publication and citation measures, respectively. All of these programs have had historically high ranking in the reputational studies. One possible explanation is that some programs ranked high in the reputational measures because they have historically been outstanding programs and the raters still assumed that they are outstanding even if those programs are not as strong as they once were.

One aspect of the visibility of doctoral programs is how well a graduate program is known by the peers in the field. As can be seen from Table 36, overall University doctoral programs are well known by the peers in the field. Several of them also ranked among the top-ten programs based on the visibility measure (e.g., German, Geography, Chemical Engineering, Psychology, Mechanical Engineering, and Statistics). One of the two most visible University programs is German which ranked 2.5th in terms of visibility of the program but ranked 11th in terms of the quality of program faculty and 10th in terms of educational quality. The other most visible University program is Geography, which also ranked 2.5th. There is also a disparity between how some programs ranked in the quality of faculty or the educational effectiveness and in the visibility measure. For example, the Chemical Engineering program ranked as the top program in the nation with respect to both objective and reputational measures but it ranked only fourth as a visible program. Similarly, visibility rankings of the Economics and Aerospace Engineering programs are lower than reputational rankings. These differences suggest that there might be some visibility problems for some University programs despite the fact that they are outstanding programs according to both objective and reputational measures.

Table 36

Rankings of University of Minnesota Doctoral Programs on
Reputational and Objective Measures in the 1993 NRC Study

Programs	Faculty Quality	Educational Effectiveness	Improvement in Quality	Visibility	Publication/ Faculty	Citation/ Faculty
Chemical Engineering	1.0	1.0	24.0	4.0	1.0	1.0
Geography	3.0	4.0	28.0	2.5	21.0	20.5
Psychology	7.0	4.0	86.0	7.0	24.0	13.0
Mechanical Engineering	8.0	11.0	82.0	10.0	11.0	22.0
Economics	10.0	6.0	97.0	15.5	47.0	44.0
German	11.0	10.0	2.0	2.5	n/r	n/r
Aerospace Engineering	12.0	12.0	2.0	21.5	15.0	7.0
Political Science	13.0	7.0	22.0	11.5	53.0	27.5
Civil Engineering	13.0	14.0	4.0	16.0	25.0	16.5
Statistics	13.0	14.0	14.0	10.5	29.0	35.0
Mathematics	14.0	17.0	50.0	16.0	16.0	32.0
Ecology Evolution & Behavior	15.0	13.0	43.0	21.0	35.0	44.0
Materials Science	17.0	14.0	4.0	12.5	6.0	4.0
Biomedical Engineering	17.5	17.0	3.0	12.5	3.0	2.0
Electrical Engineering	18.0	18.5	21.0	23.0	48.0	27.0
Chemistry	21.0	21.0	25.0	12.5	40.0	30.0
Pharmacology	21.0	26.5	16.0	41.0	39.0	45.0
History	21.5	16.5	19.0	22.0	19.0	36.5
Physics	22.5	27.5	19.0	19.5	11.0	7.0
Sociology	24.0	23.0	40.0	19.5	37.0	26.0
Astrophysics and Astronomy	24.0	21.0	29.0	25.0	8.0	11.0
Classics	24.0	22.0	21.0	24.0	n/r	n/r
French	26.5	20.0	29.0	24.5	n/r	n/r
Spanish	27.5	30.0	44.0	20.0	n/r	n/r
Comparative Literature	28.0	26.0	44.0	23.0	n/r	n/r
Art History	30.0	29.0	33.0	25.0	n/r	n/r
Music	30.5	34.0	7.0	17.5	n/r	n/r
Geology	31.0	24.0	26.0	24.0	21.0	26.0
Philosophy	32.0	29.0	18.0	39.5	n/r	n/r
Cell & Development Biology (Medicine)	34.0	40.0	26.0	66.5	30.0	40.0
Neuroscience	34.0	40.5	16.0	34.5	39.0	38.0
English	36.0	18.0	71.0	43.5	n/r	n/r
Cell & Development Biology (Biology)	37.0	43.0	35.0	39.0	32.0	32.0
Biochemistry & Molecular Biology	39.0	40.0	104.0	50.0	36.0	51.5
Molecular and General Genetics	39.0	37.5	51.0	34.5	n/r	n/r
Biostatistics	45.0	41.0	4.0	50.5	15.0	17.0
Computer Science	47.0	45.0	107.0	41.0	24.0	48.5
Anthropology	50.0	53.0	65.0	46.5	53.0	63.5
Physiology	72.5	80.5	49.0	31.5	105.0	91.0

"n/r" = not reported.

Rankings for University of Minnesota Professional Graduate Programs

The above results focused only on the ratings and rankings of 39 doctoral programs in the arts, sciences, and engineering disciplines. Such a limited focus may be misleading when overall institutional quality strength is considered in comparison with other leading institutions, since the University has a wide range of professional programs, many of which are indeed outstanding. Unfortunately, there is no available comprehensive study in professional fields as comprehensive as the NRC study to compare the quality rankings of professional programs except *U.S. News 1996 America's Best Graduate Schools* issue. This publication compares a large number of graduate programs in both professional fields and in the liberal arts. In 1996, the magazine surveyed the dean or director of each school, the director of graduate studies, and one of the senior faculty members. Each respondent was asked to rate each program according to its "reputation for scholarship, its current curriculum, and the quality of its faculty and graduate students." Programs in each field were ranked based on their mean reputational rating scores, and they published the rankings of only the top 25 programs for each field. Therefore, we are unable to report how several University professional programs ranked in this study since their rankings were not reported among the top-ranked programs. Table 37 presents the rankings of University of Minnesota professional graduate programs on the basis of academic reputation.

As can be seen from Table 37, several University professional graduate programs ranked among the top ten in their fields in the *1996 U.S. News and World Report* guidebook. Health sciences professional programs ranked particularly high. For example, Pharmacy ranked third, Public Health Administration fifth, Public Health sixth, and Dentistry seventh.

Overall, the College of Education and Human Development ranked ninth in terms of its academic reputation. Three specific programs ranked among the top three programs in their respective fields based on their academic reputation. These programs are Counseling/Personnel (2), Special Education (3), and Vocational Technical Education (2). A separate study on rankings of College of Education programs revealed that the University also has several other outstanding programs (e.g., Child Development, Educational Psychology, Elementary Education, Postsecondary Education).

According to the *U.S. News* rankings, among other "distinguished" University programs are: Part-time MBA (9), Management Information Systems (2), Architecture (13), Law (17), Public Affairs (18) and Nursing (21).

Difference Between Undergraduate and Graduate Education Ratings

The NRC study focused only on a selected number of graduate programs in the arts, sciences, and engineering, not on undergraduate programs. Very few ratings of undergraduate programs have ever been published, even though rankings of undergraduate institutions have existed since the early 1980s. The best-known undergraduate education ranking based on the academic quality reputation is *U.S. News and World Report's* annual rankings of undergraduate institutions. The magazine surveyed the presidents, deans and admission directors of these institutions who were asked to rate institutions and place each of them into one of four quartiles based on its academic reputation. The magazine calculated the mean score of each institution from the responses and then determined its rank in undergraduate education. Unfortunately, since the mean scores were rounded to one decimal place, a large number of institutions tied at the same position. Despite some differences between *US News and World Report's* undergraduate rankings and the NRC doctoral program rankings with respect to the data and methodology, it would be informative to contrast the University's rankings in undergraduate and graduate education.

Table 37

National Rank of University of Minnesota Professional
Graduate Programs Based Upon the Academic Reputation
in the 1996 *U.S. News* Survey

Professional Programs	1996 US News National Rank
Health Sciences	n/a
Pharmacy	3
Public Health Administration	5
Public Health	6
Dentistry	7
Rural Medicine (University of Minnesota, Duluth)	2
Primary Care (University of Minnesota, Duluth)	2
Nursing	21
Education and Human Development	13
Counseling/Personnel	1
Vocational and Technical	2
Special Education	4
Educational Psychology	5
Carlson School of Management	
Management Information Systems	2
Part-time MBA	9
MBA	21
Law School	17
Public Administration	18
Architecture	13
Social Work	20

"n/r" = not ranked among the top 25 schools.

Table 38 presents the academic reputational rankings of undergraduate institutions in 1996. The University of Minnesota tied 32th in undergraduate education based on "academic reputation." More surprisingly, the University has not ranked among the top 25 universities in undergraduate education on the basis of its academic reputation since *U.S. News and World Report's* first issue of annual rankings of best colleges in 1983, as have many other well-regarded public research universities (e.g., Washington, University of California-San Diego). Similarly, some other private institutions ranked very high in undergraduate education but not in graduate education.

There seems to be an inconsistency in how public and private universities are ranked in graduate and undergraduate education. Top-ranked private universities in undergraduate education also dominate the list of the top 25 institutions in doctoral education. In 1994, 19 of the top 25 institutions in undergraduate education and 15 of the top 25 institutions in doctoral education were private institutions. Nevertheless, public research universities fared better in graduate education than in undergraduate education based on academic reputation.

Table 38

1996 *U.S. News* Rankings of Undergraduate Institutions
Based on Academic Reputation

Universities	1996 Ranking
Harvard University	1
Massachusetts Institute of Technology	1
Stanford University	1
Yale University	1
Johns Hopkins University	4
Princeton University	4
University of California-Berkeley	4
California Institute of Technology	8
Columbia University	8
Cornell University	8
Duke University	8
University of Chicago	8
University of Michigan-Ann Arbor	8
Brown University	14
Northwestern University	14
University of Pennsylvania	14
Dartmouth College	17
University of Virginia	17
University of Wisconsin-Madison	17
Carnegie Mellon University	20
Rice University	20
University of California-Los Angeles	20
University of Illinois-Urbana/Champaign	20
University of North Carolina-Chapel Hill	20
University of Texas-Austin	20
Washington University	26
Georgetown University	27
Georgia Institute of Technology	27
Penn State University-Main Campus	27
University of Washington	27
Vanderbilt University	27
Emory University	32
Indiana University at Bloomington	32
Purdue University at West Lafayette	32
University of Minnesota	32
College of William and Mary	36
Ohio State University at Columbus	36
University of California at Davis	36
University of Colorado at Boulder	36
University of Iowa	36
University of Notre Dame	36
University of Southern California	36

Note: Institutions with the same numbered rank are tied.

Responses from Programs Regarding the 1993 Rankings

Some programs have provided their initial responses to the Dean of the Graduate School and the Office of Vice President for Research in response to the NRC rankings of the graduate programs. An overview of their comments suggests several common factors that may have contributed to lower than anticipated rankings.

- Most programs noted that they have had fewer faculty members, diminished resources, and more students over the past decade. Many feel that the decline in their perceived quality ranking is clearly related to the size of the department. The core faculty of some programs has diminished substantially since the 1982 rankings (primarily through retirements for which replacements were not authorized).
- Some programs did not get recognition in the NRC rankings because they are small and specialize in one or two subfields in a discipline, even if they are of exceptionally high quality.
- The level of salary at the University of Minnesota was an issue for several departments, because low salary levels make it difficult to attract or retain high quality faculty.
- Some complained about the current structure of graduate programs under the Graduate School, and suggested that the graduate programs under the academic deans can help improve graduate education.
- Rankings do not reflect the growth and improvement of some programs in the last few years because the survey data appear to be several years old. For example, although several programs have appointed new faculty members, several of whom already had national stature and several of whom have achieved national stature since their appointments, these improvements have not been reflected in the rankings.
- The areas of strength and emphasis may be different from the national emphasis. As the discipline shifts toward those emphasized at the University of Minnesota, the strength of the program may be recognized.
- In some programs there is no collective identity aside from the graduate program because faculty are spread throughout the campus. A new structure that will provide national visibility for such programs is recommended.
- Some programs are young and still growing in terms of number of faculty and students (e.g., Neuroscience).
- Some pointed out that they were ranked among a different group (e.g., biostatistics with statistics).

Interestingly, some programs have been able to maintain or improve their standings in rankings in spite of having fewer resources and faculty members than any other competitor. Several significant factors for the improved rankings can be summarized as follows:

- A new building, state-of-the-art experimental facilities, and research space have enhanced the visibility of several programs (e.g., Civil Engineering).

- Administrative consolidation of the department, programmatic changes, and expansions of several subprograms.
- Dramatic improvement of the program on educational effectiveness (e.g., English).
- Some young faculty members who were hired during the 1980s have grown in stature and have acquired excellent reputations.
- Some programs have also recruited several well-known scholars over the past decade.
- Research centers have provided high visibility.

There are several important conclusions from the results of the 1993 NRC study. First, the University ranked much higher on the basis of the effectiveness in training Ph.D.'s than in the quality of faculty. This finding is particularly important because it indicates that the University is particularly strong in the area of teaching and preparing its doctoral students compared to many other leading universities.

Second, although there was a slight decline in the rankings for the quality of faculty, the University of Minnesota still ranked among the top 20 universities in the nation for the scholarly quality of its faculty and its educational effectiveness.

Third, the University is very successful in retaining its several top-ranking graduate programs such as Chemical Engineering and Psychology. In addition, the University showed an improvement in the quality of the majority of its programs examined by the study and improved the standings of several programs in the rankings (e.g., German, Civil Engineering).

Fourth, the University's strength in doctoral education was concentrated in the social and behavioral sciences and engineering. Nevertheless, there are some signs that the University is losing its national rank and leadership in its several highly ranked programs (e.g., Economics, Geography, Political Science, and Mechanical Engineering).

Fifth, despite the fact that the University of Minnesota has made significant improvement in the quality of the majority of its graduate programs, there is also evidence that the University has not improved the "rankings" of a large number of its programs among the top-ranked research institutions. The rankings also suggest that other institutions have improved even more. As noted above, the evidence also suggests that the University is in danger of losing its institution-wide strength in doctoral education in general and its leadership in its several nationally ranked programs in particular (e.g., Geography, Economics, and Mechanical Engineering). Perhaps this is a result of the fact that some competitor institutions performed far better than the University in improving the quality of their graduate programs, and/or the number of faculty in their departments have either increased or remained stable.

Finally, the NRC study reported the existence of important correlates of ratings of program quality which might have significant influence on quality ratings of graduate programs. The most significant correlate is the size of a program, which is defined by the number of faculty, number of enrolled students, and number of graduates. Some programs noted that decline in the quality rankings of several programs is a direct result of the decline in the number of faculty over the past decade. Programs with fewer faculty members and lower rankings include Economics, Sociology, and Anthropology.

The second most important correlate of program quality measure is the level of faculty research and scholarship which is measured by publications, citations, and grants. However, it is not clear from the available data that such a direct correlation existed between reputational rating and research productivity for several University doctoral programs.

Review of Programs of the Graduate School

Since 1973 when the first cycle of reviews was funded by the Bush Foundation, the Graduate School has conducted periodic reviews and evaluations of its program. The purpose of the review process approximately every seven years (the protocol to be followed is included in Appendix K) is to strengthen education throughout the University. All units with graduate responsibilities will normally engage in the review process. These reviews should assist the faculty in the field to examine and evaluate their program (including both its graduate and undergraduate components), aided by colleagues in related fields and by external visitors from other institutions and from business and government, if appropriate. The five goals of a review and evaluation are:

- Assessment of the health and vitality of a program
- Determination of its strengths and weaknesses
- Analysis of its present effectiveness in terms of stated objectives
- Critical examination of program objectives in view of present or anticipated circumstances
- Recommendations that develop a course of action to maintain and foster strengths, to remedy weaknesses determined in the review process, or, on occasion, to close programs

Both qualitative and quantitative data and assessments form the bases for specific recommendations. The Board of Regents has mandated that all graduate programs will be reviewed on a periodic basis. At the present time, discussions are underway about the elements of the process as a result of the recent change to a three-provostal organizational structure on the Twin Cities campus.

The following three documents are produced in the course of the review process:

- Self study. This report is developed by the faculty and administration of the program.
- The External Review Committee Report. This committee is appointed by the Graduate School Dean based on recommendations from the program and in consultation with collegiate deans to prepare a written report based on review of the self-study and a site visit to the program.
- Program response. The third major document is the program's response to the External Review Committee Report.

The detailed review protocol is included as Appendix K. It is appropriate to comment here about those elements in the process that address the assessment of student academic achievement in Criterion Three for accreditation, since the Assessment Plan submitted to the North Central Association indicated that the assessment of student academic

achievement was included in the institution's ongoing program review process. The elements are amongst those included in the self-study graduate program review process for subsequent use by the External Review Committee:

- A considered statement of the objectives of graduate and undergraduate study in the area.
- A statement of the plan being followed to achieve program objectives.
- Graduate and undergraduate student advising processes.
- Profile of graduate students admitted to study in the program area, including if available, mean undergraduate GPA, mean prior graduate GPA, and mean GRE and TOEFL scores.
- Length of time undergraduate and graduate students are in the program, credits accumulated, time taken for students to complete stages toward degree goals.
- Description of the process by which the program assists students in finding employment and information on the place of initial employment.
- Course grade distribution and for graduate students, results of written and oral preliminary examinations, and final examinations.
- Information about graduate students' perception of the program (with respect to educational effectiveness and general climate).
- Assessments by recent graduates (within the last five years) of their experience and the adequacy of the program as preparation for subsequent professional work.
- Evaluation by professional or other external accrediting or reviewing agencies where these exist.
- National Research Council ranking of education effectiveness of graduate programs, or other external evaluations if appropriate.

CHAPTER VIII

RESEARCH¹

This chapter revisits some of the research issues and concerns identified in the 1986 accreditation self-study. Faculty research was the second of three areas of focus then, and of the three areas it had the longest narrative and the most statistical data to portray the scope and the complexities of the research endeavors of the faculty. Research continues its prominence as one of the six strategic areas identified in University 2000, and it is prominent in the development of institutional-level critical measures. This section addresses current concerns relative to the institution's research mission, and provides comparisons between where the Twin Cities campus was in 1986 and what it is in 1996. One of the reasons for the earlier focused attention on faculty research was to provide a baseline of information for future comparisons.

One of the characteristics of the Twin Cities campus of the University of Minnesota that makes it a unique institution in Minnesota and allies it with other complex educational enterprises across the nation, is its leadership as a research center. This research function is what sets the University apart, and preeminence in research is what distinguishes the University among its research peers. How has the institution performed in this arena compared to ten years ago? Although information for the most current year was readily available for some indicators, other types of information (e.g., overall statistics on the publications of faculty) were not available but will be collected in the future and reported annually as part of the development of institutional-level critical measures.

Current Research and Technology Transfer Trends

Over the past year the University of Minnesota has experienced the full spectrum of issues and emotions inherent in being a major research university. The institution is in a period of pervasive change in the way research is funded, administered, and overseen. Ironically, whereas 20 years ago universities were criticized for being "ivory towers" of irrelevant research, today they are criticized for being too closely connected to the real world and for having conflicts of interest. This indicates that research universities must do a better job explaining what they do, and what that means for their students and external constituencies.

The University of Minnesota is one of several of universities that are in the midst of revising policies and procedures to adapt to external changes. The institution has revised policies on research misconduct and conflict of interest; it has improved the system of calculating overhead costs, and as a result the University was granted an indirect cost recovery increase from 40 percent to 45 percent; it has implemented a less burdensome but more accountable system for reporting the effort of our research teams; it has studied all the parties in sponsored project management, and has initiated changes to clarify the responsibilities of each and to improve the process of administering externally supported projects; it has appointed a Public-Private Partnership Committee to advise on more complicated relationships with private entities; and we are working on a draft of a new

¹ <http://www.opa.pres.umn.edu/specproj/accred/research.htm>

Board of Regents policy on Conflict of Commitment. Clearly, the University of Minnesota has taken to heart the need for change, and as a result it is committed to enabling faculty to compete successfully into the next century.

In terms of long-term competitiveness, it has two basic strategic guides. The first is *Enhancing Research Effectiveness: The Foundation for Learning and Teaching in the 21 Century*, the 1993 report of the Strategic Planning Committee for Research and Postbaccalaureate Education. Specific mechanisms are now being developed for following through on the planning committee's recommendations. The second strategic guide for research, is, of course, the University 2000 goal to be a leading global research university that leverages its resources for the benefit of Minnesota. Two overall institutional-level performance goals have been identified: (a) to increase sponsored funding of research, training, and public service based on annual expenditures of funds from all sources; and (b) to maintain the institution's national ranking in federally sponsored funding for research and development.

The University receives sponsored funding because its faculty submit creative and carefully thought-out proposals for projects. As is apparent from the trend in proposals submitted and dollars requested, portrayed in Figure 15, faculty continue to be extremely creative and hard-working in their quest for external funding to support their research endeavors. After dipping slightly in 1993, proposals increased in 1994 by 7.3 percent in number and 6.0 percent in dollars requested.

The trend in actual awards, summarized in Figure 16, shows how successfully faculty continue to be in competition for external support. This trend needs to be viewed over five- to ten-year periods, because a multi-million dollar, multiyear award, such as the Army High Performance Computing Research Center², can result in large variations for any one year. Further analysis of the decline in awards for 1994 revealed that the apparent decline was the result of a processing backlog that had built up in the Office of Research and Technology Transfer Administration³ (ORTTA) due to the unusually large amount of audit activity that consumed significant staff time, and because of the increasing number and complexity of awards. ORTTA's grants and contracts staff have now caught up with the awards, and the level for fiscal year 1995 was up very significantly.

Expenditures in 1994 increased a modest 2.3 percent to \$268.2 million. Total expenditures have increased steadily over the past ten years, with support from industry rising fastest, as Figure 17 illustrates. Corporations are depending more on universities for basic research, and they are also funding more research related to patents issued to faculty at universities. These companies want to invest their research and development funds in research performed by faculty who are leaders in their field, so this is another representation of the quality of our faculty. To achieve the critical goal of increasing research support measured by total sponsored funding, the University will most likely need to increase levels of industry and private funding to compensate for expected tightening of federal and state funding.

Nationally, the University ranked 12th in federal support in 1992, a decline from a high of 11th in 1991, but is still above the historical baseline and the performance goal of 15th. The University's share of federal obligations closely matches the trend for total federal research and development obligations to universities, colleges and non-profit institutions. The institution's ability to maintain this trend and our ranking in federal support will be the

² <http://www.arc.umn.edu/html/ahpcrc.html>

³ <http://www.ortta.umn.edu/>

Figure 15

Trends in Proposals Submitted and Dollars Requested by
University of Minnesota Faculty

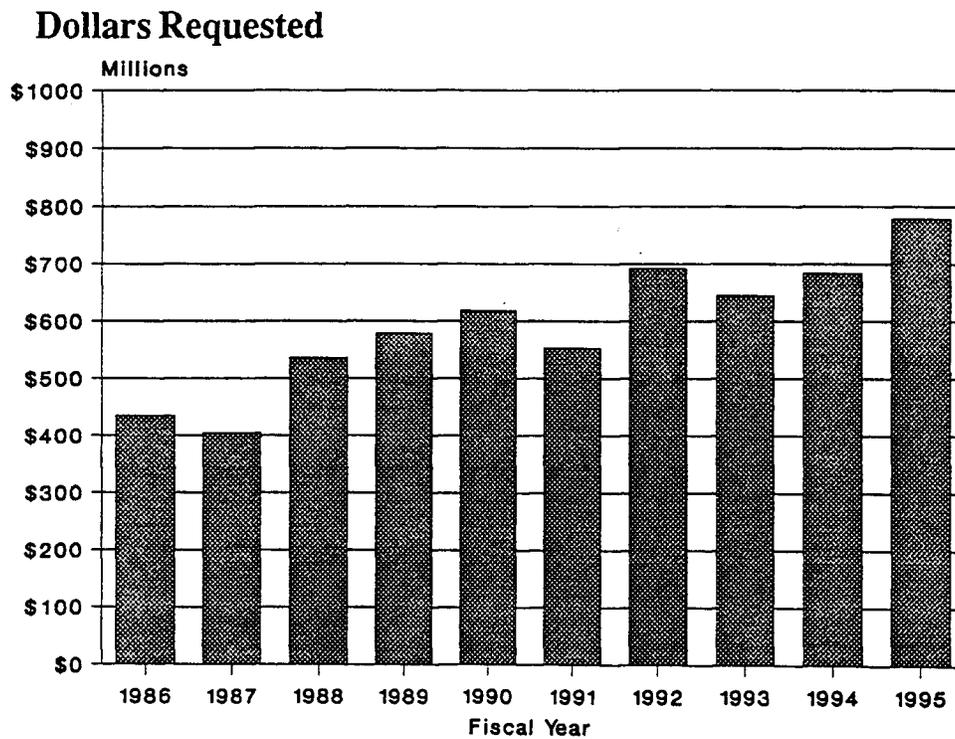
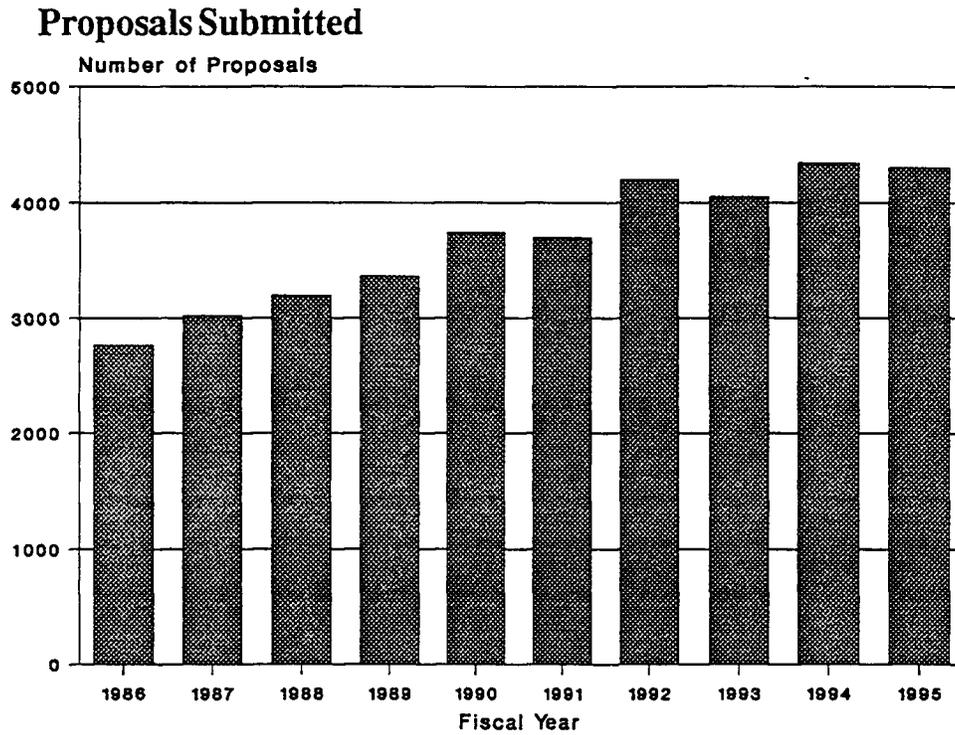


Figure 16

Trends in Awards Processed and Dollars Received by
University of Minnesota Faculty

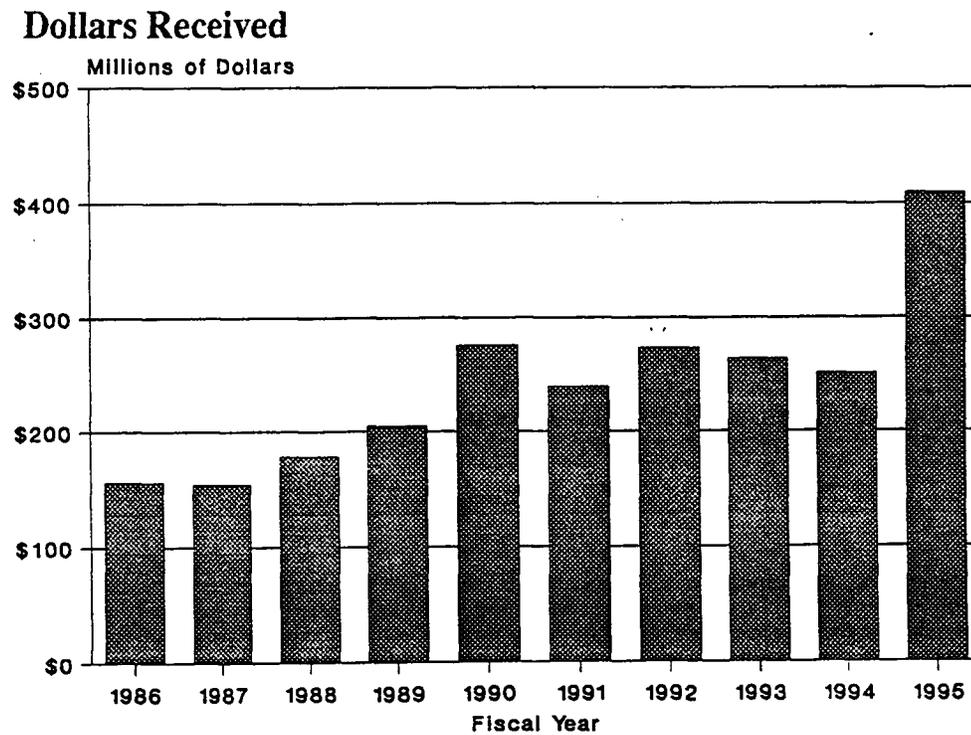
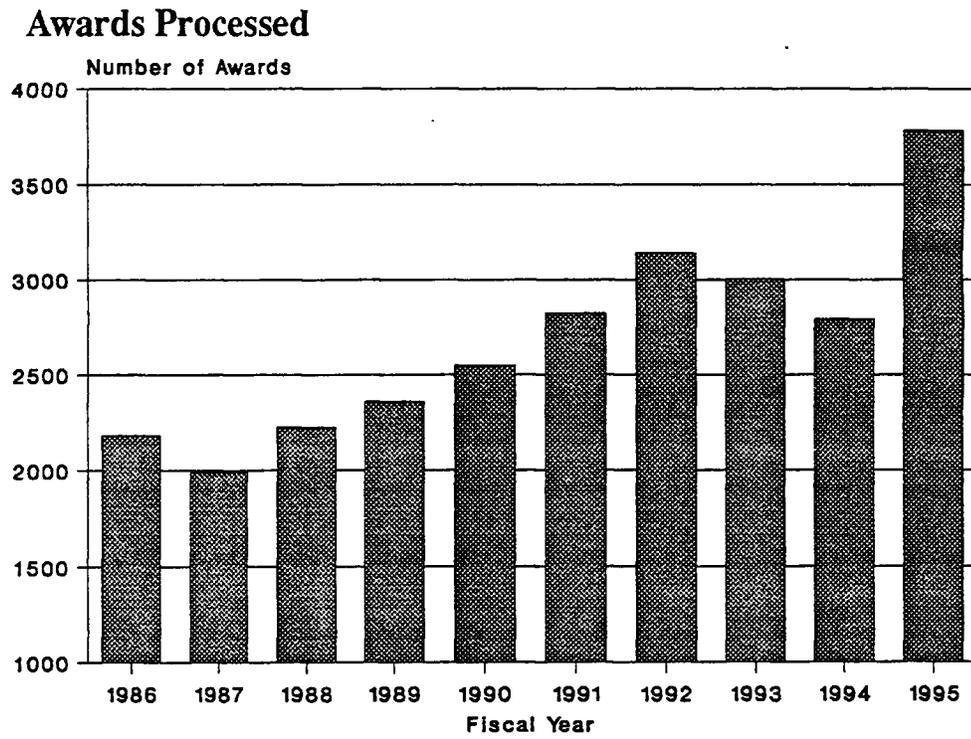
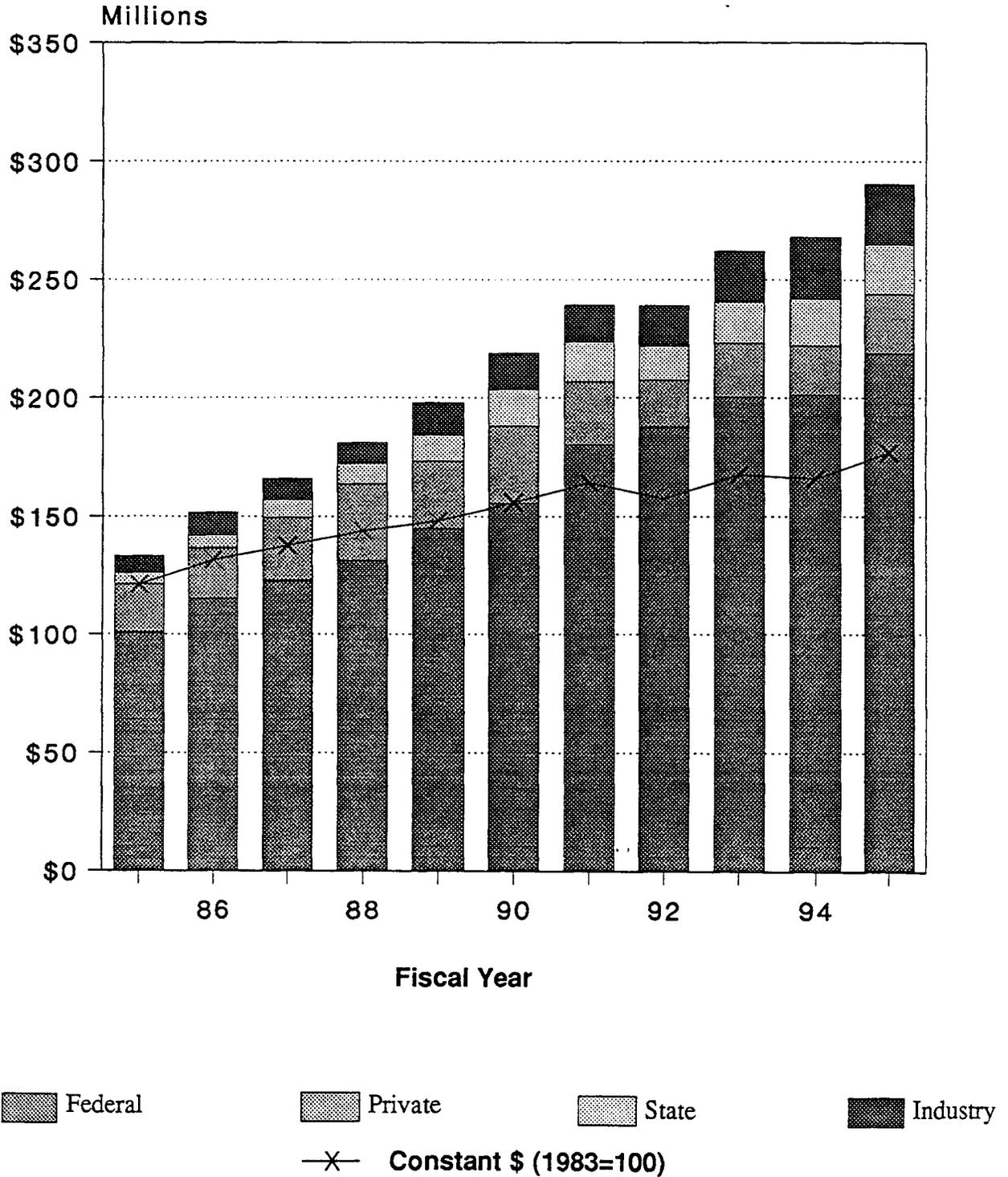


Figure 17

R & D Obligations
Total Federal and University of Minnesota



best measures of effectiveness in recruiting and retaining high-quality faculty, because the competition for federal dollars is likely to get even more intense as federal deficit reduction initiatives continue.

In the area of technology transfer, faculty continue to disclose many excellent inventions to ORTTA's Patent and Technology Marketing division. Results in Table 39 for 1994 indicate that collegiate units disclosed 136 inventions, up from 122 in 1993. Patent activity was level, with 32 U.S. patents issued. A tentative goal of about 175 inventions disclosed per year has been proposed by ORTTA.

Table 39
Inventions Reported by Collegiate Units
1990 through 1994

Academic Unit	FY90	FY91	FY92	FY93	FY94
Medical School	44	49	60	52	40
Other Health Sciences	20	21	14	14	14
Institute of Technology	54	51	30	34	42
Agriculture, Natural Resources and Human Ecology	8	18	18	13	25
College of Biological Sciences	8	10	15	5	7
Other Units	10	21	7	2	8
Non-University	0	0	3	2	0
Total	144	170	147	122	136

Source: Office of Research and Technology Transfer

The following are examples of inventions that have been licensed and commercialized, or that are available for licensing:

- The Autoscope™ Vehicle Detection System digitizes images from video cameras -- many are now monitoring traffic on highways 35W and 394 -- and provides instant reports on traffic levels.
- An umbrella with spherical mechanisms that has the handle at the edge rather than the middle, so the use can stay drier.
- An antiviral compound called carbovir, which might be able to increase the effectiveness of AIDS drugs that are currently on the market, such as AZT.
- A technology for purifying the water in dental rinsing jet systems.
- A method of making hollow, laminated poles out of readily available wood sources to support utility lines, which would relieve some of the pressure on natural wood resources.

Identification of Institutional Research Performance Measures and Goals

In the development of a set of institutional-level critical measures, the institution's relative standing and productivity in terms of research, scholarship, and artistic accomplishments has served to focus attention on this aspect of the institution's mission. The development of two institutional level critical measures has been completed, and both have been reviewed and approved by the Board of Regents. A major goal of University 2000 is to sustain and improve the University's position as one of the major research universities in the country. Accomplishments in the area of research has an important impact on undergraduate education, graduate and professional education, and outreach and access.

Statistics previously included in the 1986 Accreditation Report indicated that the University of Minnesota ranked sixteenth among public and private institutions in federal research and development funds (\$17,102,000) and thirteenth in total federal obligations (\$99,748,000) for fiscal 1983. The top ten institutions in research and development funds then were: Johns Hopkins, MIT, Stanford, University of Washington, UCLA, University of California-San Diego, Cornell, Columbia, University of Wisconsin, and Harvard.

The first Critical Measure: Sponsored Funding by Campus⁴ has two elements: (a) total amount of sponsored funding for research, training, and public service, from all sources; and (b) national ranking in total amount of sponsored funding for research and development (only) from the federal government (as one source). Sponsored funding as a critical institutional-level measure is linked to the University's strategic area of research, but also has important implications for the strategic areas of undergraduate education, graduate and professional education, and outreach and access. Given the increasingly competitive context for sponsored funding from government and private sector sources, the general goal is to achieve modest improvements in the total amount of sponsored funding and maintain our national ranking relative to other major research universities. With respect to total amount of sponsored funding, the measure includes funding from multiple sources, including local, state, federal, and international government agencies and organizations as well as the private sector and foundations. For the critical measure of national ranking in sponsored funding, the measure includes only federal government funding sources and only for research and development, as these data are available and comparable across universities.

The baseline information on institutional performance and annual performance goals for the critical measure of sponsored funding are shown in Figures 18 and 19. The measures and performance goals were endorsed by the Board of Regents in December 1994. Figure 18 provides the summary information at the institutional level for total amount of sponsored funding from all sources for research, training, and public service. (The goals recommended for total sponsored funding for the Twin Cities campus is an annual increase of 5 percent, or a total of a 35 percent increase for the seven-year period, 1994-2000. The goal for 1994 is \$264,700,000 and the goal for 2000 is \$354,700,000.) Figure 19 provides the institutional-level information for national ranking in federal funds for research and development, and indicates a performance goal for national ranking of 15th for the period 1994-2000 in sponsored funding from federal sources across all four campuses of the University of Minnesota.

⁴ <http://www.opa.pres.umn.edu/specproj/critmeas/phase1/sponfu-s.htm>

Figure 18

Sponsored Funding from All Sources for Research,
Training and Public Service

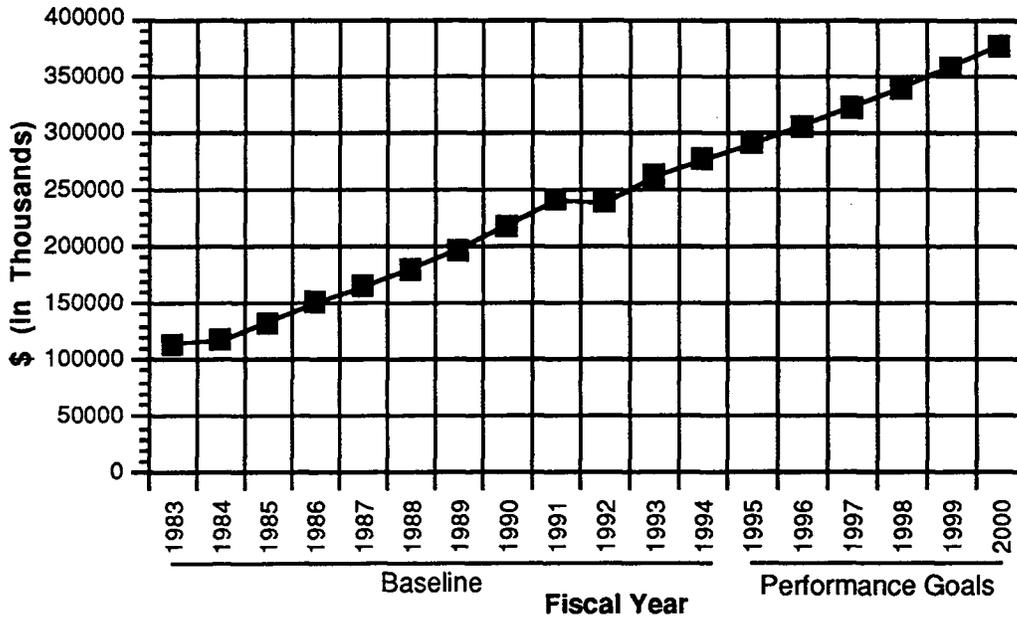
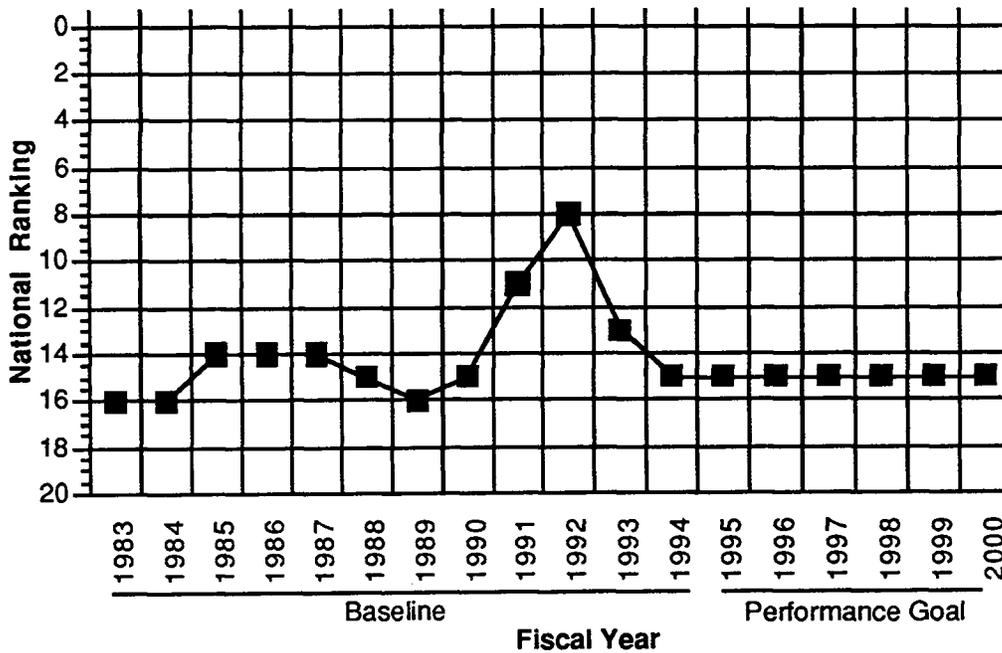


Figure 19

National Ranking of the University of Minnesota for Research and Development
Funding from the Federal Government



More detailed information is shown in Table 40 regarding the total amount of sponsored funding from all sources for the period 1983 to 1993. This information was taken from the *Level and Trends Report*, June 30, 1994, and available from the Office of Research and Technology Transfer Administration. The last row of Table 40 shows the number of regular faculty (tenured and tenure-track) that provides part of the context for understanding total amount of sponsored funding. Similar information regarding performance goals is shown in the bottom section of Table 41 for the period 1994 to 2000.

Table 41 shows more information regarding national ranking in federal funding for research and development, including total sponsored funding from all sources (the same information as presented in Table 40), sponsored funding for research and development from federal government sources, and finally national ranking in sponsored funding for research and development from federal sources. The information shown in Table 40 for the period was taken from the *Level and Trends Report* noted above.

Table 40
Baseline and Performance Goals: Sponsored Funding
All Sources by Campus(\$1,000)

Fiscal Year	Twin Cities	Duluth	Morris	Crookston	Total	% Change
<u>Baseline^a</u>						
1983	110,665	3,190	189	103	114,100	—
1984	114,229	3,041	277	74	117,600	3.1
1985	129,315	3,279	404	105	133,100	13.2
1986	147,055	3,854	494	221	151,600	13.9
1987	160,419	4,520	399	215	165,600	9.2
1988	175,272	4,824	396	281	180,800	9.2
1989	190,510	6,227	406	349	197,500	9.2
1990	211,757	6,348	347	226	218,700	10.7
1991	233,164	7,356	497	465	241,500	10.4
1992	230,189	8,234	295	430	239,100	-1.0
1993	250,432	10,811	182	655	262,100	9.6
<u>Goals</u>						
1994	264,700	11,892	187	400	277,179	5.8
1995	277,900	13,081	193	500	291,674	5.2
1996	291,800	14,389	199	600	306,988	5.3
1997	306,400	15,828	205	800	323,233	5.3
1998	321,700	17,411	211	1000	340,322	5.3
1999	337,800	19,152	217	1,200	358,369	5.3
2000	354,700	21,067	224	1,500	377,491	5.3
<u>Number of Regular Faculty 1992-93^b</u>						
	2,685	343	96	53	3,177	

^aSource: *Levels and Trends Report*, ORTTA, June 30, 1994.

^bSource: *Summary of Academic Personnel Actions*, Office of Human Resources, April 1993.

Discussions surrounding the setting of performance goals for sponsored funding for the period 1994 to 2000 occurred with the Vice President for Research and Dean of the Graduate School and the Associate Vice President for Research and Technology Transfer Administration.

The performance goal for national ranking in sponsored funding for research and development across all campuses from federal sources is to maintain a ranking of 15th for the period 1994-2000 as shown in Table 41. The reason for recommending performance goals on this order is that research funding on the national level has become more competitive and, at the state level, the economy has been slow and budget pressures have increased for other purposes. This context is described in more detail in the report, *Enhancing Research Effectiveness: The Foundations for Learning and Teaching in the 21st Century*, a Report of the Strategic Planning Committee for Research and Postbaccalaureate Education, University of Minnesota, February 3, 1994.

Table 41

Baseline and Performance Goals: National Ranking
for Research Funding from the Federal Government^a

Fiscal Year	Total Sponsored Funding, All Purposes, All Sources	Sponsored Funding for Research & Development, Federal Government	Ranking
<u>Baseline</u>			
1983	\$114,100	\$74,102	16
1984	117,600	83,905	16
1985	133,100	103,272	14
1986	151,600	100,838	14
1987	165,600	119,746	14
1988	180,800	119,831	15
1989	197,500	128,727	16
1990	218,700	137,495	15
1991	241,500	168,962	11
1992	239,100	na	na
1993	262,100	na	na
<u>Goals</u>			
1994	277,179		15
1995	291,674		15
1996	306,988		15
1997	323,233		15
1998	340,322		15
1999	358,369		15
2000	377,491		15

^aSource: *Levels and Trends Report*, ORTTA, June 30, 1994.

As part of the implementation of the institutional-level critical measures, an annual institutional performance report will be presented to the Board of Regents. The 1995 *Institutional Performance Report* (November 1995) indicated the following results for the

Twin Cities campus for the past two years: 1994 (goal of \$264,700,000 and actual performance of \$257,613,000); and 1995 (goal of \$277,900,000 and performance of \$281,884,000). The 1995 results represent a 12 percent increase over the baseline year. The results are particularly significant and a credit to the institution's faculty, since they occurred in an environment of reductions in federal research funds coupled with a decline in the number of faculty. The institution's ranking in federal funding indicated a rank of 12th in 1992 and 16th in 1993.

Achieving the performance goals for sponsored funding will depend on the availability of resources to undertake the action initiatives related to sponsored funding. The more specific costs of these initiatives should be clearer after the coming planning and budgeting cycle. If resources are not available to support these initiatives, it may be necessary to revise the performance goals for sponsored funding. The following action initiatives are focused on sustaining and improving the University's position as one of the major research universities in the country: (a) recruit, nurture, retain, and reward world-class teachers and researchers, scholars, and artists; (b) promote basic research and maintain and enhance the quality of the academic disciplines that are at the core of a land-grant university; (c) promote and strengthen interdisciplinary activities; (d) respond to the demand for applied research; and (e) upgrade and enhance our research infrastructure.

Research and Scholarly Accomplishments of Faculty⁵

The University of Minnesota is one of the leading research universities in the world, and emphasizes the importance of faculty involvement in research and scholarship of high quality. Faculty research and scholarly accomplishments are also one of the most significant correlates of academic quality and reputation in higher education. Assessing the level and quality of research productivity is particularly difficult and controversial, because of the requirements of a full set of research output measures which are often not easily obtainable. Nonetheless, publications and citations analyses and sponsored funding are especially accepted traditional ways to assess scholarly quality and research performance in higher education.

In spite of the widespread use of publications and citations in assessing quality and research performance in higher education, the data often are not easily available for all programs in order to make interinstitutional comparisons. The recent National Research Council (NRC) study provides a comprehensive, recent database on scholarly quality and research productivity of the doctoral programs of over 270 research universities for 41 major disciplines in the Sciences (including the broad fields of Biological Sciences, Physical Sciences and Mathematics, and Social and Behavioral Sciences) and Engineering, and Arts and Humanities. This study also presented a variety of measures related to faculty publication and citation patterns and federal grant support using publication and citation data from the Institute of Scientific Information (ISI).

This section of the report is intended to examine the research accomplishments of those University of Minnesota doctoral programs included in the NRC study. The data here do not attempt to assess overall research accomplishments of the University of Minnesota faculty because only 33 percent of University doctoral programs are covered by this study, and research measures are largely focused on journal articles, excluding a wide variety of other forms of research and scholarship accomplishments.

⁵ <http://www.opa.pres.umn.edu/specproj/critmeas/phase2/schola-s.htm>

Publication Performance

The NRC study included three variables for faculty publication activity. The first is average articles per faculty published in journals and monographs indexed by the Institute of Scientific Information. This measure indicates the relative productivity of departments in terms of production of journal articles, and can be useful for the purpose of interinstitutional comparisons if the data are available from peer institutions. The second is the percentage of faculty publishing at least one journal article between 1988 and 1992. This measure is also useful for comparing the relative research effort of faculty compared with those in peer institutions. Finally, the "Gini coefficient" for program publications, which measures the concentration of publications on a small number of the program faculty, was included for each doctoral program except programs in the Arts and Humanities. The NRC study obtained the publication and citation data from the Institute for Scientific Information's citation indexes by matching the names of program faculty with the names on ISI's citations indexes files. Since in the arts and humanities, the publication of books and monographs are usually emphasized as scholarly publications, the study provided these measures for only 30 fields in the sciences and engineering. For the arts and humanities, the study examined the total number of awards as indicators of scholarly performance instead of publications or citations.

Publication rates. Results from any publication analysis need to be interpreted cautiously. Although an analysis of publications as a measure of research productivity requires comprehensive publication counts (e.g., books, textbooks, journal articles, monographs), unfortunately a comprehensive publication count is unavailable. Nonetheless, an analysis of journal articles as an indicator of research publication performance can be a useful proxy for total research productivity if the number of journal articles in a field is highly correlated with more comprehensive publication measures. Note however that while one might use such a measure to compare departments within a single discipline, it is not reasonable to compare different programs with each other within an institution, because disciplines vary considerably in the range of productivity and norms of research methodologies, resulting in large differences in the meaning of research productivity across disciplines. For example, the Materials Science program has 24.5 publications per faculty, but Anthropology has less than one. The two should not be compared with each other but with the norms of the discipline.

Research performance of 30 programs is examined by comparing the average number of faculty publications and rankings in their respective disciplines. The average number of publications for each program and its ranking are shown in Table 42. The average number of publications during the 1988-92 period was approximately 8 across the 30 programs in the Sciences and Engineering, although there are considerable differences among the four fields and within each field. The number of publications per faculty member in different fields ranged from about 2.5 for programs in the social and behavioral sciences to nine in engineering, the range for program was from about one in Anthropology to 24 in Materials Science.

An examination of the ranking data presented on Table 42 suggests that most of the University programs are nationally competitive and productive. Four of the seven engineering programs examined by the NRC study ranked among the top ten programs in the nation with respect to per faculty publication rates. These programs were Biomedical Engineering, Chemical Engineering, Materials Science and Mechanical Engineering. Also, these programs along with the Aerospace Engineering program, were among the top ten research productive programs on the basis of total number of publications. Civil Engineering (ranked 12th) and Electrical Engineering (ranked 24th) were also among highly research productive programs in the nation in terms of the total number of publications.

Table 42
University of Minnesota Doctoral Programs' Characteristics Based on Research Productivity Measures

Field	Program	Number of Program Faculty	Percentage of Program Faculty with Research Support	Percentage of Program Faculty Publishing	Number of Program Faculty Publications	Average Program Faculty Publications	GM Coefficient for Publications	Number of Program Faculty Citations	Average Program Faculty Citations	GM Coefficient for Citations	Number of Programs Covered by the NRC Study
Biological Sciences	Biochemistry and Molecular Biology	41 (40)	90 (6*)	100 (9*)	487.9 (33)	11.9 (2.6*)	3.5 (2.7)	3743.3 (40)	91.3 (51.5)	4.3 (1.7)	194
	Cell & Developmental Biology (Medicine)	48 (36)	85 (14*)	92 (37*)	523 (30)	10.9 (3.2*)	4.3 (4.0)	4825 (32)	100.5 (32)	6 (39*)	179**
	Cell & Developmental Biology (Biology)	28 (67)	86 (11*)	93 (30*)	311 (49)	11.1 (3.0*)	6.2 (6.3)	2575 (46)	92.7 (40)	7.7 (5.0*)	179**
	Ecology, Evolution, and Behavior	66 (15)	58 (32)	88 (27*)	429 (15)	6.5 (3.4*)	2.6 (9)	1551 (17)	23.5 (44)	4.2 (1.8*)	129
	Molecular & General Genetics	54 (12)	76 (31)	85 (65)	432 (23)	8 (3.9)	3.2 (1.2)	3019 (30)	55.9 (45)	4.9 (1.3)	103
	Neuroscience	36 (30)	69 (60*)	89 (49*)	310 (32)	8.6 (4.1)	5.1 (3.0)	2034 (36)	56.5 (38)	8.3 (3.2)	102
	Pharmacology	22 (45)	86 (6*)	100 (1*)	253 (43)	11.5 (3.9*)	6.9 (3.1*)	1319 (46)	60 (45)	15.1 (6.1)	127
	Physiology	24 (40*)	63 (5.8)	75 (11.7)	127 (7.1)	5.3 (1.05)	7 (3.8)	510 (7.7)	21.3 (9.1)	11.1 (4.6)	140
	Subtotal	39.88	76.63	90.25	359.11	9.23	4.85	2447.2	62.71	7.7	
Engineering	Aerospace Engineering	27 (5)	78 (3.5)	81 (8)	113 (10)	4.2 (14.5)	11.1 (1.1)	294 (4)	10.9 (7)	19.8 (1.2)	33
	Biomedical Engineering	33 (9.5)	48 (21.5)	88 (12*)	452 (6)	13.7 (3)	6.3 (1.0)	2551 (4)	77.3 (2)	13.1 (1.6)	38
	Chemical Engineering	32 (1)	84 (10)	94 (14*)	736 (1)	23 (1)	6.4 (2)	3751 (1)	117.2 (1)	12.5 (8)	93
	Civil Engineering	32 (14)	56 (16*)	72 (3.7)	141 (12)	4.4 (2.4*)	7.9 (1.2*)	339 (1.3)	10.6 (16.5)	14.7 (2.0)	86
	Electrical Engineering	47 (13.5)	55 (4.0)	85 (2.8*)	263 (2.4)	5.6 (4.8)	4.3 (9)	906 (2.2)	19.3 (2.7)	10.1 (1.9*)	126
	Materials Science	26 (12.5)	85 (14*)	96 (6)	637 (6)	24.5 (6)	7.6 (1.3)	3753 (3)	144.3 (4)	13.3 (20.5)	65
	Mechanical Engineering	38 (14)	61 (2.5)	84 (2.1)	296 (10)	7.8 (10*)	5.4 (1.2)	483 (1.5)	12.7 (2.2)	6.8 (5)	110
		Subtotal	24.43	45.86	60.00	243.57	7.27	5.14	1120.14	33.61	10.03
Physical Sciences & Mathematics	Astronomy	14 (20*)	93 (4)	100 (1*)	181 (1.6)	12.9 (8)	13.3 (23.5)	1137 (1.5)	81.2 (1.1)	25 (2.9)	33
	Chemistry	45 (8.5)	73 (36*)	82 (9)	653 (13)	14.5 (3.9.5)	5.4 (1.4.5)	4154 (13)	92.3 (30)	7.4 (16.5)	168
	Computer Science	16 (5.9*)	50 (6.2*)	88 (15*)	72 (4.1*)	4.5 (2.4)	11.2 (4.4)	80 (52.5)	5 (48.5)	16.3 (31.5)	108
	Geosciences	19 (3.2*)	84 (1.4)	84 (4.4.5)	125 (2.5)	6.6 (2.1.5)	15.6 (7.0*)	635 (2.7)	33.4 (2.6)	18.6 (5.0)	100
	Mathematics	52 (16.5)	56 (4.0*)	81 (3.3*)	270 (10)	5.2 (1.6.5)	6 (4.2*)	512 (1.9)	9.8 (3.2)	16.9 (7.2)	139
	Physics	48 (17.5)	46 (8.4)	96 (8*)	624 (9)	13 (1.1)	6.1 (3.9*)	4454 (1.1)	92.8 (7)	10.1 (5.4)	147
	Statistics	19 (1.4*)	74 (4)	89 (2.4.5)	110 (2.1.5)	5.8 (2.9.5)	7.7 (8)	239 (2.7)	12.6 (3.5)	13.4 (6)	65**
		Subtotal	27.25	64.50	90.00	259.25	8.79	12.29	1421.38	44.94	16.83
Social and Behavioral Sciences	Anthropology	12 (5.9*)	17 (4.5*)	50 (3.6*)	10.8 (5.6)	0.9 (5.2*)	20.6 (5.0)	4.8 (6.3)	0.4 (6.3.5)	3.2 (5.2*)	70
	Economics	18 (7.6*)	33 (10.5)	72 (4.7*)	52.2 (6.1)	2.9 (4.2*)	10.5 (6.6.5)	77.4 (5.1)	4.3 (4.4)	15.3 (3.9.5)	107
	Geography	25 (1.5)	16 (3.0)	64 (2.4)	50 (1.4)	2 (2.1)	8.8 (3)	102.5 (1.7)	4.1 (20.5)	16.8 (7.5)	35
	History	46 (1.7)	7 (1.0*)	52 (1.7.5)	50.6 (8)	1.1 (1.2*)	5.9 (4)	52 (2.7)	1.1 (3.6.5)	18.3 (7)	111
	Political Science	30 (1.7)	13 (2.1)	53 (3.7)	39 (35.5)	1.3 (5.2)	9.5 (33.5)	93 (2.1)	3.1 (27.5)	21 (35.5)	98
	Psychology	55 (10)	36 (4.1*)	91 (1.3)	357.5 (10)	6.5 (2.3.5)	3.1 (3.5)	1878 (5)	34.1 (1.3)	6.5 (1.2)	185
	Sociology	25 (2.4)	40 (6)	80 (7)	60 (2.6)	2.4 (3.2)	9.6 (3.4)	179 (2.6)	7.2 (2.6)	19.9 (3.8)	95
		Subtotal	30.14	23.14	66.00	88.59	2.44	9.71	340.61	7.76	21.40

Note: Number in parenthesis denotes the program's ranking in a field for that particular measure; * denotes that the program's ranking is tied; and ** indicates that the University of Minnesota has two programs in this particular field.

The programs with low research productivity ranking include programs in the Biological Sciences and the Social and Behavioral Sciences. The lowest productive program in terms of average number of faculty publications is Physiology which is ranked 105th out of the 140 programs. The other programs with low faculty publications are Anthropology (54 out of 70), Molecular Biology and General Genetics (41 out of 103), Neuroscience (39 out of 102), and Pharmacology (39 out of 127).

Percent of faculty publishing. An examination of the data on the percentage of faculty publishing in the period 1988 to 1992 presented in Table 42 suggests that all doctoral programs in the sciences and engineering have faculty actively engaged in research and scholarship and the publication of their scholarly work. Overall, 83 percent of all graduate faculty in the 30 programs have published at least one journal article in the period of 1988-92. As expected, however, there are also significant differences among these four fields, as well as within each field. Although 90 percent of faculty in the biological sciences and physical sciences and 86 percent in engineering have published at least one journal article in the period of 1988-92, only 66 percent in the social and behavioral sciences have published one journal article. The lower rate in the social and behavioral sciences does not necessarily indicate low research activity, but it may simply suggest the existence of possible differences in the types of publications among disciplines. For example, in the social and behavioral sciences, as in case of the arts and humanities, books and monographs are significant types of publications and are not covered by the NRC study.

The most research active University programs on the basis of the percentage of faculty publishing include Biochemistry and Molecular Biology, Pharmacology, Astronomy, and Biostatistics. All faculty in these programs have published at least one journal article between 1988 and 1992. The least research active programs included Anthropology, History, and Political Science in which approximately 50 percent of faculty have published at least one journal article during the 1988-92 period. While this low percentage compared with the other fields in the study may indicate some disciplinary differences in publication patterns in the social and behavioral sciences, the ranking data also suggest that these programs have low faculty publication percentages even when compared with similar programs in other institutions. For example, examining ranking with respect to the percentage of faculty with publications indicates that Anthropology is tied at 36th (out of 70 programs), Political Science ranked 57th (out of 98 programs) and History 17.5th (out of 111 programs).

Citation analysis. Citation analysis provides another method to examine scholarly research accomplishments. Citations tend to reflect total scholarly productivity and include books as well as journal articles; they measure the "impact" or "influence" of publications in a discipline. The number of times a particular study has been cited is an imperfect indicator of impact/influence of contribution, since both well done and poorly done research are cited frequently. Citation analysis has been widely used in assessing scholarly productivity and quality of publications despite the fact that there are considerable methodological problems with citation analysis.

In the NRC study, the total number of citation counts and citations per faculty member were also examined to assess research performance of each program in the Sciences and Engineering. Using citation data from the ISI citation indexes, the NRC study examined citation rates across the 30 programs in the sciences and engineering, excluding programs in the arts and humanities. Table 42 presents each program's citation per faculty, total number of citations, and ranking. Programs in engineering are ranked high based on both per faculty citation and total citations measures. Four programs are ranked among the top ten programs based on per faculty citation count: Aerospace Engineering (7), Chemical

Engineering (1), Materials Sciences (4), and Biomedical Engineering (2). The other high ranked programs based on per faculty citation counts include: Physics (7), Astronomy (11), Psychology (13), Civil Engineering (16.5), and Geography (19.5).

Based on the total number of program citation counts, Biomedical Engineering (4), Chemical Engineering (1), Materials Science (3), and Aerospace Engineering (4) are among the top ten cited programs. Civil Engineering (13), Mechanical Engineering (15), and Electrical Engineering (22) also have particularly high rankings. Several other programs are also ranked very high on the basis of the total number of program citations. These programs include: Psychology (5), Physics (11), Chemistry (13), Astronomy (15), Ecology, Evolution, and Behavior (17), and Geography (17). These findings suggest that programs in engineering were particularly productive as measured by both the number of publications and the impact/influence of publications in their respective fields.

Some low ranked University programs based on the total number of program citations include: Physiology (77), Anthropology (63), Economics (51), and Pharmacology (46). Economics is one of the most highly ranked University programs on the basis of subjective judgment of the scholarly quality of its graduate faculty and educational effectiveness measures, but it is ranked considerably low based on both publication and citation measures.

Gini coefficients for publications and citations. Program research activity can also be examined by using the Gini coefficient for publications and citations. The Gini coefficient is used to indicate the concentration of publications or citations on a small number of the program faculty. This measure suggests whether all faculty are contributing equally to the program research production (measured by publications or citations), or a small number of faculty are contributing to the program's publications and citations. For example, a large Gini coefficient for publication suggests that publication productivity of the program is concentrated in a few faculty members. This coefficient is potentially useful in thinking about how the institution directs limited internal funding to stimulate research and scholarship in those units where activities are limited to a few faculty.

Table 42 also summarizes the Gini coefficients for publications and citations. With regard to differences among the four fields, programs in the social and behavioral sciences and the physical sciences have higher coefficients for both publications and citations, suggesting a small number of the program faculty are more active in producing publications, and cited more than programs in engineering and the biological sciences.

Low research active and low rated programs also appear to have a small number of research productive faculty who have more publications and are cited more than the rest of the faculty. For example, the Gini coefficients for publications and citations for Anthropology were 20.6 and 52, respectively, suggesting publication and citation rates are much greater for a few faculty than the rest of the program faculty. On the other hand, the small Gini coefficients for the top-ranked programs suggest that the program faculty appear to contribute equally to the program's research production. For example, the Gini coefficients for publications and citations for Chemical Engineering 6.4 and 12.5, respectively. The top rated Economics and Political Science programs have large Gini coefficients for publications and citations and ranked low, compared with the programs in their respective disciplines. For example, Economics was ranked 66.5th and 39.5th and Political Science was ranked 33.5th and 35.5th on the basis of their Gini coefficients for publications and citations, respectively. Although this finding is consistent with the low rankings in research productivity measures, it also suggests substantial difference between subjective rankings and objective rankings in these programs.

Sponsored Funding

Sponsored funding, as measured by the percentage of faculty holding research grants from outside sources, is another good indicator for faculty involvement in research and scholarship for those disciplines with significant sources of external funding. In this regard, the NRC study also provided the percentage of program faculty with federal research support during the period of 1986-1992. As the results in Table 42 indicate, most University graduate programs performed well in receiving federal research support. About 58 percent of faculty in 30 programs in engineering, the physical sciences, the social and behavioral sciences, and the biological sciences held federal research funding between 1986 to 1992. As expected, there are considerable differences among fields and within fields with respect to sponsored funding, and a higher percentage of faculty in programs in the biological sciences, engineering, and the physical sciences held federal research grant (76%, 66%, and 64%, respectively) than those in the social and behavioral sciences (23%).

Table 42 also provides rankings of University programs compared with programs in other institutions. Nine programs are ranked among the top ten programs with respect to the percentage of faculty holding federal research grants in the period of 1988-92. Three programs in the Biological Sciences (Biochemistry and Molecular Biology, Cell and Development Biology, and Pharmacology) ranked among the top-ten programs in their respective fields on the basis of the percentage of faculty holding federal research grants, even though they are not ranked among the top-ranked programs based on both scholarly quality ratings and objective quality indicators. This finding suggests that faculty in these fields are particularly competitive and successful in receiving research funds from outside sources.

The other top-ranked programs include Aerospace Engineering (3.5), Chemical Engineering (10), Materials Science (14), and Civil Engineering (16) in engineering; Astronomy (4), Geosciences (14), Statistics (4) in the physical sciences; and Economics (10.5), History (10), Sociology (6), and Political Science (21) in the social and behavioral sciences. These programs are also among the top-ranked programs on the basis of scholarly quality or scholarly productivity measures. Federal research grants are only a portion of total research funds for University sponsored research. A significant portion of research funding also comes from state and private sources, which is excluded in the NRC study.

The above analysis of the faculty research performance of 39 University of Minnesota doctoral programs in the Sciences and Engineering on the 1995 NRC study demonstrated that the majority of University programs have strong research performance as measured by the total number of publications and total number of citations compared with their respective programs in other research universities. In addition, faculty scholarly research activity indicators, as measured by the percentage of faculty publishing and holding federal research funds also indicated that University of Minnesota graduate faculty have active research involvement.

Grant-in-Aid of Research, Artistry and Scholarship Program

The Graduate School Research Fund, established by the Legislature in 1941, provided "seed money" to help stimulate external funding of faculty research. The Medical/Cancer Research Fund, established in 1975 to promote research in medicine generally and cancer in particular, was used to support the research of faculty primarily in the Health Sciences. Applications for Graduate School research funds were reviewed by two separate committees. Applications in non-health-related areas were considered by the General

Research Advisory committee. If the proposed research was in the area of the health sciences, the application was considered by the Health Sciences Research Advisory Committee and funded from the Medical Research Fund. All components have been folded into and are now part of a comprehensive Grant-in-Aid Research Artistry and Scholarly Program (GIA), whereas at the time of the 1986 Accreditation Review the various efforts were somewhat more separate. For the ten-year period prior to the last self study the annual number of requests and awards were as follows:

Year	Number of Requests	Number of Awards
1974-75	265	172
1975-76	266	208
1976-77	282	199
1977-78	264	179
1978-79	257	174
1979-80	310	239
1980-81	279	198
1981-82	329	239
1982-83	333	258
1983-84	285	198
1984-85	227	158

This program plays a crucial role for faculty because it is now essentially impossible to obtain funding from external agencies without preliminary data. GIA awards are made on the basis of seven different categories. New faculty who have yet to establish a track record have the highest priority for funding, and based on the past three years data, have received 42 percent of the awards. Furthermore, deriving preliminary data requires expensive equipment which the GIA program also makes possible where such equipment can be shared by multiple investigators (8% of the awards). Other areas of scholarly activity supported by the GIA program include: (a) funding in those areas where there are few sources of extramural support (17% of the awards) i.e., many of the disciplines in the arts and humanities which require smaller amounts of funding to complete books, manuscripts, and artistic products; (b) the provision of funds for faculty moving into significantly different areas of research and scholarship (14% of awards); (c) support for the acquisition of special research materials (2% of awards); and (d) support for research visits between a faculty member and another scholar or scholars (4% of awards). Finally, a very important role of the GIA program, during these times of very competitive funding, is that of providing bridge funds to faculty who have an unexpected lapse in their extramural funding. The GIA supports their research assistants and technical staff for a short period until the faculty member can successfully get their extramural grant refunded (14% of awards). A recent ten-year analysis indicates that the total amount of GIA funding awarded to faculty in a given college can vary significantly from year-to-year reflecting new hires, special needs of faculty, etc. (e.g., one college received from as little as 14% of the total in one year, to as much as 27% of the total GIA awards in another).

This program has grown over the years, increasing by \$140,000 just this past year, such that \$2,242,864 is available for the 1995-96 year. Data summarized in Table 43 below indicate that the number of applicants and awards have steadily declined since 1986, correlating with a corresponding decrease in the number of new faculty hires. However, the cost of research has steadily increased so that the average award has more than doubled in this ten-year period, when the actual amount of money available has grown less than 20 percent. A major factor for the increased cost of research has been the large increase in Graduate Student fringe benefit rates.

Table 43
Grant-in-Aid Statistics for
Ten-Year Period, 1986 through 1995

Fiscal Year	Number Requests	Number Awards	Dollar Requested	Dollar Awarded	Average Dollar Requested	Average Dollar Awarded
1986	446	308	3,921,901	2,015,591	8,793	6,544
1987	440	279	4,138,430	1,732,835	9,405	6,210
1988	456	297	4,818,008	2,151,538	10,565	7,244
1989	423	242	4,183,230	1,884,715	9,889	7,788
1990	416	256	4,712,900	2,253,177	11,329	8,801
1991	406	252	4,917,561	2,279,674	12,112	9,046
1992	371	218	4,861,118	2,253,629	13,102	10,337
1993	381	224	4,823,911	2,211,707	12,661	9,873
1994	338	187	4,600,872	2,119,344	13,612	11,333
1995	326	175	5,327,755	2,471,625	16,342	14,123

Research proposals for one year of support are solicited from faculty every six months. All grant applications are reviewed by one of two peer review committees comprised of senior research faculty from different colleges and campuses: the Biomedical Research Advisory Committee reviews all biomedical and biomolecular science proposals, while the General Research Advisory Committee reviews proposals in all other disciplines at the University. For the 1995-96 year, a total of 300 applications have been received and a total of 159 awards have been made with an average grant size of \$13,899. Of the total funding awarded, approximately 40 percent supports graduate research assistants (salary and fringe benefits) on faculty research projects.

To evaluate the outcome of this program, a questionnaire was sent in the spring of 1995 to all 538 GIA recipients for the years 1985-86, 1989-90 and 1992-93. The questionnaire sought information on the scholarly products/honors and extramural grants received by the faculty that were due in whole or in part to the specific GIA award. When the scholarly products attributable to the GIA awards are examined for the three years surveyed, the data indicate that these programs are very effective with the 1992-93 awards already generating an average of two peer-reviewed publications/GIA award and 3.5 such publications/GIA award for the 1985-86 awardees. There would appear to be a long "tail" on any GIA award as publications are still being produced from such awards up to 10 years after the award date. The same appears to hold true for the publication of books and products of artistry.

When the extramural grant activity of the respondents is examined it is clear that faculty receiving GIA funding have made good use of this "seed-money" investment. This is best illustrated by the 1985-86 recipients of GIA awards where 111 respondents received a total of \$603,046 from the GIA program (average award \$5,400). Ten years later, these faculty had received a total of \$55,269,058 in extramural funding of which \$21,658,200 was identified as having resulted directly from the GIA award that they had received in 1985-86. It is clear from these data that the GIA awards have proven very effective in facilitating the acquisition of extramural funding. The 1985-86 awards resulted in an average return on

investment of 36-fold over this ten-year period. Clearly this return on investment increases with time since the GIA award. Thus, the 1989-90 GIA recipients generated a 15-fold return on investment, and the 1992-93 GIA recipients generated a 12-fold return on investment.

These data somewhat underrepresent the return on investment as this value ranges from 40 to 56-fold for the 1985-86 Biological Sciences, Engineering, and Math and Physical Sciences disciplinary groups to only 5-fold for the Arts and Humanities disciplinary group for this same year. The data are most reliable for the Biological Sciences disciplinary group as it received the largest number of GIA awards (almost 50% of the total number of awards).

Therefore, the GIA program has proven to be a highly effective mechanism for supporting faculty scholarship and research. It serves as a catalyst for faculty research as documented by both the numbers of scholarly products generated as a result of these awards and the return on investment in terms of extramural grant support generated in part as a result of this GIA funding.

Interdisciplinary Research Awards

This major new initiative to facilitate interdisciplinary research programs across the University of Minnesota system was launched in 1994 by the Office of the Vice President for Research and Dean of the Graduate School. The goal of this program is to support faculty groups from two or more colleges focusing on issues of state or national significance or on areas where Minnesota could create a special niche. In addition, the programs should provide important opportunities for the education and training of graduate students, and should demonstrate a likelihood of external funding within two years.

After the peer-review of these proposals, the top-ranked proposals are sent to the relevant deans of the applicants for their assessment. Their feedback on the different proposals is particularly helpful in making final decisions as to which proposals to fund, i.e., which have the greatest support from deans and are likely to be continued when this Interdisciplinary Program funding ends. Currently, 17 grants of no more than \$50,000/year for two years and nine planning grants of \$10,000 or less per year for two years have been funded. Many of these centers have funding to support research assistants and a number are specifically focused on the initiation of new graduate programs (e.g., immunology, developmental biology). Currently, funded grants support centers that include faculty from every one of the Twin Cities campus colleges as well as a number of colleges on the Duluth campus. In addition, "non-competing" renewal applications are requested from all funded interdisciplinary programs after their first year of funding to track their successes and review their budgets. The faculty peer-review committee will also be evaluating the effectiveness of this program after the completion of the first two-year grants to ensure that the review criteria and level of funding of this program are optimal to support its goals given the available resources.

Three of these currently-funded centers (Center for Research on Interpersonal Relationships, Center on Aging and Center for Neuroscientific Databases) requested to report administratively to the Office of the Vice President for Research. Following meetings with appropriate deans, it was decided to have these three centers report to this office during the two years of funding. At the end of that period, their reporting relationship will be reassessed.

The University of Minnesota continues its internal funding processes to stimulate interdisciplinary research activity. Twelve of the 32 proposals submitted in December 1994

were selected for up to two years of funding beginning July 1, 1995: three for support of planning efforts (\$10,000 annually) and nine for support of new programmatic center activities (up to \$50,000 annually). These grants will support interdisciplinary projects in colleges on the Twin Cities and Duluth campuses.

- Center for Immunology, \$50,000 annually/two years. (CBS, IT, Dentistry, Medical School, Pharmacy, Veterinary Medicine, Medicine-Duluth.) The specific goals of the Center for Immunology are: (a) to establish an identifiable graduate (doctoral) program in immunology by joining with existing programs, (b) to expand postdoctoral training opportunities in immunology and enhance the training experience, (c) to establish mechanisms for more effective communication within the immunology community at the University, and (d) to provide support for recruitment of outstanding immunology faculty and acquisition of external research funding, components vital to strong graduate programs in immunology.
- Planning Grant to Establish an NSF-Funded Identified-Neuron Database, \$10,000/one year. (AgFES, Medical School.) This grant will fund a planning effort aimed toward the University being considered a site for one of the identified neuron databases soon to be funded by the National Science Foundation. The University's new database will have an emphasis on information about the anatomy and neurochemistry of identified neurons in the well-studied model systems of insects, an area in which NSF wishes to direct its funds.
- Project for Interdisciplinary Postbaccalaureate Education in Mental Health Practice, \$10,000/one year. (Human Ecology, EdHD.) The Project for Interdisciplinary Postbaccalaureate Education in Mental Health Practice (PIPE-MHP) endeavors to improve mental health services to children and families by providing systematically oriented care. To achieve this improvement, PIPE-MHP will institute a program that changes the nature of graduate education for student preparing for professions as mental health practitioners serving children and families. The revised educational program will transcend the discipline-specific ways these services have traditionally been provided. PIPE-MHP is an initiative of the University's Children, Youth, and Family Consortium, which fosters cooperative efforts among such disciplines as child clinical psychology, counseling and school personnel psychology, marriage and family therapy, and social work.
- Research Collaborative on School Reform, \$10,000 annually/two years. (CLA, AgFES, CALA, Human Ecology, EdHD, Humphrey Institute, Education and Human Service Professions-Duluth.) This planning grant brings together faculty from seven colleges across the University who, despite diverse interests and backgrounds, share interests in helping improve the educational environments in which children learn. The focus for these efforts will be on helping schools address the complex problems that confront them, particularly as they try to balance issues of excellence (producing and rewarding high achievement) and of equity (assuring that all children will be given real opportunities to succeed). An organizing framework will be provided by Goals 2000: Educate America Act.
- Center for Cryoimaging of Molecular Topography and Spatial Organization of Cell Surface Molecules, \$40,000 annually/two years. (CBS, IT, AgFES, Dentistry, Medical School.) The Center for Cryoimaging of Molecular Topography and Spatial Organization of Cell Surface Molecules is an interdisciplinary effort in collaboration with 34 scientists in 16 departments in five colleges. A nationally unique center will be established at the University to enable investigators to pursue key questions on the function and structure of membrane molecules and molecular complexes. This center

will provide and coordinate the use of existing cryotechnology and high-resolution field emission scanning electron microscopy. The center will also provide training and access to numerous scientists from different disciplines and departments on the Twin Cities campus who want to utilize this technology.

- Center for the Study of Political Psychology, \$50,000 annually/two years. (CLA, CSOM, EdHD, Law.) A Center for the Study of Political Psychology (CSPP) will allow scholars at the University to become more deeply involved in interdisciplinary research that will advance empirical and theoretical knowledge in political psychology and in its parent disciplines. The research conducted by participants in the center will concern such issues as racial and political tolerance, citizenship and political participation, and social cognition and communication. CSPP will allow scholars to conduct first-rate interdisciplinary research and, where appropriate, to disseminate their knowledge through community outreach programs, including curriculum development in high schools or teaching community leaders about citizenship and tolerance. CSPP will complement and strengthen the Ph.D. minor program already in existence at the University.
- Center for Gene Therapy of Fibrotic Lung Disease, \$36,000 year 1/\$23,000 year 2. (Medical School, Pharmacy.) This grant is for administrative, secretarial, and nursing support in response to a request for applications by the National Institutes of Health (NIH) for specialized centers of research to study the pathobiology of fibrotic lung disease. The general goal of NIH's program announcement is to develop centers that "will have an impact on the prevention, diagnosis, and treatment of fibrotic lung disease." Seed funding from the University will make possible the pursuit of an initiative with federally targeted funding in an area where the University has established academic strength.
- Center for Political Economy, \$50,000 annually/two years. (CLA, AgFES.) The Center for Political Economy will enable scholars from economics and political science to interact and attempt to provide certain important components of a micro-theory of political economy, address important problems of methodology, and use this work to provide a basis for a more fruitful way of addressing important applied problems, such as the political economy of environmental protection.
- Biophysical Approaches to Nucleic Acid Function, \$30,000 annually/two years. (CBS, IT, AgFES, Dentistry, Medical School, Pharmacy.) The aim of a center for research on biophysical approaches to nucleic acid function is to catalyze and facilitate new research collaborations between molecular biophysicists and molecular biologists. The original definition of molecular biology included both structural and genetic approaches. Such a center would make possible interesting and significant new applications of modern biophysics and chemical physics to nucleic acids, by facilitating the access of biophysicists and molecular biologists to each other's expertise.
- Center for Advance Controls in Plasma Processing, \$50,000 annually/two years. (IT, Science and Engineering-Duluth.) In the Laboratory for Intelligent Systems in the Department of Computer Engineering, Duluth, there has been an extensive effort to develop the new approaches for control systems, and a collaboration with industry exists for transferring these new developments into practice. In the High-Temperature Laboratory in the Department of Mechanical Engineering, Twin Cities, a large effort exists to develop plasma processes and plasma process equipment. This new center will combine the expertise from both campuses with the objective of applying advances in control methodology to plasma manufacturing processes, thus creating the basis for more widespread utilization of this advanced technology.

- Center for Integrated Natural Resource and Agriculture Management, \$50,000 annually/two years. (AgFES, Natural Resources, NRRI-Duluth.) The central purpose of this center is to facilitate collaborative research on integrated resource management within Minnesota. The goals of the center are: (a) to identify and bring together stakeholders from within the University and from around the state, including state and federal agencies and the private sector, to determine what research on integrated resource management would be most useful for Minnesota; (b) to initiate and facilitate interdisciplinary research projects in this area and to pursue the necessary funding for these projects; and (c) to act as a research home for collaboration in the area of integrated resource management to those within and outside of the University.
- Community-University Adolescent Health Partnership, \$50,000 annually/two years. (Human Ecology, EdHD, Medical School, Nursing, Public Health.) The Community-University Adolescent Health Partnership will promote the health and well-being of adolescents in Minnesota. The center will focus on design and implementation of evaluation research for youth-serving programs and interdisciplinary training in adolescent health development and youth work. The center will evaluate three youth-serving organizations in Minneapolis. The center will also implement in its second year a core graduate seminar in healthy adolescent development, taught by University faculty and visiting practitioner(s) from one or more youth-serving organizations.

Related Research Opportunities for Faculty

Three other programs (the Faculty Summer Research Program, the McKnight Land-Grant Professorships, and the Undergraduate Research Opportunities Program) provide additional opportunities for individual faculty members.

Faculty Summer Research Fellowship Program

The Faculty Summer Research Fellowship Program provides summer stipends for faculty on nine-month appointments to enable them to devote five weeks of time to research. Without this summer salary support these faculty must derive income from teaching or other non-research related activities. For many of the faculty supported by this program, the summer months are the only time in the year when they are free of other commitments and therefore able to spend a concentrated period of time devoted to their research or artistic pursuits. The program receives approximately 80 applications per year from faculty in the arts, humanities, and social sciences and awards 27 fellowships of \$5,000 each. All fellowship applications are reviewed by a faculty peer-review committee comprised of senior research faculty from across the University.

McKnight Land-Grant Professorships

The McKnight Land-Grant Professorships were created from a \$3 million gift from the McKnight Foundations and \$9 million from other University funds (including PUF funds) and are designed to stimulate the careers of young faculty members who have the potential to make significant contributions to their fields. Each professor receives two months summer salary and a research grant of \$21,000 in each of three years, plus a year's leave in the second or third year with half salary from the department and half from the Graduate School. The first competition was held in 1986-87. Due in part to declining numbers of new hires at the assistant professor level in recent years, a new mid-career Professorship

program--the distinguished McKnight University Professorship--was established this year. The program's intent is to recognize and reward the University's most distinguished mid-career faculty who have recently achieved full professor status, especially those who have made significant advancement in their careers here. The grant associated with the Professorship will consist of \$100,000 over five years to be used for research, scholarly, or artistic activities, and expended at the recipient's discretion.

Undergraduate Research Opportunities Program

The Undergraduate Research Opportunities Program (UROP) is worth noting here, although it is described in more detail in Chapter VI: Undergraduate Education. UROP awards approximately 400 grants per year to support research by undergraduates who are supervised by University of Minnesota faculty. This very unique program allows interested undergraduates the opportunity to engage in an intensive research experience and discover the possibilities that a career in research has to offer. It also helps prepare students for acceptance into the program of their choice. The UROP office is responsible for coordinating two other important undergraduate research events: the annual University Undergraduate Research Opportunities Fair which provides students with an opportunity to present their research to an audience of faculty and fellow students; and the national Undergraduate Research Conference (at which the University of Minnesota has the largest participation of any university with about 35 to 40 students plus four to six faculty). This conference provides undergraduates with an opportunity to meet undergraduates from other institutions to share their excitement and interest in the research experience.

Another important role of the UROP office is to act as the central clearinghouse for all applicants to more than a dozen different collegiate/departementally-funded undergraduate research opportunity programs that each year recruit undergraduates from the University of Minnesota as well as from other universities across the United States. All programmatic decisions and selection of students are performed by these programs: the UROP office acts as the single location that facilitates the application process for students less familiar with the different units and programs at the University of Minnesota. All these different undergraduate research efforts enable students to take advantage of the very rich research environment that characterizes the University of Minnesota.

CHAPTER IX

OUTREACH¹

The document *University 2000, Mission, Vision, Strategic Directions, and Performance* includes the following statement relative to the institution's outreach and public service mission:

“Extend, apply, and exchange knowledge between the University and society by applying scholarly expertise to community problems, by helping organizations and individuals respond to their changing environments, and by making the knowledge and resources created and preserved at the University accessible to the citizens of the state, the nation, and the world.”

One of the difficulties in describing the institution's outcomes in its three-fold mission is that the three areas are interrelated (i.e., some of the institution's research and teaching outcomes also can be viewed as an outreach outcome). This chapter highlights, on a very selective basis, some of the more visible outreach activities and outcomes that distinguish the University of Minnesota from other publicly funded postsecondary institutions in Minnesota, and align it with other land-grant institutions. Other college specific outreach activities and accomplishments were described in Chapter V: Collegiate Overviews, Plans, Actions, and Concerns.

Institutional-Level Critical Measures

An important feature of *University 2000* is the emphasis it places on the University's relationship to people and entities outside of the institution. *U2000* envisions the University's research, education, and outreach programs as enhancing the social, cultural, economic, and physical and intellectual health of Minnesota and the Upper Midwest; it also envisions a broad array and diversity of partnerships and collaborations.

At the time of the preparation of this self-study report, work is underway to prepare institutional-level critical measures to be used to evaluate the institution's success in its outreach mission. Although three critical measure areas initially were proposed as part of the set of 19 measures (Outreach and Public Service, Responsiveness to Market Demand, and Responsiveness to Compelling State Needs), the final set of measurement categories is likely to be quite different from those proposed initially.

Initial discussions have suggested three themes for attention in developing appropriate measures, with each theme viewed across the breadth of the University's mission as suggested by the University's *1993 Outreach Plan*. The three themes are: (a) access to education, particularly opportunities for learning in “non-traditional” ways; access to the University's expertise to address external needs and problems; and access to the University's graduates, who carry the University's expertise into their own communities when they leave; (b) the extent and quality of the interaction between the University and its external constituencies, including partnerships and collaborations and other kinds of

¹ <http://www.opa.pres.umn.edu/specproj/accred/reachout.htm>

external contacts and interactions; and (c) impact or results, including impacts in economic, educational, environmental, health, social, and cultural areas; and impacts resulting from graduates who serve their communities, create new organizations/jobs/economic activity and/or provide leadership in their fields. All of these concepts reflect the University's outreach mission and responsiveness to state needs and external demand. This approach is not intended to provide a comprehensive definition of the outreach mission, but to measure some important aspects of that mission that are not otherwise reflected in the critical measures.

A two-part strategy seems appropriate for this broad area. First, as noted in the *1993 Outreach Plan*, it is important for the University to tell its outreach story to the public, and there are important aspects of the University's interface with society that would not fall within any of the existing critical measures and, therefore, require a new measurement category. Given the breadth of the University's expertise and the richness of its related interactions with external constituencies, this measurement area is likely to be largely qualitative in focus. Second, because in the broadest sense the outreach mission and the University's interface with external communities crosses all aspects of the University's mission, some of what needs to be measured belongs in measurement categories developed in the first and second phase critical measures work. In some cases, new data elements need to be added to these measures; in other cases, the information collected for the measure will need to be disaggregated.

Overall Satisfaction of Minnesota Citizens²

As a public land-grant institution, the University of Minnesota's outreach mission and associated activities must be considered from the perspective of citizens of the State of Minnesota. How Minnesotans evaluate the institution depends not only on its success in outreach, but on the quality and impact of its teaching and research activities as well. One of the institutional-level critical measures: Overall Satisfaction of Minnesota Citizens has as its goal "to increase satisfaction of Minnesota citizens and key constituency groups with the University's performance and contributions to the state."

Satisfaction requires an awareness of the University's multiple roles, a belief in their importance, and a perception of the University's performance and contributions in relation to its roles. For purposes of this critical measure, "Minnesota citizens" are defined as: (a) the general public of the state; and (b) key constituency groups, including business and industry, state and local governments, the non-profit sector, and communities of color. The University needs not only to maintain and improve its performance in each of these areas, but also to improve the public's understanding of its mission, its programs, and its contributions to the state. Public understanding and support are critical for achieving the University's vision and goals for the 21st century. This critical measure will serve as a way of measuring the University's success in communicating its mission, goals, and accomplishments to the people of the state.

University Relations has conducted public opinion polls that have used a relatively small number of questions. Their data is interesting but is not necessarily adequate to establish the baseline for an overall satisfaction measure. A question on "overall satisfaction" was used in a survey of 805 adults (18 years of age or older) conducted as part of the 1994 Minnesota State Survey.

² <http://www.opa.pres.umn.edu/specproj/critmeas/phase2/overal-s.htm>

The survey found that 19 percent of the Minnesota citizens sampled were "very satisfied" with the University and an additional 38 percent were "somewhat satisfied." Although only small percentages gave negative responses (8% were "somewhat dissatisfied" and only 2% were "very dissatisfied"), a significant percentage of the people questioned (33%) were neither satisfied nor dissatisfied. Based on these results, the University could be viewed as having important work to do in increasing ratings of the "somewhat satisfied" and the "neither" groups, in order to increase public support for its mission and goals in this critical time of shrinking resources. A question on "impression of the University as an educational institution" was included in 1988, 1990, 1992, 1993, and 1994 University Relations surveys but is not useful as a measure of overall satisfaction since the focus is on only the educational component of the tripartite mission.

During the 1995-96 year, a more comprehensive survey is being developed by the Office of Planning and Analysis and will include the following four components:

- Satisfaction is operationalized as the percentage of Minnesota citizens polled who say they are very satisfied when responding to a question about their overall satisfaction with the University.
- Awareness is operationalized as the response of the public and members of key constituency groups to questions about:
 - (a) feeling generally informed about the University and its activities;
 - (b) being able to identify components of the University's mission and key aspects of its future goals (i.e., teaching/learning, research/discovery, outreach/public service, and responsiveness to customers/constituents); and
 - (c) recognizing the University's unique role in the state's public higher education system.
- Perception of importance is operationalized as the response of the general public and members of key constituency groups to questions about the importance of the University's mission and goals for the state, for their communities, and for themselves/their families (in general and in teaching/learning, research/discovery, outreach/public service, and responsiveness to customers/constituents).
- Perception of performance is operationalized as the response of the general public and members of key constituency groups to questions about:
 - (a) the University's performance overall;
 - (b) the quality of the University's teaching/learning, research/discovery, and outreach/public service, as well as its responsiveness to customers/constituents; and
 - (c) the University's contributions to the quality of life in the state, their communities, and themselves/their families.

Outreach Plan

The University's *1993 Outreach Plan* states a mission to "improve and enhance the quality of life, economy, and the environment through the transfer and exchange of knowledge between the University and society." Outreach is viewed as being "fully integrated with research and teaching as a basic part of the knowledge mission," and as "a two-way exchange of knowledge, ideas, and vision between the University and society." The *Outreach Plan* further describes eight desired outcomes as follows:

- Enlightened citizens, liberally educated across the life span
- Mentally and physically healthy youths and adults
- Educated professional and skilled work forces
- Informed and orderly public policy development
- Effective, productive organizations, groups, and communities
- Globally competitive businesses and industry
- Sustainable human-made and natural environments
- Effective public institutions, infrastructures, and community designs

Illustrative outreach activities that have addressed each of the above desired outcomes in recent years include the following:

Enlightened Citizens Liberally Educated Across the Life Span

- The Weisman Art Museum³ the College of Human Ecology's Goldstein Gallery⁴, Midwest Play Labs, and the Jazz Program's Buckner Series provide youths and adults the opportunity to experience and learn more about artistic expression.
- The College of Natural Resources Bell Museum of Natural History, through its traveling exhibit program, interprets and disseminates the facts, principles, and controversies of the natural sciences to people throughout the state.
- More than 44,700 individuals experienced personal growth and lifelong learning in noncredit courses through CEE centers⁵ in the Twin Cities, Duluth, Rochester, and Morris.
- Dial U gives Minnesotans current direct telephone access to research-based information on problems related to plants and insects.
- The Talented Youth Mathematics Program is an intense and accelerated program for students in grades 5-12 who show excellent promise in mathematics. Through this program, the School of Mathematics provides high-potential youth with academic enrichment and important role models.
- The Humphrey Institute's Humphrey Forum provides classes for all ages with a focus on relating the political values of Hubert Humphrey to contemporary issues.

Mentally and Physically Healthy Youths and Adults

- Alcohol Decisions, a program designed and delivered through 4-H Youth Development in the Minnesota Extension Service⁶, reaches hundreds of youths annually with sound information about use and abuse of alcohol. In addition, this peer training model serves as a leadership development tool for Minnesota teens.
- The Rural Physicians Associate Program (RPAP) which places U of M medical students and technology in rural communities throughout the state, addresses the problem of limited availability and accessibility of medical care. The University

³ <http://hudson.acad.umn.edu/>

⁴ <http://www.che.umn.edu/gallery/gallery.htm>

⁵ <http://www.cee.umn.edu/>

⁶ <http://www.mes.umn.edu>

Hospital and Clinic supports a computer network linking RPAP communities to the University Hospital, each other, and a nationwide electronic library.

- The interdepartmental Consortium on Children, Youth, and Families⁷ addresses critical educational opportunities at the community level on issues such as poverty and nutrition, family violence, parenting skills, teen pregnancy and substance abuse, and community family support systems.
- The College of Pharmacy maintains a working relationship with more than 3,500 Minnesota pharmacies. Its intern program places pharmacy students in the community, to work with practicing pharmacists and connecting the University's knowledge base with the clientele served locally.
- The School of Public Health's Heart Healthy Program is a community-based healthful lifestyle intervention program with emphasis on cardiovascular and cerebral vascular risk prevention. The intent is to decrease health risk and optimize well-being through media, market place, community education, public awareness, community organizations, schools, churches, etc.
- School of Social Work research and outreach on family violence is a collaboration with the Domestic Abuse Program and is recognized worldwide for impact on what we know about this critical issue.

Educated Professionals and Skilled Work Forces

- The College of Architecture and Landscape Architecture⁸ (CALA) provides 75 percent of the principals and staff of architecture and landscape architecture firms in Minnesota. CALA graduates currently operate over 250 businesses in the state and each year the college's graduates design 3,000 to 4,000 projects in Minnesota.
- The Law School's Continuing Legal Education Program⁹ is an annual training for practicing lawyers and judges on current issues in law.
- The College of Liberal Arts (CLA) on the Twin Cities campus annually conducts the Summer Institute for Teachers, a program of literature and humanities courses designed for kindergarten through 12th grade educators and taught by CLA faculty.
- Faculty of the College of Veterinary Medicine¹⁰ comb the world for cutting edge research information on swine production. They apply this new knowledge to Minnesota situations through continuing education classes, informal extension programs and one-to-one consultation with veterinarians and producers.
- The Industrial Relations Center¹¹ of the Carlson School of Management conducts skill-building and employee relations seminars and workshops to help managers, union leaders, and public officials in the field of labor and employment law, policy, and practice.

⁷ <http://www.cyfc.umn.edu/>

⁸ <http://gumby.arch.umn.edu/>

⁹ <http://www.umn.edu/law/alumni/cle/htm>

¹⁰ <http://www.cvm.umn.edu/c-resrch.htm>

¹¹ <http://www.csom.umn.edu/CSOM/EES/>

- The College of Agricultural, Food, and Environmental Sciences Center for Farm Financial Management¹² provides farm managers, agriculture lenders, and educators with computerized tools to apply the principles and concepts of farm planning, financing, and analysis in an individualized and practical way.
- Through the UNITE¹³ interactive television system, the CEE Rochester Center provides continuing education opportunities in computer science and electrical engineering to the professional population of Rochester.

Informed and Orderly Public Policy Development

- The Center for Urban and Regional Affairs¹⁴ conducted a large-scale analysis of population and economic change in the Upper Midwest, especially Minnesota. The findings helped guide policymakers and planners in areas such as education, health care, and economic survival of the state's small trade centers.
- The Mondale Policy Forum¹⁵ of the Humphrey Institute of Public Affairs involves emerging community leaders and international experts in forums, symposia, and conferences on contemporary public policy issues.
- The School of Social Work's Center for Social Policy and Child Welfare provides research-based input to public policy development at local, state, and national levels.
- *Fact Find*, generated by the Center for Early Education and Development in the Institute of Child Development, is an example of an outreach publication that is used by policymakers who seek objective, current data about early childhood issues.
- Faculty from the School of Statistics¹⁶ and the Department of Economics¹⁷ frequently serve as consultants to various government agencies and community organizations.
- The Center for Transportation Studies in the Department of Civil Engineering was established in 1987 to strengthen knowledge in transportation issues.
- Research in the Department of Family Social Science¹⁸ on the economic consequences of divorce in Minnesota contributed to the development of a new "divorcing family income equivalence worksheet," now used in state divorce policy.

¹² <http://beauty.agoff.umn.edu/~coafes/research.html>

¹³ <http://www.itdean.umn.edu/itdean/arca/unite.htm>

¹⁴ <http://www.umn.edu/cura/>

¹⁵ <http://www.hhh.umn.edu/archives/PUBPOL/>

¹⁶ <http://stat.umn.edu/>

¹⁷ <http://www.econ.umn.edu/>

¹⁸ <http://www.che.umn.edu/fsos/fsos.html>

Effective, Productive Organizations, Groups, and Communities

- Project Future, a Minnesota Extension Service community self-renewal program, involves local citizens in creating a vision for their community. This vision becomes a basis for setting and achieving goals at the grassroots level.
- Crookston's Management Division faculty conduct outreach programs on total quality management and the continuing improvement process for local community groups, organizations, and businesses.
- The Conflict and Change Center (Twin Cities) is a clearinghouse that provides outreach to individuals and groups seeking information on conflict management.
- CLA maintains an Office of Community and Cultural Affairs dedicated to outreach activities, that works directly with dozens of agencies and organizations annually, coordinating a wide variety of continuing relationships with the community and developing programs and projects that involve CLA faculty and students.
- Students in the Carlson School of Management graduate programs work in consulting teams, with faculty advisors, on interdisciplinary projects identified by corporate and public organizations¹⁹.
- With a grant from the Blandin Foundation, the Office of Research and Technology Transfer Administration²⁰ (ORTTA) seeks to communicate University research outcomes to viable industries in rural Minnesota and to form collaborative relationships with rural companies.

Globally Competitive Business and Industry

- The Center for Interfacial Engineering Small Companies Exchange Program²¹ (Institute of Technology) establishes teams of undergraduates, corporate mentors, and University faculty to take on challenges in small business environments. The company gets access to the expertise and facilities of the University, the student receives practical experience in the business environment, and the University fulfills its mission for outreach.
- The Dairy Initiative Program²², sponsored by the College of Agricultural, Food, and Environmental Sciences and the Minnesota Extension Service, enhances the quality of dairy-farm life, improves farm profitability, strengthens national competitiveness, and increases the vitality of rural communities.
- The College of Biological Sciences' Biological Process Technology Institute²³ (BPTI) serves as a catalyst of communication between engineers and biologists, laying a foundation of expertise, fundamental research, and trained workers needed to build Minnesota's biotechnology industry.

¹⁹ <http://www.csom.umn.edu/CSOM/MBAProg/Benefits.htm>

²⁰ <http://www.ortta.umn.edu/>

²¹ <http://www.cie.umn.edu/what/industry>

²² <http://www.mes.umn.edu/MES/livest.html>

²³ <http://biosci.cbs.umn.edu/bpt/bpti.html>

- The Institute of International Studies²⁴ in the College of Liberal Arts sponsors numerous long-term partnerships with selected area public schools and the education community statewide. Faculty frequently assist local teachers, helping them introduce international issues into their teaching.
- The Institute of Technology's Productivity Center improves design and manufacturing productivity through collaborative work with small- and medium-sized industries in the state. The center's focus is on technology-based solutions for problems of industrial competitiveness.
- Minnesota Project Outreach is a comprehensive information service that brings together University faculty with the state's entrepreneurs and small businesses to provide rapid, accurate answers to technical and business questions.
- Faculty from the College of Veterinary Medicine work with farm co-ops and farm lenders to provide information on animal health management and disease control²⁵.

Sustainable Human-Made and Natural Resources

- Integrated Pest Management programs (College of Agricultural, Food, and Environmental Sciences) educate farmers and urban dwellers alike on the use of environmentally conscious management practices for more sustainable farming, fruits, and vegetable production, and garden care.
- The Minnesota Geological Survey²⁶ maintains a Minnesota water wells database, which is used by agency professionals in local and state ground water management.
- The Cold Climate Housing Center is an interdisciplinary program (Colleges of Human Ecology, Architecture and Landscape Architecture, Natural Resources, and Agricultural, Food, and Environmental Sciences) that operates in close contact with the building industry and housing consumers to improve the energy efficiency, durability, and indoor air quality of homes in cold climates.
- The University has a major commitment to issues related to water. Some examples of programs that conduct and transfer research to industry, policymakers, and consumers include: Water Resources Research Center, Limnological Research Center, Sea Grant College Program²⁷, Center for Agricultural Impacts on Water Quality, and the Minnesota Extension Service Water Quality Program.
- The Environment and Natural Resources Policy and Training Project (Colleges of Agricultural, Food, and Environmental Sciences and Natural Resources) research teams work with international policymakers and managers in developing appropriate natural resource policies and training programs for watershed, forestry, and dry-land management and conservation.

²⁴ <http://cla-net.cla.umn.edu/iis/>

²⁵ <http://www.cvm.umn.edu/c-outre.htm>

²⁶ <http://www.geo.umn.edu:80/mgs/>

²⁷ <http://www.d.umn.edu/%7Eseagr/>

- Faculty from Urban Studies and Geography²⁸ work with Minnesota communities on issues involving historic preservation, urban design, and the environment.
- Touring exhibits from the University Art Museum address “sustainable” issues; two examples include: an exhibit on the meanings associated with fish and fishing in our regional culture, and a program on sustainable agriculture.

Effective Public Institutions, Infrastructures, and Community Designs

- College of Education and Human Development representatives served on a recent task force to develop long-range strategies for kindergarten through 12th grade schools in St. Paul²⁹.
- Several units within the health sciences are pursuing a collaborative effort to assist selected rural communities in the design of institutions and services for health care in the coming decade.
- The Institute on Community Integration³⁰ (College of Education and Human Development) improves the quality and availability of social services for those with developmental disabilities and their families. Through connections with local, state, and national agencies and educational institutions, the center assists in the design of new ways communities organize to improve quality of life for their citizens.
- University Libraries³¹, through MINITEX, provides a service of accelerated lending and copying to libraries and residents throughout the state. Libraries in this sense take on an outreach function that goes beyond that of collecting and preserving knowledge, including interlibrary loans, on-line catalog of books and materials and skills development for library staff throughout the state. The extensive library system has become part of the state's education infrastructure.
- Students in the College of Architecture and Landscape Architecture³² do their design research within the community. A project might, for example, look at current design dysfunction and the generation of new knowledge to fix that dysfunction so a neighborhood can be rejuvenated.

Another way to describe and organize the institution's diverse outreach and public service activities focuses somewhat more on different content areas. Listed below are the five dimensions of impact for the institution's outreach mission:

- Economic impacts, including the extent to which the University provides educational programs and graduates that are suited to job market (undergraduate, graduate, professional, continuing education and/or retraining); the role of the University and/or its graduates in the starting-up and/or growth of businesses and the related increase in jobs; and the kinds of new or innovative systems, techniques, etc. developed with University expertise that result in the increased competitiveness of state businesses, industries, and other organizations.

²⁸ <http://www.umn.edu/cura/updt2.htm>

²⁹ <http://www.coled.umn.edu/CAREI/www/Default.html>

³⁰ <http://www.ocoed.umn.edu/ICIWWW/Default.html>

³¹ <http://www.lib.umn.edu/>

³² <http://gumby.arch.umn.edu/>

- Education impacts, including effective and successful applications of knowledge and support to K-12 systems in the state.
- Health impacts, including break-throughs in medical knowledge, techniques, and devices, and improved health care for people through provision of clinical services.
- Social impacts, including research and applied programs that contribute to improving the lives of children, youth, and families in communities, to improving the status of underrepresented groups, and to promoting strong communities.
- Cultural impacts, including bringing literature and the arts to people outside of the University to expand their experience and enrich their lives.

Connections between the University and Twin Cities Businesses

The University of Minnesota is located in a large metropolitan community that affords opportunities that are beneficial to both the institution and the broader economic community of the Twin Cities, Minnesota, and the region. A joint project of the University of Minnesota's Humphrey Institute and the Metropolitan Council of the Twin Cities, *Twin Cities Industry Cluster Project*, focused on ways to improve the linkages between businesses and postsecondary institutions. The purpose of the joint project was to examine ways of strengthening the economic competitiveness and increasing economic opportunities in the Twin Cities by:

- Identifying clusters of industries in the Twin Cities.
- Examining the competitive advantages of these industries.
- Bringing communities, businesses and economic development professionals together to discuss these clusters and the "regional" economy.
- Developing recommendations for action based on the industry cluster analysis.

The seven recommendations included in the final report were as follows:

- Improve linkages between businesses and postsecondary educational and training institutions. Examine current institutional-level programs connecting the skills training provided with the demand for job-specific skills and training needs (on-the-job training and/or apprenticeship programs). Create or enhance industry or skills-specific linkages.
- Publicize the value and long-run economic potential of high-skill, technological occupations. Encourage people to pursue technical training. Use secondary school counseling and collaborative partnerships to create pipelines between high schools, technical training programs and technical jobs.
- Revitalize the University of Minnesota as a leader in education, research and technology transfer. Create or strengthen connections and collaborative partnerships between University departments, the University of Minnesota Office of Research and Technology Transfer Administration, the local economic development community and area businesses. Encourage businesses to view and use the University of Minnesota as a resource for technology transfer.

- Incorporate economic development considerations into transportation decision-making affecting highways, railroads, air travel, barge facilities, intermodal connections and other modes.
- Enhance state-of-the-art telecommunications as a critical component of future economic growth and development. Integrate telecommunications planning with physical planning. Recognize that telecommunications infrastructure is becoming the preferred means of transferring information. Provide not only adequate telecommunications infrastructure but also a supply of people trained in its uses.
- Promote industry-based economic development and regional cooperations in economic development through education and further research.
- Facilitate industry-based cooperation and ongoing dialogue by convening industry teams to discuss common problems and issues, develop legislative agendas and share solutions.

Transition to University College

When University 2000 was first proposed in the fall of 1994, six major initiative areas were outlined: research, graduate and professional education, undergraduate education, outreach and access, user friendliness, and diversity. A central part of the access agenda was creation of University College. At first, it was supposed that University College would combine several units of the University: General College, Continuing Education and Extension (CEE) and the already existing, albeit small University College, that offers non-traditional baccalaureate degree programs and that this new entity would provide an alternative to the more elite research university.

There was considerable reaction to this conceptualization of University College (UC), and after several weeks of discussion about its nature and role, a working group was formed to refine its vision and to outline the role it would play in improving access and outreach to the University of Minnesota. The report of that working group clarified that UC should be system-wide, that it should strive to serve a wide range of students, and that it should be a student-centered delivery system to build upon strengths and resources to achieve the following goals:

- Improve access to existing University courses and degree programs by being more responsive to student scheduling and support service needs, while also permitting the creation of a stronger campus community for full-time and residential students.
- Provide broader bases of information for courses or degree programs drawn from employer needs and labor market projections while ensuring the necessary, high quality liberal education component in the institution's undergraduate degree programs.
- Assess the need for and develop additional certificate programs, as well as a limited number of special experimental partnership degrees, while ensuring the quality of core undergraduate, graduate and professional degrees of this land-grant and research university.

The report recommended that General College not be part of UC, but that CEE would begin a transition into the role envisioned for UC. In February 1995, the Dean of Continuing Education and Extension was also named Acting Dean of UC to lead the merger in winter quarter 1996. The following summary (excerpted from the document *University College: Where Are We and What Is Ahead?*) is intended to show the current development of UC and to outline necessary actions to complete its implementation.

Improving Access to Existing Degrees

In 1993-94, when UC was being conceptualized, CEE was already being used as an access point to over 30 existing University degrees and to 6,085 credit courses offered out of three campuses, the Rochester University Center and around the world by distance education. In that year, over 61,000 people registering through CEE generated 424,732 student credit hours (13,545 FYE's) and an income to the University of well over \$50,000,000. But there were many unmet needs that the University was challenged to meet, including those identified in the series of MSPAN studies summarized elsewhere in this self-study report, that had indicated pressing needs within the Twin Cities was for master's degrees in professionally-based programs. Several private colleges in the metropolitan area as well as institutions located in other states had been aligning themselves to meet that need and had been very successful in doing so. By 1993, the University of Minnesota had done little to respond to that "market." In distance education, CEE had been slowly converting its nearly 400 correspondence courses to incorporate technology. It was involved in developing the interactive television network to connect the campuses and outfit classrooms on the Twin Cities and coordinate campuses. The University Center in Rochester was building a new state of the art classroom facility on the community college campus for the UM Rochester Center and Winona State University to share. We were just beginning to develop e-mail capacity and to experiment with the Internet in these courses.

During the past two years, the institution has made quick strides toward the expansion of our distance education capabilities. The interactive television network is completed and the State of Minnesota has linked all public institutions together by this means. CEE has begun to put 50 popular courses on line and has worked with faculty members to encourage the development of new courses via the Internet.

To improve access to existing degrees, the working group on UC had concluded that a key was a closer strategic partnership between UC and the colleges, than had existed between them and CEE. Since then, joint appointments have been made in several college offices: Education and Human Development, Human Ecology, Public Health, the Crookston campus, the Minnesota Extension Service and the School of Nursing. These were added to those which already existed at Morris, Duluth, in Pharmacy and Medicine and in many of the departments of several colleges. CEE collaborated to help colleges extend the Master of Social Work, the Master of Education and the Master of Nursing degrees to off-campus cohort groups using distance education technology.

Providing Broader Bases of Information for New Courses or Degrees

University 2000 and the impending financial crisis for all of Minnesota higher education has encouraged the institution to think more seriously about the potential for expansion of programs to older students. The growth of CEE had been linked over the years to an expanding need for recurrent education by people in the work force. In the 1980s, for example, 90 percent of the growth in Minnesota's postsecondary education came from adults and part-time students. That fact, along with the expectation that a person may well have seven or more careers in a lifetime had registered on us, and several deans had begun to plan

their current programs to respond to the changes in the demography of higher education. Until 1994, however, CEE had not developed a systematic way to explore the markets for these expanded degree offerings and CEE was not in a position to raise expectations for new degrees for adult and part-time students. CEE had collaborated with UMD and the Graduate School to offer a Master's of Liberal Studies degree at Duluth, with the College of Education and Human Development for the expansion of its MEd degree into the field of teacher leadership and with the Carlson School of Management for a Master of Business Taxation.

More recently, the Master's of Liberal Studies has been established on the Twin Cities campus and has been at capacity since its first offering. Course-only master's degrees in IT have been developed. CEE is currently working with the Humphrey Institute in their planning for the delivery of a new mid-career degree for public administrators.

CEE has turned Communication Services toward increased market research projects in conjunction with partners in the colleges on the Twin Cities campus. A market analyst carries out research projects with assistance to local market research companies. CEE developed and recently completed a survey on registration as part of the effort to move to a single user-friendly registration system for all students, one of the recommendations of the working group on UC.

Need for and Development of Certificate and Partnership Degrees

In 1994, CEE had in place over 20 certificate programs which primarily drew degree courses into packages that met work force needs. The working group on UC understood that the certificate was of value for those who wanted to upgrade their knowledge and skill in their present jobs or who needed a credential for a shift to new jobs or careers. The development of new experimental degrees was also seen as a way for the University to meet these demands and to test the market for some new approaches to degree development. The Twin Cities Higher Education Partnership, briefly described in a previous chapter, had just begun and the Board of Regents had approved two polytechnic-style degrees to be offered through CEE in close cooperation with Inver Hills Community College and with North Hennepin Community College. Since 1994, the two partnership degrees have been implemented and plans are under way to offer two new degrees through the partnership. Two new certificates have been begun, in child abuse prevention and in solid waste management and others are under development. The child abuse prevention certificate is now being delivered over interactive television to several sites.

Reengineering University College

Although much progress has been made toward the goals of UC, incrementalism alone cannot make the kinds of changes needed if the University of Minnesota is to achieve its potential in reaching the adult market in Minnesota, in the region and in the world at large. CEE/UC is initiating reengineering in the five processes basic to the success of UC: programming, marketing, distribution, registration, and financial management. It is these processes that provide the added value that will give the colleges the public interface that will be essential to programmatic and income growth.

Marketing will be aimed at providing market research and strategic analysis. Besides environmental scanning, tracking, and research surveys, the revised registration system will provide information for database marketing that will allow for trend analysis and cross selling. The University of Minnesota should think of itself as an institution that cultivates its students, its alumni and the people in its primary market area. This service will be provided to the collegiate partners of UC and it will strive to be the best of its kind in the country.

The courses and programs of UC and its partners will be available at centers throughout the Metropolitan area, at the coordinate campuses, at Rochester and, by distance education, at sites around the world. Also, contract custom instructional packages will be designed for companies in cooperation with collegiate partners. Strategic planning will be essential to focus energies, because the costs are enormous and the competition is growing very rapidly.

Programming will support the collegiate and campus partners, drawing from their faculty members and sharing in the income streams from these programs. Oversight from the colleges, campuses, departments and faculty will permit judicious use of adjunct faculty members drawn from the community. Programs will be developed to meet the demands of the Minnesota work force. They will be quickly developed and as quickly ended when they have met the demand. A merger of the "old" UC and the new one will allow for a faculty-community assembly to oversee these certificates, the partnership degrees and the longstanding inter-college and individualized bachelor's degrees of the "old" University College.

Reengineering of a single registration system has been underway for a year. Policy and design teams are working to build a single user-friendly registration system that will serve the students as well as the institution.

Finally, while CEE has had a good financial management system, it is one that has served the institution's needs more than that of its partners. With the implementation of responsibility center management, UC will need agreements with colleges and a clear and effective activity-based cost system.

Courses and Registration Offered Through Continuing Education and Extension

The *Report of Activities 1994-95* from Continuing Education and Extension includes the words "season of change" and provides an overview of the changes in an organization that has existed for more than 80 years and that annually provides programs and services to more than 400,000 people as part of the University's outreach mission. The organization is the largest provider in Minnesota of educational opportunities for part-time and adult students and has one of the most comprehensive continuing education programs in the United States: 168,274 registrations in both credit and noncredit and 239,143 other outreach contacts during 1994-95. Highlights from that report are as follows:

Extension Classes

The Department of Extension Classes, based on the Twin Cities campus, offered students access to 4,481 evening and weekend classes. Extension students could also enroll in 7,979 day-school classes. There were 77,468 registrations during 1994-95.

With the cooperation of several colleges on the Twin Cities campus, University of Minnesota degrees in more than 25 major areas could be earned completely through registration in these classes, most of which were offered for credit. The department is also home to new degree programs developed as part of the Twin Cities Higher Education Partnership, such as the Bachelor of Applied Business, and the Bachelor of Information Networking. The Master of Liberal Studies (MLS) a new interdisciplinary Graduate School degree, is offered through Extension Classes.

Professional Development and Conference Services (PDCS)

PDCS sponsored 230 noncredit conferences, workshops, short courses, and scholarly symposia in 1994-95. The department develops programs in collaboration with faculty, colleges, professional schools, institutes, and other departments and organizations within and outside the University of Minnesota. There were 16,050 registrations during 1994-95.

Continuing Medical Education

In 1994-95, Continuing Medical Education offered 49 seminars, workshops, and short courses for health care professionals. There were 8,220 registrations during 1994-95.

Summer Session

The University of Minnesota offers one of the largest, most comprehensive Summer Sessions in the nation. Summer Session aims primarily to help academic year students complete their degrees in a timely fashion, and it also provides special opportunities for visiting summer-only students, such as inservice teachers, students from other colleges and universities who are home for the summer, and academically qualified high school students. There were 34,050 registrations during 1994-95.

Counseling

CEE/UC's academic advisers help adult and part-time students plan ways to achieve their career and personal goals through education. There were 41,557 unduplicated student contacts during 1994-95.

Concerts and Lectures

The Department of Concerts and Lectures brings dance, music, theater, and ideas to Northrop Auditorium through performances and lectures. The department also sponsors the nationally-recognized Northrop Dance Series and the Northrop Jazz Series. There were 194,428 in attendance during 1994-95 events.

University Media Resources (UMR)

UMR offers educational media services for the community, as well as for the colleges and departments on the Twin Cities campus.

Minnesota Extension Service³³

The mission of the Minnesota Extension Service (MES) is to involve people in improving the quality of life and enhancing the economy and the environment through education, applied research and the resources of the University of Minnesota. As an organization whose primary mandate is to link the University with the people, MES is sensitive to changes both in the needs of outreach clientele and in the internal milieu of the University. MES is planning for the future shaped by the following eight predominant environmental trends:

³³ <http://www.mes.umn.edu/MES/mes.html>

- Greater complexity of problems facing the public. At all levels -- individual, community, statewide -- the problems facing us are more complex, inter-connected and deeper than in the past.
- Availability of multiple sources of education and information. In the past, the University of Minnesota and the Minnesota Extension Service were the primary source of knowledge and information for the public. Today, in contrast, there are many public and private providers of continuing education and educational information. We are faced with an explosion of information so that often the public's needs focus, not on gaining new information, but on making sense of existing and often conflicting information.
- Multiple agencies and organizations focusing on similar problems and issues. Whether water quality, community violence, agricultural profitability, or other issues of wide concern, many state and local agencies and organizations work on the same problems that have the attention of MES and the University. This creates, particularly for local decision-makers, concerns about duplication of effort. At the same time, communities express a great need for help in bringing agencies and organizations together to deal with their problems in a broader, more holistic way, rather than a piece-meal fashion.
- An increasing demand on land-grant universities to be responsive to public needs. As decisions about the best use of tax dollars become more difficult, the public is placing more demand on its tax-supported institutions. There is growing sentiment that the University should play a larger leadership role in helping the state solve its most compelling problems.
- An increasingly diverse population. Minnesota's ethnic and racial make-up is changing dramatically. In addition, we are increasingly recognizing diversity in the public with respect to age, sexual orientation, physical and mental ability, religious preference, ideas and perspectives.
- A better educated public. Minnesota enjoys a highly literate and educated public, many of whom are able to seek out their own continuing education and information needs and who wish to be respected for their knowledge and experience.
- A growing skepticism about science and technology. At the same time the public is increasingly educated, they are also placing less trust in research, science and universities as a whole as credible sources of knowledge.
- A desperate need for able community leadership. With the growing complexity of problems and the increasing pace and nature of change, communities need strong, able leadership to create the transformations necessary to be viable in the future.
- Technological advances. Ongoing changes in communications technology and applications are providing new tools and paradigms for linking the University and its constituents.

MES is a major outreach entity of the University, and is engaged primarily in informal education at local, community and regional levels. The shape and focus of these programs reflect a broad range and variety of forms. Essential to MES is ongoing strategic planning, environmental scanning, and program analysis on an interactive basis, within the organization and the University, and with local people who are served across the state. MES regularly reviews its educational programs to evaluate their alignment with demand, comparative advantage, and centrality to the institution's mission. The current educational emphasis is on the following:

- Enhancing and transforming communities and community leadership
- Reducing violence in families and communities
- Enhancing environmental sustainability
- Building strong families (in a community setting)
- Strengthening the health and safety of the public
- Enhancing the rural/urban interface
- Restructuring of agriculture
- Supporting rural economic recovery
- Reducing racism/strengthening pluralism
- Reexamining the funding of public institutions

MES continually assesses and modifies educational priorities and programs to ensure the best use of our limited resources and to shift emphasis from weaker, less relevant programs to those that are stronger and in more demand. Still, the institution has difficulty bringing some programs to an end. As a result, last year MES began pilot testing an innovative and comprehensive public decision-making process for sunseting programs, known as "Seeking Higher Ground." One of the two clusters in this pilot expects to sunset about ten percent of their programs as a result of this process, allowing them to shift that time to new, important emerging issues. This strategic process is likely to be a useful tool in the future for regularly and publicly discontinuing programs.

When MES discontinues educational programs, efforts of existing staff are directed elsewhere. Unlike most other colleges, we typically do not need to end appointments and hire others to create a shift in programmatic emphasis. MES has, nevertheless, experienced significant organizational downsizing in recent years and are already a "lean" organization. However, this leanness has, in part, helped accomplish the strategic plan because it has given cause to restructure the organization and rethink the entire way of making decisions about program priorities.

MES has three overarching goals that guide strategic planning:

- To help bring the University's resources to bear on societal problems from a total University perspective.
- To provide two-way access of the public to the University through our county offices, and access by the colleges to the public through our extension network.
- To strengthen interdisciplinary approaches across the spectrum of research, graduate and undergraduate education, and outreach and across all parts of the University.

The University's strategic planning process creates an important opportunity for MES to expand the scope of education for the public, to strengthen relationships with other University colleges and departments, and to strengthen and initiate links with undergraduate/graduate education and research. MES's 1992 strategic plan, "Re-inventing the Minnesota Extension Service" is well into implementation, and is in concert with and already addressing many of the major themes expressed in the University's current strategic planning guidelines. MES has a special niche in the University's overall outreach program, through which the University can be extended to the people by a network of faculty in every county, providing ready and efficient access, expedited by a statewide computer and satellite downlink system. This educational system is further extended by over 30,000 volunteers, MES educators in the 87 counties work in 17 clusters across the state in interdisciplinary issue-focused educational teams.

The ten interdisciplinary specialization teams are: Child and Youth Development, Community Resources, Crop Systems, Environment and Natural Resources, Family Development, Financial and Business Management, Horticulture, Leadership/Citizenship Education, Livestock Systems, and Nutrition, Food and Health. These teams include all extension educators across the state and campus faculty and are intended to provide the core long-term base for MES educational programming and staff development.

MES now has formal programmatic and fiscal partnerships with 14 University colleges and units: Agricultural, Food, and Environmental Sciences; Architecture and Landscape Architecture; Continuing Education and Extension; Center for Urban and Regional Affairs; Education and Human Development; Humphrey Institute of Public Affairs; Human Ecology; Natural Resources; Nursing; Public Health; Veterinary Medicine and the three coordinate campuses (Crookston, Duluth, and Morris).

MES provides outreach education through three primary inter-related organizational structures: 17 county clusters, 10 interdisciplinary specialization teams, and partnerships with 14 University of Minnesota colleges and units. These partnerships and structures are key to the effectiveness of the institution's outreach effort.

Over the past few years, MES has increased the number of grants and fee-generated income. Nearly 20 percent of MES's resources are now from grants and fees and this is expected to increase. Much of the innovative new programming efforts have been supported through these funds. County and federal funds have been generally stable over time, but have not kept up with inflation.

Access Minnesota³⁴

The institution's outreach capacities have been enhanced greatly as a result of electronic communication technologies. Access Minnesota, a project coordinated by the University of Minnesota through the Minnesota Extension Service, provides 60 Minnesota communities with access to the Internet through public information terminals located in county extension offices. The project is also providing Internet access to a limited number of K-12 schools and possibly public libraries. All members of the newly connected communities are invited to experiment with the Internet at no charge during office hours. Browsers can call up University research results, government and business development information, library catalogs, health care information, and on-line periodicals. In the words of an MES extension educator, "The purpose of Access Minnesota is not just to provide people with access to the Internet. The thrust of the project is to act as a catalyst to get people interested in and informed about the information superhighway." A key component of the project involves a community education program that stresses the relationship between telecommunications infrastructure and community economic development initiatives.

The Access Minnesota Project was funded by the Telecommunications Information Infrastructure Assistance Program (TIAP), a program which has benefited hundreds of communities nationally. Congress has been considering eliminating funding for TIAP, but that threat was lifted during the last week in September 1995. The \$425,000 grant from TIAP provides funding to continue the project through spring 1996.

³⁴ <http://www.mes.umn.edu/accessmr/>

Access Minnesota has provided these snapshots of how the services have been used:

- County commissioners in Aitkin County were able to receive information about pending legislation as a result of the Access Minnesota project.
- A cash grain producer in Pine County received current futures prices.
- A nursing student in Aitkin is able to do research for classes in Aitkin instead of making the long trip to Bemidji.
- Information and referral services staff in Dakota County have received up-to-date legislative information as a result of the Access Minnesota project.
- A St. Louis County resident was able to confirm that an adverse reaction was related to a pesticide after the extension horticulturist found information on the Internet. The horticulturist then recommended an alternative.
- Advocates for a domestic abuse program in Aitkin County are tracking legislation through their Access Minnesota site.

Among the many resources that are available on the Internet are the following:

- The Planning Commissioners Journal has several interesting articles available on-line in full text, such as "Creating Vital Communities: Planning for Our Aging Societies." They also have a collection of links to other planning resources.
- The Center for Civic Networking is a valuable resource for information about Telecommunications and Civic Networking. An example is "Life in the Fast Lane: A Municipal Roadmap for the Information Superhighway."
- The Applied Rural Telecom Resource Guide provides rural communities with resources to help them meet their economic and community development goals using telecommunications.
- The Local Government Resource Directory provides links to Internet resources such as "FinanceNet: focusing on reinventing government financial management."
- The Minnesota Office of the Legislative Auditor includes resources for auditors about federal and other government information.
- The WebCrawler includes terms such as "county commissioner" or "land planning" to find resources and home pages.
- Information about the national Association of Counties InfoRamp database for county government is available on the Internet.
- Census and geographic data for all Minnesota counties is available on the Internet from the U.S. Bureau of the Census.
- Minnesota weather forecasts, current radar and satellite images are available. Weekly snow depth maps and public ski and snowmobile trail information is updated every Thursday.

Technology Transfer Activities and Outcomes

The following are specific examples of how representatives of the University of Minnesota transfer technology:

- Teaching and working with students who go on to work in industry
- Publishing in professional journals
- Attending and presenting at meetings of professionals from academia and industry
- Collaborating on research centers cosponsored by universities and industry
- Discussing technical matters informally with industry representatives and providing technical information to industry
- Consulting formally with industry
- Providing technical services to industry
- Providing technical services of information to the state, federal government, or the general public
- Disclosing inventions (ideas, processes, products) to the Office of Patents and licensing
- Applying for patents on inventions
- Licensing inventions to industry
- Participating in start-up companies
- Discussing and explaining technology to the media and the public

Increased activity in "transferring" technologies and products developed within the institution for use outside the institution is not without risks, as the University of Minnesota's development of ALG has indicated. The University of Minnesota has experienced the full spectrum of issues and emotions inherent in being a major research university. The University, along with other research universities, is in a period of pervasive change in the way research is funded, administered, and overseen. Ironically, whereas 20 years ago universities were criticized for being "ivory towers of irrelevant research," today they are criticized for being too closely connected to the real world and for having conflicts of interest. This indicates that research universities must do a better job explaining what they do, what that means for their students and external constituencies, and to insure that what is done conforms with regulations of various state and federal agencies.

The University of Minnesota is one of a handful of universities that are in the midst of major revisions of policies and procedures to adapt to external changes. The institution has revised policies on research misconduct and conflicts of interest; the institution has improved the system of calculating overhead costs, and as a result the University was granted an indirect cost recover increase from 40 percent to 45 percent; the institution has implemented a less burdensome but more accountable system for reporting the effort of our research teams; the institution has studied sponsored project management and have initiated implementation of changes to clarify the responsibilities of each and to improve the process of administering externally supported projects; the institution has appointed a Public-Private Partnerships Committee to advise on our more complicated relationships with private entities; and the institution has drafted a new Regents' policy on Conflicts of Commitment. Clearly, the University of Minnesota has taken to heart the need for change; as a result the institution is committed to enabling faculty to continue to compete effectively for external support.

In terms of long-term competitiveness, two strategic guides are worth mentioning. The first is *Enhancing Research Effectiveness: The Foundation for Learning and Teaching in the 21st Century*, a report of the Strategic Planning Committee for Research and

Postbaccalaureate Education. The institution is developing specific mechanisms for following through on the planning committee's recommendations to evaluate the quality of academic units, to recruit and retain outstanding faculty members, to invest in areas of excellence, to encourage interdisciplinary research and external partnerships, and to communicate the vault of research. The second strategic guide for research is University 2000 and the associated institutional-level critical measures that suggest the goal to be a leading global research university that leverages its resources for the benefit of Minnesota.

In January 1996, the Office for Research and Technology Transfer prepared a detailed report *Connections between the University of Minnesota and Minnesota Companies*. The report is a detailed description of the following: educational offerings and information exchanges designed for industry; the resources available from the University to assist Minnesota companies; research centers with significant interactions with industry; sponsored projects currently sponsored by Minnesota companies; and mechanisms for transferring University technologies to industry.

Rochester Center

The University of Minnesota has had a presence in Rochester for more than 60 years. The Agricultural Extension Service (now the Minnesota Extension Service (MES)) has been present in Olmsted County as in other counties, since the early part of the century. The University's General Extension Division (now Continuing Education and Extension and soon to be University College) began offering programs in Rochester in the 1930s.

In 1966, a legislative appropriation made possible a University Center in Rochester. The Center offered a platform for expanded offerings in Rochester, particularly in areas of education and technology. In 1992, the University of Minnesota moved to the new and excellent facility located on the campus of Rochester Community College. With the co-location of three of the public higher education programs (Rochester Community College, Winona State University, and the University of Minnesota) in this facility, the campus was renamed the University Center Rochester. More recently, plans are underway to co-locate the fourth public provider, the Riverland Technical College, on the University campus. The University of Minnesota has concentrated on providing upper division and graduate courses that offer access to areas of recognized strength in post-baccalaureate programs at the University and that complement the offerings of other institutions.

The Greater Rochester Area University Center (GRAUC) is a unique partnership between citizens, business leaders, elected city, county and state officials, as well as representatives of the eight higher education institutions serving the Rochester area. The diverse membership of the organization encourages the development of a vision for higher education and the community that crosses existing institutional lines and organizational boundaries. GRAUC has been particularly instrumental in the creation and support of the University Center Rochester, most recently playing an active role in the completion of a Master Academic Plan encompassing four academic institutions: Minnesota Riverland Technical College, Rochester Community College, Winona State University-Rochester, and the University of Minnesota Rochester Center. Other outreach to Rochester, such as that carried out by the very successful University of Minnesota Alumni Association Chapter in Rochester, designated the Alumni Association Chapter of the Year, occurs on a regular basis from departments, colleges, and centers throughout the University as well as by the Minnesota Extension Service, whose Southeastern District Administrative Office is located at the University Center in Rochester. The 1994

Minnesota Legislature has authorized \$1.2 million in a bonding bill for the University Center in Rochester. The legislation specified that a master academic plan must be developed to reflect the mission of the Rochester Center, which is to extend the educational resources of Minnesota's systems of higher education to Rochester and the surrounding southeastern section of the state by providing selected degree programs, and by offering continuing education credit and non-credit courses for the professional and intellectual development of students.

A Joint Leadership Council, along with several small task forces and an advisory panel, worked on the plan during the summer of 1994, and then submitted it to a four-person, four-sector Steering Committee.

Given the special needs for enhanced information networking among Rochester area businesses, it is understandable that multiple forms of information networks and educational access are in use at the University Center. These technologies include networks based on both cable and satellite (e.g., fibre, T-1 lines, Interactive TV, cable access channels, data transmission, etc.) and also build on communications within the member education institutions. For a number of years, the Institute of Technology has offered master's degrees over its UNITE (microwave) system, first to IBM and, subsequently, with funding provided by the legislature, in face-to face instruction to the broader Southeastern Minnesota community. The University Center is connected to the University of Minnesota T-1 network for interactive television and data transmission and to OMET/MinD-SET, a 16 channel southeast regional network which will be interconnected with other regions in the state. A number of the University of Minnesota courses for degree programs delivered in Rochester are provided by means of distance education, using interactive television and computer-assisted instruction, carried by a variety of technologies ranging from satellite, microwave, fiber optic and T-1 lines. Several classrooms at the University Center Rochester have been created to include state-of-the-art technologies to increase the interactivity in instruction.

Center for Applied Research and Educational Improvement³⁵

The Center for Applied Research and Educational Improvement (CAREI) in the College of Education and Human Development performs an important outreach function that connects the educational programs and faculty research efforts with the K-12 system in the State of Minnesota and beyond. The November 1994 report *Pre-Kindergarten through 12th Grade: Inventory of University Programs* was the most recent biennial inventory of programs that connect University of Minnesota faculty, staff, and students with administrators, teachers, schools, and agencies serving children, youth and families. the criterion for inclusion is that the activity consists of ongoing collaboration, service, and/or research (including training or consultation activities) related to infancy through 12th grade students, teachers, or other professionals or school practitioners.

This was the third survey of pre-kindergarten through 12th grade activities at the University and included 368 programs, over 100 more than the 1992 survey. Programs identified both the type and numbers of participants, both individuals and agencies. These programs reported serving approximately 676,000 students from birth through postsecondary age; 36,800 teachers and administrators, 1,060 schools and 296 school districts; and 12,000 families and 126,000 community participants.

³⁵ <http://www.coled.umn.edu/CAREI/www/Default.htm>

According to financial information provided by the program, a total of \$17,556,000 was brought into the University as a result of all of the programs. The sources of funds were as follows:

Foundations	\$1,565,000
Private groups	\$500,000
U.S. government	\$11,085,000
State and local government	\$1,840,000
School districts	\$1,012,000
Fees	\$1,445,000
Other donations	\$109,000

The brief descriptions in the inventory illustrate the nature and scope of the University's efforts to work with the schools and other agencies and to provide high quality, innovative educational programs for children and youth in Minnesota. The programs described have been categorized into four groups: community; school change; students; and curriculum, teaching, and leadership.

Next Steps in the Institution's Outreach Strategic Planning

Although it is neither desirable nor feasible for this self-study process to recommend institutional strategies to maximize outcomes in the outreach arena, members of the Advisory Committee participated in related activities focused on clarification of the institution's outreach mission. In February 1996, approximately 75 individuals participated in a day-long planning meeting *Building the Culture and Capacity for Outreach*. The interactive event drew on the resources of some selected presenters, as well as on the experiences of all of those who participated. The 1993 report *Outreach at the University of Minnesota -- A Strategic Plan* was used as background for the event. The goal was to provide participants with information and a frame of reference for dialogue about outreach and focused on three topics: (a) reflections on past work on outreach; (b) assessment of current outreach mission and contributions; and (c) directions and recommendations for the future. The event began with the overview "Outreach culture and capacity: Why it's high on the agenda," and was followed by a discussion about the *1993 Outreach Report* and the implications of environmental factors and institutional changes since it was written three years ago. Examples of successful outreach efforts reflected the breadth, diversity, and richness throughout the entire University system. The event concluded with a discussion of issues of organization, leadership, rewards, and measures of success for outreach.

CHAPTER X

DIVERSITY¹

The need to address diversity issues at the University of Minnesota reflects the increasing national concerns about how higher education institutions address broader societal issues, and is reflected in attention to diversity within undergraduate, graduate and professional student populations, diversity within the faculty and staff, as well as issues of diversity within the curriculum and the classroom.

The University of Minnesota is committed to enhancing academic excellence through diversity. The Office of the Associate Vice President for Academic Affairs and Associate Provost with Special Responsibility for Minority Affairs was created in 1988 to provide leadership and guidance for system-wide minority programs and services. The Office was charged with overseeing institutional efforts to achieve three five-year diversity goals established in 1989 to: (a) increase the number of students of color to 10 percent of total enrollment; (b) improve their graduation rate by 50 percent; and (c) to double minority faculty hires.

Although the institution achieved all of these goals within five years, the institution still has a long way to go to create a diverse and inclusive University community. As the University of Minnesota approaches the 21st Century, diversity has become an important concern in all aspects of its governance and planning, and is one of the six strategic areas identified in University 2000. Issues concerning campus diversity have been an important component in the development of institutional-level critical measures as well.

More recent additions to the institution's diversity agenda are services and resources directed at students, faculty and staff with disabilities, as well as services and resources focused on issues related to sexual orientation. More detailed discussions are included in subsequent sections of this chapter.

The Office of the Associate Vice President for Academic Affairs and the Office of Equal Opportunity and Affirmative Action work in tandem to achieve institutional goals. The office's goals are, respectively: (a) to enhance academic excellence through diversity; to increase the recruitment and retention of students, staff and faculty of color, to improve the graduation rate of minority students, to ensure the scholarly success and satisfaction of minority faculty, to improve the academic environment and campus climate for students, staff and faculty of color, and to make diversity one of the most important guiding principles in all aspects of the University community; and (b) to ensure that all University of Minnesota units uphold federal and state civil rights laws and regulations, as well as University equal opportunity policies.

Brief overviews of the two offices are, respectively: (a) the office coordinates and provides leadership and guidance for system-wide minority programs and services designed to enhance academic excellence through diversity. The office deals with all issues relative to students, faculty, and staff of color. It also analyzes and evaluates the University's

¹ <http://www.opa.pres.umn.edu/specproj/accred/diverse.htm>

diversity goals, objectives and programs, as well as makes policy recommendations on the institutional diversity efforts; and (b) the office monitors the University's compliance with equal opportunity legislation by maintaining statistical information about the University work force and working with units to foster fair and equitable hiring. The office also investigates and works to resolve discrimination complaints and complaints of harassment based on race, gender, sexual orientation or other status. EOAA offers "Building Cultural Bridges," a training workshop on understanding, managing, and valuing cultural diversity in the workplace.

Context of University 2000

The commitment to diversity was expressed in the resolution approved by the Board of Regents on January 14, 1994, both in a separate section of the resolution and in each of the five strategic areas of research, graduate and professional education, undergraduate education, outreach and access, and user-friendly community. Subsequent discussions, both inside and outside of the University, suggested that diversity should become a sixth strategic area, in addition to remaining embedded in each of the original five strategic areas; a diversity strategic area and initiatives were approved by the Board of Regents in September 1994. In the new diversity strategic area, the University's efforts and its progress with respect to diversity will focus on two important areas:

- Increasing the presence and participation of racial/ethnic minorities and women in areas where they are underrepresented, specifically increasing the presence and participation of African American, American Indian, Asian/Pacific American, and Chicano/Latino/Hispanic men and women, as well as other groups of women in areas where they are underrepresented. Numerical goals have been set to guide our efforts and the measurement of progress with respect to the presence of racial/ethnic minorities and women where they are underrepresented, for students, faculty, and staff.
- Creating an environment that actively acknowledges and values diversity for men and women students, faculty, and staff from varying racial, religious, and ethnic backgrounds, and of varying sexual orientations, as well as people with disabilities. Progress in creating an inclusive and supportive environment for students, faculty, and staff in these groups will be measured in a variety of ways, for example, through surveys of students, faculty, and staff that measure changes in the attitudes and experiences of members of the University community.

Policy Statement on Diversity

In addition to the inclusion of diversity as one of the six strategic areas in University 2000, a revised policy statement on diversity sets the context for the institution's approach to diversity. The revised policy, adopted by the Board of Regents in July 1995, consolidated five separate policies related to diversity, affirmative action, and equal opportunity. The policy stated below reaffirmed the institution's commitment to diversity, and directed the administration to set performance goals and implement affirmative action programs and procedures to meet the goals and to remediate discriminatory policies which deviate from this policy:

"Consistent with its academic mission and standards, the University of Minnesota is committed to achieving excellence through diversity. As a community of faculty, staff, and students engaged in research, scholarship, artistic activity, teaching and

learning, or activities which support them, the University fosters an environment that is diverse, humane, and hospitable. As an institution, the University is a global enterprise which serves the state, the nation, and the world through its outreach and public service, and in partnership with community groups.

The University shall seek to:

- Provide equal access and opportunity to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status or sexual orientation.
- Advocate and practice affirmative action including the use of recruiting and search processes to enhance participation of racial minorities, women, persons with a disability, and Vietnam era veterans.
- Establish and nurture an environment that actively acknowledges and values diversity and is free from racism, sexism, and other forms of prejudice, intolerance or harassment, for men and women, faculty, staff, and students from varying racial, religious, and ethnic backgrounds, and of varying sexual orientations, as well as people with disabilities.
- Provide equal educational access to members of underrepresented groups, and develop affirmative action admission programs where appropriate to achieve this goal.

The University will promote and support diversity through its academic programs, its employment policies and practices, and the purchase of goods, materials, and services for its programs and facilities from businesses of the diverse communities it serves.

Administrative officers are directed to set performance goals consistent with this policy and the law, and energetically continue to implement the necessary programs and affirmative action administrative procedures for the achievement of these goals; to remediate any discriminatory practice which deviates from this policy; and to assess and reward the performance of individuals and units using the University's critical measures for the diversity performance goals as part of the University's planning and budgeting process."

Organizational Structure

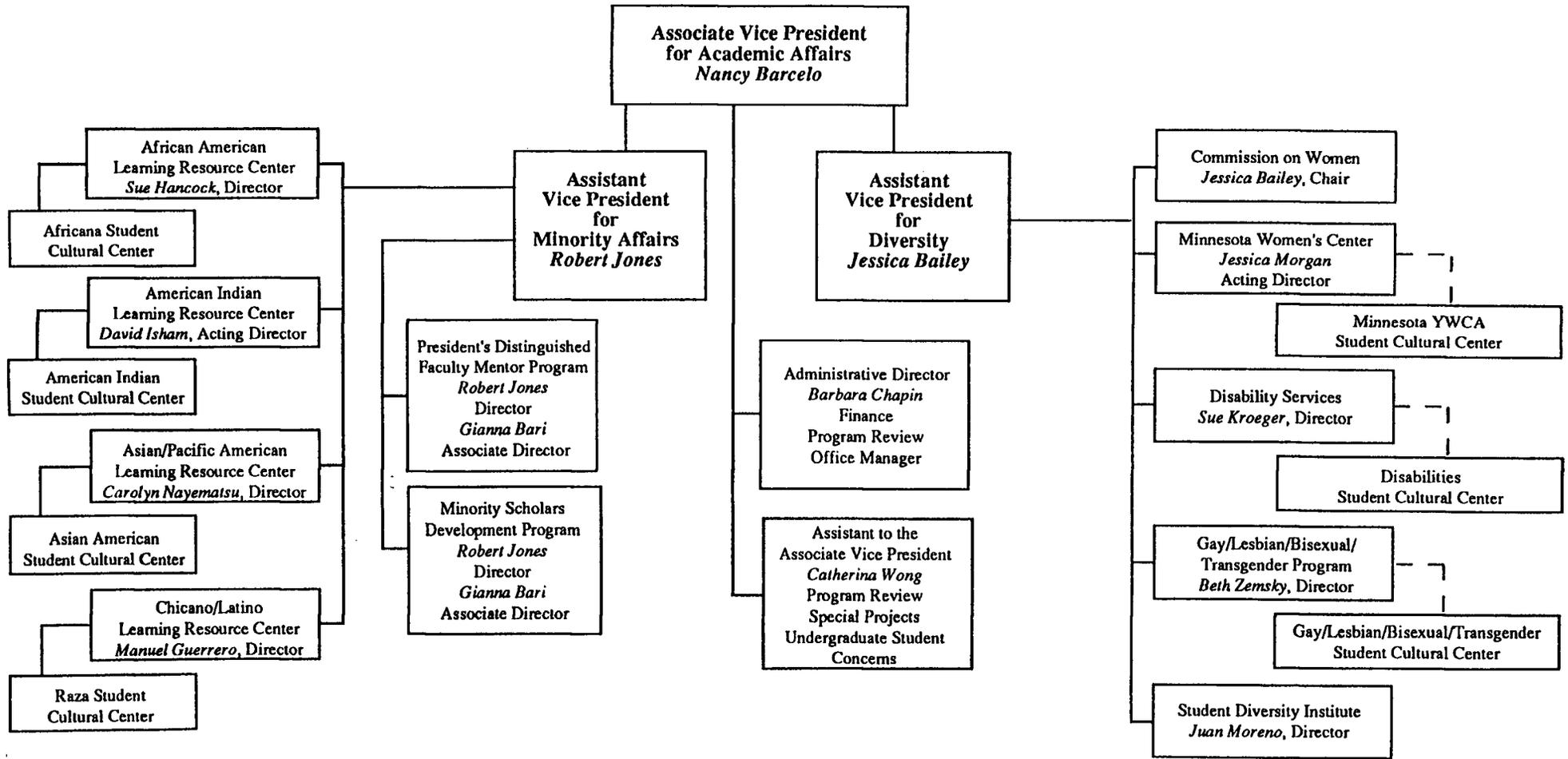
As part of the overall campus reorganization, changes have been made in the reporting structure for those several offices on campus that address diversity and minority affairs issues. Figure 20 below outlines the current organizational structure as of March 1996.

Special Committee on Minority Programs

Shortly after the 1986 Accreditation Review, the *Final Report of the Special Committee on Minority Programs in Support of Commitment to Focus* (May 1987) was submitted to the President and the Senate Consultative Committee. The committee had been charged "to examine and make recommendations on University programs and practices aimed

Figure 20

Organizational Structure for the Office of the Associate Vice President for Academic Affairs with Special Responsibility for Minority Affairs and Diversity



specifically at minority students and faculty. The committee's 22 recommendations, categorized into seven topic areas, were as follows:

Undergraduate Recruiting and Admissions

- The Committee recommends that the University provide resources to expand its current minority student recruitment efforts and implement a comprehensive, coordinated undergraduate recruitment program to identify and recruit minority students.
- The Committee recommends that the University establish annual goals for the successful recruitment and admission of high-potential minority high school seniors.
- The Committee recommends that the University expand, support, and effectively coordinate its early "reach-out" programs in those Minnesota elementary and secondary schools that serve a significant number of minority students.
- The Committee recommends that the University provide funds to increase and improve the financial aid package for minority undergraduate students.
- The Committee recommends that the University develop indices of academic potential that take into account the educational backgrounds and experiences of nontraditional students from minority populations. This is necessary in order to establish appropriate admissions criteria for these populations.

Undergraduate Retention and Graduation

- The Committee recommends that the University establish a centralized coordinating mechanism for minority student programs in order to facilitate development of more uniform reporting methods, accountability, allocation of resources, fiscal planning, and to reduce possible redundancy of effort.
- The Committee recommends that the University promote and reward creative efforts that increase the direct involvement of faculty members in addressing the academic needs of minority students.
- The Committee recommends that the University develop creative funding strategies to support and insure the continuity and expansion of special programs that have demonstrated their effectiveness in facilitating the retention and graduation of minority students.
- The Committee recommends that the University develop creative financial assistance programs to facilitate the continuous enrollment of upper division minority students.
- The Committee recommends that the University develop and implement a program of staff development and graduate education for minority program personnel.
- The Committee recommends that the University encourage academic and student support personnel, as part of their professional development, to enroll in courses and programs that upgrade their awareness, understanding, and communication skills with minority students.

Minority Graduate and Professional Programs

- The Committee recommends that the University strengthen the current Office of Equal Opportunity in Graduate Studies by placing responsibility for the program in the office of an associate dean whose duties will entail primary responsibility for exercising leadership with academic units to develop and implement creative initiatives for recruitment, retention, and graduation of minority graduate students.
- The Committee recommends that the University establish annual goals for the successful recruitment of minority graduate students in all disciplines with special focus on those disciplines where minority student have been historically underrepresented.
- The Committee recommends that the University provide funds to increase and improve the financial awards for minority graduate and professional students.

Minority Student Data Base

- The Committee recommends that the University allocate resources to develop a comprehensive, centralized, computerized data system to facilitate monitoring the progress of minority students from initial contact (e.g., participation in special summer programs and applicants for admission) through graduation and follow-up after graduation.
- The Committee recommends that the University develop mechanisms to support research concerning minority students in higher education with a special emphasis on the State of Minnesota.

Minority Faculty

- The Committee recommends that the University establish a structured, highly visible, and aggressive program for minority faculty recruitment, which is coordinated and monitored centrally.
- The Committee recommends that collegiate units establish short- and long-range goals for the successful recruitment of tenure-track minority faculty. These efforts should be reviewed annually at the highest level of academic administration.
- The Committee recommends that the University encourage academic units to create initiatives that enhance the careers of minority faculty in their progress within their disciplines, relationships with their departmental colleagues, and their productivity in areas appropriate to their level of career development. Adaptations should be developed to facilitate the efforts of the coordinate campuses in attracting and retaining minority faculty.

Facilities

- The Committee recommends that the University take measures to provide adequate and physically attractive spaces that are commensurate with the programmatic needs of minority student programs.

Administration: Coordination

- The Committee recommends that the Office of the Provost and Vice President for Academic Affairs assume principal responsibility for the leadership, coordination, and provision of adequate resources for minority student academic programs and minority faculty recruitment/retention. A new position should be established in that office and a significant part of the responsibility of this position will be to provide leadership and coordinate minority programs.
- The Committee recommends that the Board of Regents require an annual review of the University's progress in implementing the recommendations contained in this report.

Most of the institution's efforts in the last decade directed at minority students and faculty can be considered as specific institutional actions to address the concerns outlined in 1987. Within the current framework of University 2000, many of those efforts are part of the diversity strategic area and are addressed in appropriate institutional-level critical measures.

The University currently has as many as 135 programs and services specifically designed to serve the students, faculty and staff of color throughout the system. Among these programs are four learning resource centers (African American, American Indian, Asian/Pacific American, and Chicano/Latino) as well as programs within colleges (e.g., MLK Program in the College of Liberal Arts). The quality and quantity of such programs and services attest to the University's genuine commitment to diversity. To increase awareness of the many programs and services available to meet the needs of students, faculty and staff of color, the resource guide *Minority Programs and Services at the University of Minnesota* was published to ensure the maximum utilization of these programs and services. The guide is divided first by campus and then by college or unit on each campus; it is also available on Internet Gopher, University of Minnesota.

Critical Measure: Underrepresented Groups/Diversity²

Internal and external discussions of University 2000 have underscored the importance of including a critical measure for "underrepresented groups/diversity" in the institutional-level critical measures and performance goals being developed. The focus of measurement and goal setting is on a relatively small number of critical elements that reflect the University's success in achieving its diversity goals; for example, in looking at the diversity of the undergraduate student body, the critical elements would include characteristics of entering students and graduation rates for each of the four racial/ethnic groups, as well as the quality of their undergraduate student experience. In some areas, additional measures may be needed to fully understand the outcomes to be reported in this critical measure. For example, in the case of faculty, supplemental measures include distribution of faculty of color and women across disciplines and across faculty ranks; time to promotion and tenure; and reasons for attrition. In the short term, the focus of this critical measure is on the following areas:

- Characteristics of entering freshmen
- Five-year graduation rate of students who entered as freshmen
- Composition of regular faculty (tenured and tenure track)

² <http://www.opa.pres.umn.edu/specproj/critmeas/phase1.underep-s.htm>

In each of these areas, numerical goals have been set to guide our efforts and the measurement of progress in increasing the presence of racial/ethnic minorities and women where they are underrepresented. For the critical measure of Underrepresented Groups/Diversity, the Board of Regents reaffirmed an institutional performance goal to increase by at least 50 percent the graduation rate within five years of freshman students of color, leading to a graduation rate of at least 33 percent for students who enter in fall 1996. In addition to the analysis of overall graduation rates, results will be disaggregated and analyzed by ethnic group. The Board of Regents further approved an institution-wide aspirational goal for students of color to represent at least 16 percent of entering freshmen in the year 2000, consistent with applicable legal requirements governing the recruitment and admission of students.

Characteristics of Entering Freshmen

Table 44 below indicates the 1993 baseline information and year 2000 desired goals for new freshmen. Campus goals were based on its particular mission and its primary recruitment areas. Because all goals set in this process were based on assumptions concerning the future availability of prospective students of color in each campus's recruitment area, it will be important to review and update these assumptions as new information becomes available. As a result, goals will be reviewed annually and, if necessary, changed to accommodate changed circumstances.

Goals for new freshmen students of color are desired goals, not maximums. In understanding the purpose and the implications of these goals, it is important to note a distinction between the University's recruiting efforts and its admission practices. For example, the goals will guide the University's efforts in recruitment of students of color but will not determine admissions decisions. The criteria set for preparedness of the entering freshman class (e.g., 80% in the top quartile for the Twin Cities campus, excluding General College) will apply to students of color in the same way that they apply to other students. Race/ethnicity will not be the sole criterion for admission.

Students of color will be recruited and have access to the University in a number of ways: (a) as students from the "targeted ability groups" that are defined for each campus in the critical measure of Characteristics of Entering Students; (b) as students with other special talents and/or with high potential from educationally disadvantaged backgrounds who are not from the "targeted ability groups" (e.g., 20% of non-General College freshmen on the Twin Cities campus in the year 2000); (c) as transfer students; (d) as students in General College on the Twin Cities campus (General College is expected to be 17% of the fall Twin Cities freshman class in the year 2000); and (e) by taking classes through Continuing Education and Extension.

Using the demographic projections to set goals, students of color should represent approximately 16.5 percent of the Twin Cities campus's new freshman enrollment in the year 2000; African American students would represent 5.5 percent of all new freshmen, American Indian students 1.3 percent, Chicano/Latino/Hispanic students 2.5 percent, and Asian/Pacific Americans 7.2 percent. When compared to the 1993 baseline information, these goals suggest that the University will have to be very aggressive in its efforts to successfully recruit African American, American Indian, and Chicano/Latino/Hispanic students, including top quartile students. Since Asian/Pacific American and women students appear to be adequately represented in their total numbers, recruitment efforts for these two groups will focus on enrollment of top quartile students, but numerical goals for these two groups need not be set at the present time. However, it will be important to track freshman enrollment numbers to ensure that these groups do not fall below their demographic representation; if that were to happen, numerical goals would need to be set for

these groups as well. In addition, for all five groups (African Americans, American Indians, Asian/Pacific Americans, Chicano/Latino/Hispanic students, and women), colleges will work toward reflecting the demographic proportions set for the campus as they plan for diversity among their undergraduate students. Goals for increasing the presence of racial/ethnic minorities and women where they are underrepresented among undergraduate transfer students and graduate and professional students also will be completed.

Table 44
Freshman Enrollment of Students of Color and Women
Baseline Information and Desired Goals for
Twin Cities Campus

	Baseline Data					Goals						
	89	90	91	92	93	94	95	96	97	98	99	2000
Groups Not Adequately Represented												
African American												
# total	151	200	136	166	161	161	171	182	192	202	213	223
% of total	3.9	5.4	4.2	5.1	4.6	4.4	4.5	4.6	4.7	5.0	5.3	5.5
# top 1/4					50	50	60	71	81	91	102	112
American Indian												
# total	56	52	47	34	35	35	38	40	43	45	48	53
% of total	1.4	1.4	1.4	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.2	1.3
# top 1/4					12	12	15	17	20	22	25	27
Chicano/L/H												
# total	62	77	70	75	86	86	89	91	94	96	99	101
% of total	1.6	2.1	2.1	2.3	2.4	2.3	2.3	2.3	2.3	2.4	2.4	2.5
# top 1/4					32	32	36	41	45	49	54	58
Groups Not Underrepresented												
Asian/Pacific American												
# total	250	304	301	307	374	<i>[Campus goals satisfied; units may still have unit goals]</i>						7.2% ^a
% of total	6.4	8.2	9.2	9.4	10.6							
# top 1/4					173							
Women												
# total	1838	1735	1535	1552	1704	<i>[Campus goals satisfied; units may still have unit goals]</i>						
% of total	46.9	46.8	47.1	47.6	48.4							
# top 1/4					892							

^aExpected proportion of seven county metropolitan area high school graduates in the year 2000

The success of these recruitment and access methods and related goals will depend in part on the University's K-12 Initiative, which should increase the number of students of color who are prepared to take advantage of higher education, not only at the University of Minnesota but at other colleges and universities as well. Information on the projected high school graduation statistics, reported in Table 45 below, underscores the importance of working with the K-12 system.

Table 45
High School Graduation Projections by Racial-Ethnic Group^a

Group	Actual Graduates ^b		Projections									
	1993		1995		1997		1999		2000		2003	
	N	%	N	%	N	%	N	%	N	%	N	%
African American												
Statewide	904	1.9	1131	2.2	1349	2.4	1569	2.6	1690	2.7	2237	3.4
Twin Cities Metro ^c	840	3.9	1046	4.6	1241	5.0	1446	5.2	1564	5.5	2067	6.7
Minneapolis/St. Paul	625	19.3	722	21.8	837	23.2	954	23.6	1018	24.0	1333	27.8
American Indian												
Statewide	494	1.0	618	1.2	721	1.3	766	1.3	801	1.3	886	1.4
Twin Cities Metro	202	0.9	256	1.1	291	1.2	293	1.1	292	1.0	325	1.1
Minneapolis/St. Paul	105	3.3	115	3.5	133	3.7	133	3.3	129	3.0	134	2.8
Asian American/Pacific Islander												
Statewide	1600	3.3	1679	3.3	1740	3.1	2397	3.9	2693	4.3	3118	4.8
Twin Cities Metro	1229	5.8	1261	5.6	1321	5.3	1861	6.7	2061	7.2	2388	7.7
Minneapolis/St. Paul	541	16.7	550	16.6	596	16.5	888	22.0	1011	23.8	1198	25.0
Chicano/Latino/Hispanic												
Statewide	641	1.3	872	1.7	1125	2.0	1317	2.2	1482	2.4	1924	3.0
Twin Cities Metro	337	1.6	464	2.1	597	2.4	646	2.3	717	2.5	870	2.8
Minneapolis/St. Paul	124	3.8	163	4.9	209	5.8	214	5.3	248	5.8	304	6.3
White												
Statewide	44363	92.4	46821	91.6	50925	91.2	54723	90.0	55652	89.3	56925	87.5
Twin Cities Metro	18721	87.8	19477	86.6	21608	86.2	23459	84.7	23920	83.8	25262	81.7
Minneapolis/St. Paul	1835	56.8	1759	53.2	1830	50.8	1855	45.9	1843	43.4	1818	38.0
Total (All Groups)												
Statewide	48002	100	51121	100	55860	100	60772	100	62318	100	65089	100
Twin Cities Metro	21329	100	22503	100	25058	100	27704	100	28534	100	30911	100
Minneapolis/St. Paul	3230	100	3308	100	3605	100	4045	100	4249	100	4786	100

^aSource: University of Minnesota, Data and Information Services. Projections are based on historical progressions of students through grade levels using sight count enrollment data for students enrolled in 1993-94 from the Minnesota Department of Education.

^bSource: Minnesota Department of Education, Minnesota Public High School Graduates by Ethnicity, 1992-93 Report totals.

^cSeven county metropolitan area, including Minneapolis and St. Paul.

Five-Year Freshman Graduation Rate

Graduation rate goals for students of color were set in the University 2000 strategic area for undergraduate education that was adopted in January 1994, specifically, to "improve the graduation rate of minority students by 50 percent, with the (long term) goal of a minority student graduation rate equivalent to that of the University student population as a whole." It should be noted that graduation rates are a function of two important variables: the readiness of students who enroll and the quality of experience received by students when they are here. Achieving the goals that are set for improved graduation rates of students of color will depend heavily on how successful we are in these other areas.

Using the class that entered as freshmen in 1988 (whose five-year graduation year would be 1993) as the baseline for goal setting purposes, campuses set goals of at least a 50 percent increase in the five-year graduation rate for each of the four racial/ethnic groups. Baseline information and performance goals for the Twin Cities campus are presented in Table 46 below.

The first step in addressing the overall graduation rate for students of color is a systematic analysis of the freshman-to-sophomore rates for each subgroup of students. The next step is to identify and address institutional as well as individual factors that affect retention for students of color. Whereas the institution has made considerable progress relative to numbers of students of color, less progress has been made in retaining and graduating students of color.

Table 46

Five-Year Graduation Rates for New Freshmen Students of Color
Baseline Information and Desired Goals
for the Twin Cities Campus, by Percent

Ethnicity	Baseline					Performance Goals							
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
African American	6.3	7.8	7.2	8.8	14.2	15.4	16.6	17.7	18.9	20.1	21.2	22.4	23.6
American Indian	4.1	8.7	14.8	2.4	11.7	12.7	13.6	14.6	15.6	16.5	17.5	18.5	19.4
Asian/Pacific American	20.9	22.8	27.9	30.9	31.5	34.1	36.7	39.3	41.9	44.6	47.2	49.8	52.4
Chicano/Latino/ Hispanic	10.5	14.1	23.1	9.7	16.0	17.3	18.7	20.0	21.3	22.6	24.0	25.3	26.7
All Minority	13.6	16.6	20.7	19.8	22.5	24.4	26.2	28.1	30.0	31.8	33.7	35.6	37.5

Note: Since we do not yet have the five-year graduation for the 1989 freshman class, we used as the basis the five-year graduation rate for the 1988 freshman class as of the end of summer session 1993.

Experience, research, evaluations and observations, have suggested that the following essential elements must exist to retain and graduate significantly more students of color:

- The central administration must be committed to enhancing diversity at the University of Minnesota and hold all units responsible for implementing this important institutional policy.
- The institution must improve its academic environment and campus climate in such a way that students of color feel welcome and supported and can be fully integrated into the University community.
- The University of Minnesota must provide financially disadvantaged students of color with adequate financial aid to help eliminate the barrier to their academic success.
- Culturally sensitive support services must be readily available to students of color to meet their unique needs.
- Collegiate advising units must provide minority students with effective advising, counseling and accurate information about the University with a view to facilitating their academic endeavor.
- The University must recruit and retain more faculty of color not only to strengthen excellence through diversity, but also to have them serve as mentors and role models for students of color.
- The institution must encourage and challenge minority students to fully develop their potential and broaden their horizons by providing faculty mentoring, research opportunities and other enrichment programs, relevant co-curricular and cultural activities, and leadership development programs.
- The University must collaborate with the communities of color to ensure the academic success of minority students.
- Students of color must do their part by diligently pursuing their academic goals, taking advantage of comprehensive academic support services in a timely manner, and participating fully in the life of the University.

Annual Performance Report

The continuing implementation of the institutional-level critical measures calls for the submission of an annual performance report to the Board of Regents. The first report, *1995 Institutional Performance Report*, was presented at the November 1995 meeting, and reported progress on the student related aspects of the underrepresented groups/diversity critical measure.

Across all four campuses, the total number of new freshmen increased by 791 students over 1994, an increase of 13.1 percent; freshmen enrollment was up 19.5 percent. Across all four campuses, the percentage of new freshmen students of color rose from 13.6 percent to 13.8 percent; on the Twin Cities campus, the number rose from 661 for fall 1994 to 850 for fall 1995.

More recent data on five-year graduation rates, for those entering in fall 1990, was available in January 1996 and indicates only slight changes in five-year graduation rate. The most recent data available for inclusion in the November 1995 report, for fall 1989 entrants, generally shows no change from the rates of the previous years' freshman. This finding is not unexpected, because it will be some time before the effects of recent efforts to improve undergraduate education can be seen in five-year graduation rates. Students who entered in 1989 or 1990 went through their most vulnerable years at the University before many of current efforts were initiated.

Degrees Awarded by Ethnicity

Besides statistics on the enrollments of students of color and commentary on continuing concerns about retention and graduation rates for entering cohorts of students, another perspective on the issue can be obtained by an analysis of the numbers of students of color who completed various types of degree programs. Statistics summarized in Table 47 below aggregated across the six-year period from 1989-90 through 1994-95 indicate that 3,555 degrees were awarded to students of color during that time period. The more detailed results for each of the several years indicate year-to-year fluctuations, with no evident trends across the six-year period. Total numbers for each ethnic group are as follows: African American (N=827, 23.0%), American Indian (N=236, 6.6%), Asian/Pacific Islander (N=1,939, 54.5%), and Chicano/Latino/Hispanic (N=553, 15.5%).

University 2000 Diversity Initiatives

The framework for the University's diversity initiatives is stated in the resolution passed by the Board of Regents on January 14, 1994. Following the restatement of the University's mission and preceding the listing of the strategic directions, the resolution states:

“That the University reaffirms its commitment to achieving excellence through diversity: to the recruitment and retention of world-class researchers, scholars, and artists who are effective teachers and who reflect the diversity of our society; to the active recruitment, support, graduation, and placement of graduate and professional students from traditionally underrepresented populations; to the recruitment of a diverse population of undergraduate students who are academically prepared and motivated to enrich, and to profit from the richness of, the University experience; to a financial aid program that serves the needs of students and makes access and baccalaureate degree completion possible for students from all socioeconomic groups; and to a diverse and inclusive University community.”

These statements were then repeated in the strategic directions that follow. For the purposes of focusing our efforts and resources for maximum impact, the University will concentrate on the following critical initiative areas:

K-12 Initiative³

The University has achieved encouraging results in recent years in the recruitment of students of color (for the Twin Cities campus, 18.6 percent of the entering freshman class in fall 1993 were students of color; for all campuses combined, 13.4 percent of entering

³ <http://www.coled.umn.edu/CARE/www/ExecutiveSummary.html>

Table 47

Degree Completion for the Twin Cities Campus
for 1989-90 through 1994-95, by Ethnicity and Degree Level

Ethnicity	Less than 1 year	1 year but less than 2	Associate	2 years but less than 4	Bachelors	Masters	Post-bac and post-masters certificate	Doctorate	JD	MD	DVM	DDS	PharmD	Totals
International	0	3	6	0	931	1,558	0	1,221	14	1	0	19	15	3,768
African American	0	4	27	3	486	199	4	34	47	21	1	0	1	827
American Indian	0	1	9	0	140	52	1	9	15	7	1	1	0	236
Asian American/ Pacific Islander	0	22	23	14	1,348	256	2	65	78	101	5	18	7	1,939
Chicano/Latino/ Hispanic	0	4	7	5	311	119	5	29	35	28	4	5	1	553
White	4	296	262	122	27,986	10,470	95	2,417	1,253	1,171	383	380	178	45,017
Unknown	0	18	33	20	1,139	441	4	235	35	32	3	7	3	1,970
Total	4	348	367	164	32,341	13,095	111	4,010	1,477	1,361	397	430	205	54,310

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freshmen were students of color), and future University recruitment efforts will include special provisions for identifying and financially supporting students with high potential from educationally disadvantaged backgrounds (for the 1994-95 academic year, the number of Outstanding Minority Scholarships has been doubled, and a new merit/need-based scholarship program for high-ability students of color from the Twin Cities area is being developed).

But the University's role is broader than this and includes using its expertise and resources to assist and support students of color while they are still in the K-12 system. Since students cannot go to or be successful in college unless they graduate from high school with adequate academic preparation, the University of Minnesota has begun to mobilize its resources to help students from diverse cultures be successful in the K-12 system.

- The University will strengthen its research partnerships with various K-12 systems, with increased University faculty involvement and visibility in the schools. As of November 1994, there were a total of 368 separate projects and programs in place. Although there are already many research activities in this area, the institution needs to increase and focus our efforts in a way that results in the whole being more than the sum of the parts, to achieve a greater impact.
- The institution must continue to improve and expand the existing special learning opportunities and pre-college programs designed to prepare students of color for higher education. We hope to expand our efforts in providing pre-college pathways programs, such as the Minority Encouragement Program (MEP) in St. Paul and the Minneapolis Pathways project in Minneapolis. In addition to the K-12 connections, the Minneapolis Pathways facilitates the transfer of students from Minneapolis Community College to the University of Minnesota. We will also expand the Postsecondary Enrollment Options (PSEO) Program (where currently 30% of participants are students of color) to not only enable more high school students of color to take University courses, but also to concurrently admit them to the University of Minnesota as high school seniors. College-sponsored programs such as PROMISE in the Institute of Technology, the Research Introductory Program (RIP) for High School Students of Color, and the National Institute of Health Research Apprenticeship Program (RAP) will also be continued and expanded.
- In addition to the research and pre-college programs, the University of Minnesota will produce teachers who are prepared to teach effectively in the K-12 systems in an increasingly diverse and multicultural world. These teachers will know how to teach students from different cultures and to help all students learn how to live productively and harmoniously in a multicultural, multiethnic world. Furthermore, the Common Ground Consortium, a collaborative effort between the College of Education and Human Development and nine Historically Black Colleges and Universities (HBCUs), recruits graduate education students from the HBCUs and provides them with financial aid, transitional support, career development, and job placement opportunities. Many of these HBCU students have already been placed as teachers in the metro-area public schools. Increasing the number of teachers of color will continue to be an important part of the K-12 initiative.

The College of Education and Human Development is well prepared to take the lead role in articulating the K-12 initiative, and in aggressively undertaking pre-college programs and teacher training. The K-12 initiative will make it possible for us to recruit additional able students of color to the University, as well as to position our institution in a leadership role in enhancing the K-12 system's effectiveness in educating and preparing students of color for higher education.

Retention and Graduation Initiative⁴

The institution must retain and graduate those students of color that it admits to the University of Minnesota. In order to increase the institution's retention and graduation rates, several strategies will be used.

- The institution needs to improve financial aid, advising, counseling and other academic support services to increase the retention and graduation rates of minority students. In addition to the scholarship programs mentioned above, the University's Financial Aid Task Force is in the process of formulating recommendations to further improve our financial aid and scholarship programs, to enable students from all socioeconomic groups to have access to and graduate from the University of Minnesota. We will also continue to strengthen the comprehensive academic support services provided for students of color by the University's Office for Minority and Special Student Affairs, including their Summer Institute, which provides a full stipend for approximately 155 students of color during a special seven-week summer session. This was included in the diversity strategic area of University 2000 approved in September 1994, but the number of Summer Institute participants has not been increased.
- Since retention is also related to the quality of the undergraduate experience and the environment in which it takes place, the University will continue the Bush Faculty Development Program on Excellence and Diversity in Teaching, which is designed to support activities which emphasize cultural diversity as a component of effective teaching and learning. All colleges and the University community as a whole will be responsible for this initiative.

Recruitment and Retention of Faculty of Color

The University 2000 strategic direction on research states a goal of recruitment, retention, and reward of world-class researchers, scholars, and artists who are effective teachers and who reflect the diversity of our society. Recruitment and retention of faculty of color is important for many reasons, including the role that faculty of color can play as role models for students. This in turn can improve the University's success in graduating a higher proportion of students of color.

- The institution expects to expand the use of bridge funds to support the hiring of faculty of color.
- Faculty development, particularly mentoring for junior faculty of color, will be enhanced at the collegiate and departmental levels, to foster the scholarly success and professional development of faculty of color.

Graduate/Professional Education Initiative

The University is the sole or major provider of graduate and professional education in the state in many fields. The institution must ensure the full participation in all these fields of scientists, scholars, artists, and professionals of color.

⁴ <http://www.opa.pres.umn.edu/specproj/critmeas/phase1/gradrt-s.htm>

In the long run, our own continuing efforts to recruit more faculty of color will be futile unless the size of the graduate and professional school pool is substantially increased. The institution needs to produce larger numbers of minority recipients of master's and doctoral degrees. The institution must enhance efforts to recruit and retain traditionally underrepresented students in our graduate and professional programs.

- As part of our recruitment and retention efforts, the institution will create adequate numbers of fellowships, teaching and research assistantships, and dissertation grants to attract qualified students of color in an increasingly competitive market. The University has agreed to fund special grants for graduate students from Historically Black Colleges and Universities, beginning September 1994. The effort is in cooperation with the National Association of State Universities and Land-Grant Colleges (NASULGC). The Graduate School, professional schools and colleges will be instrumental in carrying out this initiative.

University-Community Partnership

The University of Minnesota alone cannot successfully implement the initiatives mentioned above or the University 2000 strategic plan.

- The institution must further strengthen its partnership with the community to make the University's diversity efforts successful. We will build on the work of the President's African American, American Indian, Asian American, and Chicano/Latino/Hispanic Advisory Committees and on the comprehensive recommendations of the Task Force on Excellence Through Diversity, established in 1989. The community at large, and particularly the communities of color, can help it do a better job by evaluating what it does and providing it with guidance and advice. The institution can succeed only if it continues to work together with external communities to achieve our common goals. The institution needs to maintain ongoing dialogue with each of the President's Minority Advisory Committees as well as each of the broader minority communities.

Minnesota Women's Center

In the fall of 1992 the Minnesota Women's Center (MWC) was revitalized, having been dormant for about two years as a result of budget issues and moved out of University Counseling and Consulting Services. The MWC was reopened after the Student Initiative was launched and it became evident that a unit focused on the needs of women students was necessary. (The Student Initiative was a joint endeavor of Student Affairs -- now Student Development and Athletics -- along with the Commission on Women that focused on campus climate for women students.) The mission of the Minnesota Women's Center has been to provide leadership in issues and activities affecting women students. The MWC offers information and referral, including a database and library of materials on women's concerns, coordinates the annual Daughter's Day events, and Women in Science and Engineering (WISE) activities, and administers a scholarship program for returning women students. Chapter XIII: Faculty contains more discussion of the recent efforts of the Commission of Women.

Disability Services⁵

Disability Services (formerly known as Office for Students with Disabilities) was transferred in 1988 from University Counseling and Consulting Services to the Office of the Vice President for Student Affairs in response to growing needs for disability services. The unit's mission was expanded to provide services to faculty and staff as well as to students. The unit has grown considerably in recent years as the call for services has increased dramatically, and is now in the Office of the Associate Vice President for Academic Affairs with Special Responsibility for Minority Affairs and Diversity. The actual number of people with disabilities on campus has not increased in recent years, but those individuals with disabilities have become more actively involved in shaping the availability of services on the Twin Cities campus.

Disability Services works in partnerships with other University offices and units to ensure access for people with disabilities. Toward this end, the continuing goals of Disability Services are to:

- Promote physical, academic, employment, information, and attitudinal environments that actively value and respect individuals with disabilities.
- Create an equal opportunity for students, faculty, and staff with disabilities to learn, to work, and to receive reasonable accommodations, academic adjustments, and auxiliary services.
- Increase the visibility and awareness of Disability Services and concomitant University policies, procedures, and resources.
- Foster institutional accountability and administrative responsibility for disability access.
- Monitor and assess institutional change and advocate for universally-designed employment, courses, programs, facilities, services, and activities.
- Increase leadership, career development, and advancement opportunities for students, faculty, and staff with disabilities.
- Develop and disseminate research, innovative models, and exemplary practices to local and global communities.
- Enhance the quality, effectiveness, and efficiency of Disability Services.

The University of Minnesota seeks to provide optimal education opportunities for all students, including those with disabilities. In 1978, and again in 1992, the University conducted self-evaluations to ensure that its programs were in compliance with access provisions to address state and federal civil rights legislation for disabled people. In 1983, the University Senate adopted a set of procedures designed to provide direction and support to efforts in this regard. In 1993, the administration adopted a set of operating principles to guide the institution in accommodating people with disabilities. The following policy for students with disabilities has been adopted by the Board of Regents:

⁵ <http://www.desserv.stu.umn.edu/>

“The Board of Regents of the University of Minnesota is committed to provide for the needs of enrolled or admitted students who have disabilities under section 504 of the Rehabilitation Act of 1973.

It is the policy of the Board of Regents that each campus shall make services available for any student who, through a recent assessment, can document a disability. The administration is directed to provide appropriate services, and included among them shall be 1) support, counseling, and information, 2) academic assistance services, and 3) advocacy services.”

In general, University policy calls for accommodations to be made for students with disabilities on an individualized and flexible basis. The 1995 publication *Access for Students with Disabilities* is an overview of the policies, procedures, and resources for students with disabilities. Although programs are not required to have all the resources disabled students may need, they are expected to have the flexibility and capacity to provide accommodations as needs arise. Those disability-related services that are necessary for access to campus programs and facilities have been centralized. To receive specific accommodations for a disability, students must document an impairment that substantially limits one or more major life activity and demonstrate that the requested accommodations are necessary for equal opportunities to University programs, services, activities, and employment. Information on disability access is readily available to prospective and enrolled students and is included in campus catalogs and quarterly course schedule booklets. Upon admission to the University, all students are provided with an opportunity to identify themselves as having a disability and be referred to the disabled student service office on their campus.

Nationally, disabled students enrolled in postsecondary institutions (reporting at least one disability) range from 9.2 percent enrollment in four-year doctoral programs to 14.2 percent in programs of less than two years in length. In Minnesota, data on disabled students are collected inconsistently; however, estimates from the public systems indicate that approximately five percent of the students enrolled are identified as disabled.

Gay, Lesbian, Bisexual, Transgender Programs⁶

The Gay, Lesbian, Bisexual, Transgender (GLBT) Programs Office, which opened on December 1, 1993, created as one of the outcomes of the work of the Select Committee on Lesbian, Gay, and Bisexual Concerns. The Select Committee did extensive research from 1990 to 1993 concerning campus climate regarding GLBT issues. The findings of this research, summarized in the report *Breaking the Silence: Final Report of the Select Committee on Lesbian, Gay, and Bisexual Concerns*, revealed that the existing campus climate at the University of Minnesota was detrimental to the professional and academic success of GLBT faculty, staff, and students and counter to the University's non-discrimination and equal opportunity goals.

The Office is staffed by a full-time coordinator and a half-time principal secretary. They are assisted by graduate assistants, student workers, student interns, and volunteers.

The Office is dedicated to improving campus climate for gay, lesbian, bisexual and transgender people at the University of Minnesota and to addressing the harmful effects of discrimination based on sexual orientation and gender identification. The purpose of this

⁶ <http://www.umn.edu/glb/>

office is to provide services and programming for all members of the University community by:

- Assisting GLBT members of the University to foster a supportive community.
- Educating and providing resources for all members of the University of Minnesota about the issues that impact the experience of GLBT faculty, staff, and students.
- Supporting the development of curriculum and research in GLBT studies.

The goals of the Office and illustrative accomplishments can be summarized as follows:

- Provide information and referral services on issues of concern to GLBT communities.

Information is provided through walk-in contacts, brochures and flyers, telephone and e-mail requests, information tables at public events, a small research library and information files, and a Gopher (Internet) information and referral database (IRD), which includes research guides for finding information sources in University libraries. Some of the most common types of information requests include: prospective students concerned about campus climate and curriculum; undergraduates working on research projects; faculty members looking for materials for classes; and a variety of people seeking referrals to attorneys, therapists, and other community services. The total number of information and referral telephone, walk-in, and correspondence requests for the 12-month period ending June 15, 1995 was 1,640.

- Provide educational resources regarding issues of concern to GLBT communities, and about the harmful effects of homophobia and heterosexism.

Education is provided through workshops and training programs for a variety of groups including residence halls, student groups, classes, staff inservices, and professional conferences. The Office has also organized and trained a 25-member speaker's bureau, and assisted the media in understanding background on GLBT concerns. A total of 4,052 individuals participated in 89 group education programs.

- Provide advocacy when appropriate on behalf of individuals who feel they have been treated unfairly due to their sexual orientation or gender identity at the University.

The Office supports and assists to individuals who have complaints and intervenes with University departments on behalf of those individuals necessary.

- Provide assistance for University organizations and departments in developing programming appropriate to the needs and concerns of GLBT communities.

The Office has helped to integrate an awareness of GLBT concerns throughout the entire University by offering consultation and technical assistance to other campus departments and organizations. In addition, the Office has initiated a Small Grants Program that financially supports the development of programs by campus units specific to the needs of GLBT communities.

- Participate in University and community planning.

Through participation on committees and task forces, the Office frequently represents GLBT concerns in University planning activities, and represents University concerns in GLBT community planning activities.

- Provide volunteer opportunities for individuals to participate in GLBT community activities.

Providing volunteer opportunities is an important part of the Office's mission to educate and foster a supportive community. These opportunities have been available through the speaker's bureau, internships, office work, and membership on Advisory, Transgender Planning, Alumni, and Employee Network Planning committees.

Periodic Progress Reports to the Board of Regents

In the past several years, annual reports have been given to the Board of Regents as a reflection of the institution's commitment to students of color. The most recent report *A Progress Report on the Status of Students of Color: Enrollment and Graduation Rate* was presented in February 1996, and provides an update on the current status of the University of Minnesota's efforts to enroll and graduate students of color. In previous years, the five-year diversity goals established by the Office of the Associate Vice President of Academic Affairs in 1989 has served as a standard for measuring our progress. Those goals have been accomplished, and new diversity goals have been set as part of the University 2000 Critical Measures and Performance Goals.

In February 1995, the Office of the Associate Vice President for Academic Affairs with Special Responsibility for Minority Affairs reported to the Board of Regents that the student-related diversity goals to increase minority enrollment to 10 percent of the system-wide total and to improve the five-year graduation rate of undergraduate students of color by 50 percent had been achieved. Now, the University of Minnesota is seeking to achieve new diversity goals as identified in University 2000. With respect to diversity, the focus of University 2000 is on: (a) increasing the presence and participation of racial/ethnic minorities and women where they are underrepresented; and (b) creating an environment that actively acknowledges and values diversity for men and women students, faculty and staff from varying racial, religious, and ethnic backgrounds, and of varying sexual orientations, as well as people with disabilities. The most recent report focused on the underrepresented students at the University of Minnesota which include African American, American Indian, Asian/Pacific American, and Chicano/Latino/Hispanic students. All of these racial/ethnic groups are underrepresented at each campus of the University, except for Asian/Pacific American students at the Twin Cities campus.

The University is making progress toward the achievement of its objective to increase the presence and participation of underrepresented groups. System-wide minority enrollment increased from 9.9 percent in fall 1993, the baseline year used for comparison by University 2000, to 11.0 percent in fall 1995. One goal identified in University 2000 relative to the readiness to succeed of undergraduate students is that 80 percent of the freshmen entering the Twin Cities campus be in the top quartile. Of the 4,356 new freshmen who matriculated fall 1995 at the University of Minnesota, Twin Cities campus, there were 2,239 (51.4%) students who graduated in the top quartile of their high school classes. Of those students in the top quartile, 312 (13.9%) are students of color. The new focus on minority student recruitment has contributed to the increased minority student

enrollment. However, to meet the University 2000 goals of improving the graduation rate of students of color by 50 percent, the University needs to retain the students it enrolls. The University has not been successful at consistently increasing minority freshmen and transfer students' retention and graduation rates.

For programs to be effective however, the University must concurrently work toward the achievement of the second diversity goal of creating an "environment that actively acknowledges and values diversity—an environment that men and women students, faculty, and staff from varying racial, religious, and ethnic backgrounds, and of varying sexual orientations, as well as people with disabilities, find humane, hospitable, and conducive to learning and working." Minority programs and services are not solely entrusted with protecting and promoting the well-being of students of color, nor are they solely responsible for the students' academic performance. A report *Campus Diversity: Student Life and the Classroom* summarized elsewhere in this chapter, revealed that the University of Minnesota still presents a hostile environment where minority students sometimes feel harassed and/or discriminated against by their fellow students, professors, teaching assistants, and staff.

Since its creation in 1988, the Office of the Associate Vice President for Academic Affairs with Special Responsibility for Minority Affairs and Diversity has made annual recommendations to the Board of Regents for the recruitment, retention, and graduation of students of color. The University of Minnesota has established a philosophical position on equal opportunity and equal access, as well as support for excellence through diversity. The University has supported funding for minority student programs whose mission is to retain and graduate students of color. The Board of Regents has developed policies to support and protect the diversity goals of the University. Clearly, the lack of constant and continued improvement in the attainment of the retention and graduation goals of the University for students of color is not tied to the articulation of policy and the awarding of financial support.

Lack of continued progress in these critical areas has to do with cultural changes that are necessary at our institution. Those changes face a historical condition that has existed in the American tradition and, therefore, the University tradition for hundreds of years. In order to maintain a continuing and ongoing track of success, the culture at the University of Minnesota needs to change. To this effect, all parties within the University must recognize the need for cultural change and deliberately work toward its achievement so that students of color can be successful and remain at the University of Minnesota through graduation.

The most recent report to the Board of Regents indicates that the University of Minnesota is making progress toward the achievement of its objective to increase the presence and participation of underrepresented groups. In fall 1995, 5,309 students of color were enrolled at the four campuses of the University of Minnesota, constituting 11.0 percent of the total system-wide enrollment of 48,091; 4,566 students of color were enrolled on the Twin Cities campus. Using fall 1993 enrollment as a baseline for comparison, as is used by University 2000 Critical Measures and Performance Goals, system-wide minority enrollment increased across the ethnic groups, as shown in Table 48 below. Table 49 indicates enrollments by collegiate unit.

Considering the relatively small minority population in the State of Minnesota, the undergraduate student body at the Twin Cities campus is fairly diverse in comparison with the majority of the other Big Ten institutions. Table 50 indicates that the University of Minnesota ranks fifth amongst the eleven institutions in the percentage of minority undergraduates to total campus undergraduate enrollment.

Table 48

Minority Student Enrollment by Ethnicity and Campus
with Percent of Total Campus and System-wide Enrollment
Fall 1993 and Fall 1995

Ethnicity/Campus	Fall 1993		Fall 1995		Increase/Decrease	
	N	%	N	%	N	%
African American						
Crookston	3	0.2%	18	1.0%	+15	+500.0%
Morris	71	3.7%	83	4.3%	+12	+16.9%
Duluth	58	0.8%	62	0.9%	+4	+6.9%
Twin Cities	1,043	2.8%	1,140	3.1%	+97	+9.3%
System-wide	1,175	2.4%	1,303	2.7%	+128	+10.9%
American Indian						
Crookston	5	0.3%	25	1.5%	+20	+400.0%
Morris	57	2.9%	77	3.9%	+20	+35.1%
Duluth	113	1.5%	99	1.3%	-14	-12.4%
Twin Cities	253	0.7%	271	0.7%	+18	+7.1%
System-wide	428	0.9%	472	1.0%	+44	+10.3%
Asian/Pacific American						
Crookston	9	0.6%	11	0.6%	+2	+22.2%
Morris	77	4.0%	74	3.8%	-3	-3.9%
Duluth	131	1.7%	173	2.3%	+42	+32.1%
Twin Cities ^a	2,284	6.1%	2,541	6.9%	+257	+11.3%
System-wide	2,501	5.2%	2,799	5.8%	+298	+11.9%
Chicano/Latino/Hispanic						
Crookston	23	1.6%	28	1.6%	+5	+21.7%
Morris	26	1.3%	30	1.5%	+4	+15.4%
Duluth	40	0.5%	63	0.9%	+23	+57.5%
Twin Cities	593	1.6%	614	1.7%	+21	+3.5%
System-wide	682	1.4%	735	1.5%	+53	+7.8%

^aBecause of the success of the enrollment of Asian/Pacific American students at the Twin Cities campus, they are not classified as underrepresented according to University 2000 Critical Measures and Performance Goals. Therefore, goals for their recruitment were not established.

One goal identified in University 2000 relative to the readiness to succeed of undergraduate students is that 80 percent of the freshmen entering the Twin Cities campus be in the top quartile. Of the 4,356 new freshmen who matriculated fall 1995 at the University of Minnesota, Twin Cities campus, there were 760 (17.4%) freshmen of color and 2,239 (51.4%) students who graduated in the top quartile of their high school classes. Of those 760 students of color, 312 (41.1%) graduated in the top quartile of their high school classes. The ethnic distribution of the new freshmen matriculants who graduated in the top quartile of their high school classes was as follows: American Indian (N=12 or 0.5%); Chicano/Latino/Hispanic (N=37 or 1.7%); African American (N=61 or 2.7%); Asian/Pacific American (N=202 or 9.0%); and Non-Minority Students (N=1,927 or 86.0%)

Table 49

Twin Cities Minority Enrollment by Collegewith Percent of
College Enrollment and Percent of Minority Enrollment, Fall 1995

College	African American	American Indian	Asian/ Pacific American	Chicano/ Latino/ Hispanic	Number	All Minority	
						Percent of College Enrollment	Percent of Minority Enrollment
Agriculture	52	5	35	12	104	11.3%	2.3%
Architecture	0	0	2	0	2	2.6%	0.1%
Biological Sciences	10	4	41	3	58	12.4%	1.3%
Education	54	3	38	19	114	9.3%	2.5%
General College	178	31	216	58	483	33.2%	10.6%
Graduate	171	39	251	107	568	6.8%	12.4%
Health Sciences	84	44	311	49	488	13.5%	10.7%
Human Ecology	20	6	52	11	89	10.6%	1.9%
Law School	33	16	55	19	123	14.7%	2.7%
Liberal Arts	422	100	998	266	1,786	13.3%	39.1%
Management	11	2	73	8	94	11.2%	2.1%
Natural Resources	3	3	17	6	29	4.8%	0.6%
Technology	79	17	445	49	590	13.9%	12.9%
University College	23	1	7	7	38	18.8%	0.8%
Total	1,140	271	2,541	614	4,566	12.4%	100.0%

Source: Fall Quarter 1995 Minority Enrollment Report, Office of the Registrar, October 20, 1995
Prepared by: Office of the Associate Vice President for Academic Affairs with Special Responsibility for
Minority Affairs and Diversity, January 25, 1996.

Table 50

Minority Undergraduate Enrollment at Big Ten Institutions
Fall 1994

Institution	Minority		Undergraduate Enrollment
	Undergraduate Number	Percentage	
Northwestern University	2,453	25.7%	9,806
University of Illinois-Urbana	6,651	25.6%	25,931
University of Michigan	5,612	24.9%	23,238
Michigan State University	4,522	14.9%	31,056
University of Minnesota-Twin Cities	3,245	14.0%	23,238
Ohio State University	4,717	13.5%	36,166
Purdue University	2,841	9.9%	29,374
Pennsylvania State University	3,000	9.6%	31,496
Indiana University	2,483	9.3%	27,462
University of Wisconsin-Madison	2,405	9.2%	27,544
University of Iowa	1,480	8.3%	18,356

Source: 1994 Integrated Postsecondary Education Data System (IPEDS) Fall Enrollment Reports.

Programs to Improve Minority Enrollment and Graduation Rates

University 2000 recognizes that students cannot go to college and be successful in college unless they graduate from high school with adequate academic preparation. The University needs to continue to improve and expand the existing K-12 initiatives, pre-college programs, and programs and initiatives at the undergraduate and graduate level at each of the University of Minnesota campuses. The list below is only a sampling of the 135 programs included in the guide *Minority Programs and Services at the University of Minnesota* to inform people about such programs and to ensure the maximum utilization of these excellent programs and services. A few programs include:

Postsecondary Enrollment Options Program

The Postsecondary Enrollment Options (PSEO) Program offers high school students the opportunity to enroll in college courses, simultaneously fulfilling high school graduation requirements and earning college credits. In the 1994-95 academic year, the PSEO program had 1,233 participants, of which 24.0 percent were students of color. In fall 1994, the average grade point average earned in University classes by PSEO participants was a 3.10.

Office for Minority and Special Student Affairs Summer Institute

Every summer since 1978, the Office for Minority and Special Student Affairs (OMSSA) has provided minority freshmen the opportunity to begin their collegiate experience during the summer before their fall matriculation by offering University courses, for credit, during the seven-week program. Of the 82 freshmen students who were selected to participate in the 1995 OMSSA Summer Institute, 80 (97.6%) completed the program. Seventy-nine students (96.3%) completed the program with satisfactory progress (2.00 or better GPA) and 77 (93.9%) returned to the University for fall quarter 1995. The figures for these two criteria were the highest since the program started, and the average grade point average of the participants was 3.35, also the highest ever.

Multicultural Teacher Development Project

The Multicultural Teacher Development Project (MTDP) was developed by the College of Education and Human Development in the fall of 1989 in response to the nationwide need for more teachers of color for the increasingly diverse K-12 classrooms. MTDP is a recruitment and support program which provides guidance, academic support, and scholarships to students of color. Minnesota residents are targeted. During the 1994-95 academic year, 47 students were enrolled in the MTDP program. By August 1995, 32 (68.1%) of the students graduated and 12 (25.6%) were employed as teachers.

Minneapolis Pathways

In addition to improving and expanding pre-college programs, the University needs to address the needs of minority transfer students. Through Minneapolis Pathways, a citywide collaborative project funded by the Ford Foundation, the University of Minnesota is currently working closely with Minneapolis Community College on a transfer articulation agreement to establish an effective pipeline to facilitate the successful transfer of students of color from two-year to four-year degree programs.

Graduate Feeder Program

At the graduate and professional student levels, the University needs to enhance its efforts to recruit and retain underrepresented students. These recruitment efforts are exemplified by the University's participation in the National Association of State Universities and Land-Grant Colleges (NASULGC) Graduate Feeder Program. In cooperation with the Graduate Feeder Program, the University created ten graduate fellowships for students from Historically Black Colleges and Universities (HBCUs).

Common Ground Consortium

The Common Ground Consortium was created in 1989 to increase the number of African American graduate students in the College of Education and Human Development and the number of educators of color in the Twin Cities area. The Consortium, made up of the College of Education and Human Development and nine HBCUs, offers financial assistance annually to 20 new or returning students who enroll in the college's graduate programs. As of the 1994-95 academic year, 51 students have enrolled in the College of Education and Human Development through the Consortium. Of these 51 students, 22 (43.1%) have graduated and 27 (52.9%) are continuing their enrollment.

Community of Scholars

To address the issue of graduate and professional student retention, the Office of the Associate Vice President for Academic Affairs with Special Responsibility for Minority Affairs and Diversity is working in cooperation with the Graduate School on the development of the Community of Scholars program. This program will bring together graduate and professional students of color, across the various disciplines, and provide them with opportunities to network and talk about their research. It will also provide students with additional mentoring relationships and support professional development activities.

Life Sciences Summer Programs

This program provides undergraduate students with a summer research experience in the life sciences and encourages continued study at the graduate and professional levels. Although this program is not specifically targeted for minority students, considerable effort is focused on the recruitment of students of color. In the summer of 1995, 28 (30.1%) of the 93 participants were students from underrepresented minority groups.

Through the adoption of the mission, vision, and strategic initiatives of University 2000, the University is continuing to develop, implement, and improve the elements identified above. In the Second Phase of University 2000 Critical Measures and Performance Goals, measures of the Student Experience have been proposed. The focus will be on undergraduate, graduate, and professional students, as well as students enrolled through Continuing Education and Extension/University College. This measure should help the University assess its ability to provide a challenging and high quality educational environment for all students attending each of the four campuses of the University of Minnesota.

Composition of Regular Faculty

As with the other elements of the Underrepresented Groups/Diversity Critical Measure, faculty goals set in the strategic planning process are desired goals, not maximums. They

are based on a review of past performance, an attempt to be strategic in thinking about where we would like to be in the future, and a realistic view of how far we can move in the next six years. More specifically, the goals are based primarily on the current composition of the faculty, system-wide and on each campus, and on EEO national availability data and deficiencies; other considerations include unique hiring opportunities. Also considered are limits on the size of the faculty and the rate of hiring due to budgetary factors; attrition rates; and a lower level of turnover due to the elimination of mandatory retirement.

Principles or assumptions guiding goal setting for regular faculty of color and women included the assumption that goals will not be the same for each group, but will reflect differences in each group's circumstances. Discrepancies in numbers and problems of distribution across disciplines must both be considered, resulting in different kinds of goals for the four different racial/ethnic groups. Thus goals for African American, American Indian, and Chicano/Latino/Hispanic and women faculty will emphasize numbers, while goals for Asian American/Pacific Islander faculty will emphasize distribution across disciplines (since Asian/Pacific Americans are adequately represented on the faculty in total numbers, but there is an imbalanced disciplinary distribution). Emphasis will be on both recruitment and retention. Race/ethnicity/gender will not be the sole criterion for hiring decisions. Detailed information for the four racial/ethnic groups and for women is included in Chapter XIII: Faculty. Although not included here, collegiate and departmental goals addressing distribution issues will continue to be specified in the EEO hiring guidelines that are sent to colleges and departments in January of each year.

Bush Faculty Development Program for Excellence and Diversity in Teaching

The activities of the Bush Faculty Development for Excellence and Diversity in Teaching, described more fully in Chapter XIII: Faculty, have had two complementary objectives: improving instruction and helping faculty to develop inclusive curricula and classroom environments. The small grants portion of this project has, since 1991-92 funded 39 proposals in 29 departments that supported curriculum transformations related to cultural diversity. These grants have affected hundreds of students and have the potential for long-term impact.

Faculty of Color Bridge Fund Program

The Faculty of Color Bridge Fund Program, established in 1988, provides bridge funds to departments with high needs for, and genuine commitment to hiring faculty of color. In awarding such funding, the Associate Vice President for Academic Affairs and Associate Provost with Special Responsibility for Minority Affairs works closely with the appropriate vice president, dean and department chair to ensure that there is strong commitment from top down and vice versa to fostering the scholarly success and satisfaction of bridge money recipients. Senior professors in the hiring departments serve as faculty mentors for junior faculty of color hired through the Bridge Fund Program until they are promoted with tenure.

This fund is administered through the Office of the Senior Vice President for Academic Affairs, and is an auxiliary resource designed to complement, not replace, money regularly available to a unit. Its purpose is to provide financial support to academic departments that have identified full-time tenure-track or tenured faculty of color or professional/academic staff on a continuous appointment track through a national search process or through a

target of opportunity procedure, but do not immediately have adequate funding available to extend an offer of employment.

Although the specific content and format of these requests is left to the discretion of individual units and colleges, all requests must include the following: evidence that the recruitment of the candidate is consistent with the academic priorities of the college and unit involved; an analysis of how the proposed salary aligns with that of other faculty in the unit of similar rank and experience; an indication that the candidate has credentials that meet the criteria for appointment at the proposed rank and tenure status; and, the amount of funding requested, with a description of how the funds will be used and a specific indication of the time periods to be covered. Units whose requests are approved will receive maximum bridge funding of 100 percent the first year, 75 percent the second, and 50 percent the third, including fringe benefits.

Minority Faculty Development Project

The institution's affiliation with the Midwestern Higher Education Commission (MHEC) has afforded faculty the opportunity to work with MHEC on selected planning and research efforts, one of which focused on minority faculty. MHEC adopted the following goal in July 1991: "To develop a plan to encourage the expansion of minority faculty in underrepresented academic disciplines at public and independent colleges, universities, community colleges, and technical colleges throughout the Midwest." Faculty from the Hubert H. Humphrey Institute of Public Affairs and the College of Education and Human Development served as project leaders.

The May 1995 MHEC report *Minority Faculty Development Project* summarized the findings of the study as follows:

Extent of Minority Representation

- Varying definitions of representation yield alternative estimates of the degree of underrepresentation of minority faculty.
- When measured in comparison with the percentage of the entire population, representation among full-time faculty in MHEC states differs by minority group: African Americans are severely underrepresented in all states; American Indians are underrepresented in even out of eight states; Hispanics are underrepresented in six of eight states; and Asian/Pacific Islanders are not underrepresented.
- When measured in comparison with the percentage of the population ages 24 to 70, representation among higher education faculty in MHEC states differs by minority group: African Americans and American Indians are severely underrepresented; Hispanics are also substantially underrepresented in most MHEC states; Asian/Pacific Islanders, in contrast, are represented at higher proportions among faculty than among the population in all eight MHEC states.
- Moreover, African American and American Indian faculty representation in MHEC states is lower than the national average, using the measure based on age groups 24-70. The representation of Asian American/Pacific Islanders and Chicano/Latino/Hispanics in MHEC states is above the national average, although representation of Hispanic males is lowest of all racial groups.

- When measured in comparison with the percentage of individuals with master's or Ph.D. degrees, nonwhites as a group are underrepresented as faculty members in MHEC states.
- National data show that African American, American Indian and Hispanic faculty representation in science and engineering (which includes social sciences, physical sciences and engineering fields) is lower than in other fields. MHEC data also show these pattern.

Causes of Underrepresentation

- African Americans, Hispanics, and American Indians are substantially underrepresented nationally along every step of the collegiate education pipeline culminating in the doctorate. Asians are represented at higher proportions than in the population all along the pipeline to the doctorate.
- The number and share of bachelor's degree recipients increased nationally for Asians, Hispanics, and American Indians between 1977 and 1990. For African Americans, though, the number increased slightly, while the share declined. The results were generally less positive -- and, for African Americans, negative -- for master's degrees and Ph.D.s.
- In the science and engineering fields, where there has been a historic underrepresentation of African Americans, Hispanics and American Indians, the pathways toward the Ph.D. differ for each minority group nationally. But at the critical junction where doctorates move to faculty tenure at four-year colleges and universities, there is a drop-off among all minority groups including Asians, who are adequately represented at earlier points along the pipeline.
- Low faculty salaries have a greater effect than the quantity of minority Ph.D.s on the supply of minority faculty members in MHEC states.
- MHEC states are exporters of Ph.D.s generally and -- to an even greater extent -- of minority Ph.D.s.
- Minority faculty members believe a "chilly climate" exists on many campuses in MHEC states.
- Midwestern institutions reported few organized programs for supporting minority faculty development, although a few institutions reported "exemplary programs."

President's Minority Advisory Committees

In May 1991, the President established four minority advisory committees to advise on issues of special concern to the minority communities, and requested the advisory committees' input and guidance in achieving the University of Minnesota's diversity goals. In July 1993, the President's minority advisory committees submitted to the Board of Regents recommendations on what the University could and should do to help remove barriers to the successful recruitment and retention of minority students and faculty. Some of these recommendations had already been implemented or are in the process of being implemented, while others needed further planning and consultations with appropriate University units and constituents. After receiving and reviewing these recommendations, the Board of Regents asked the advisory committees to consider the following:

- To present the advisory committees' recommendations in "action item" formats that contain the impact of the "action" in implementation, budget, and policy ramifications.
- To monitor the responsiveness of the various administrative units in the preparation process of the advisory committees' "action items" which will permit accountability and continuity of efforts to address the concerns of the committees.
- To work with the Office of the Associate Vice President for Academic Affairs and Associate Provost with Special Responsibility for Minority Affairs in its efforts to achieve the diversity goals: (a) to recruit and retain students of color through graduation; and (b) to recruit and retain tenured and tenure-track faculty of color by ensuring their scholarly success.
- To identify and bring to the President attention any other issues of concern to each of the minority communities. The President would decide the appropriate department or unit to address the concern, if it is not strictly academic. For example, some advisory committees were concerned about diversity in vendors, suppliers, and non-academic employment.

The University of Minnesota has a long history of collaboration with members of the communities of color on many issues of mutual interest and concern. These advisory committees provide a vehicle by which the communities of color can provide advice and guidance regarding the recruitment, retention and graduation of minority students, as well as the scholarly success and satisfaction of minority faculty.

In November 1993, a new annual process for handling the minority advisory committees' recommendations was established. The process is as follows:

- The President meets with the minority advisory committees to seek their input, guidance and advice in achieving the University of Minnesota's diversity goals.
- The President reviews the minority advisory committees' recommendations and instructs appropriate administrative units to address them.
- The administrative units advise the President which recommendations are implementable, how and when they will be implemented, and which recommendations require policy consideration by the Board of Regents.
- The President meets with the minority advisory committees again to update them on the status of their recommendations and to seek their feedback and further advice.
- The President directs the Office of the Associate Vice President for Academic Affairs with Special Responsibility for Minority Affairs to prepare an annual report on the minority advisory committees' recommendations and how various administrative units have implemented or acted on them.
- The President meets with the executive council of the minority advisory committee chairs to review the report and to seek its final input and feedback.
- The Office of the Associate Vice President for Academic Affairs incorporates the executive council's input and feedback into its annual report on the minority advisory committees' recommendations.
- The President and the advisory committee representatives submit the report to the Board of Regents.

During May and June 1994, the Associate Vice President met with the minority advisory committees to present the University of Minnesota's responses to their recommendations and to seek their feedback and further advice. The advisory committees' recommendations were grouped into six areas of concern: (a) minority undergraduate students; (b) minority graduate/professional students; (c) minority faculty; (d) curriculum and ethnic studies departments; (e) environment and campus climate; and (f) accountability. In July 1994, the minority advisory committee submitted to the Board of Regents the first annual report on the University's responses to the committee recommendations. We have since developed a tracking system to monitor the status of each recommendation on a quarterly basis. During the 1994-95 academic year, the President's minority advisory committees met six to twelve times each to evaluate the status of their recommendations; to examine University 2000 planning documents and give their feedback; to review the job description for the position of Associate Vice President for Academic Affairs with Special Responsibility for Minority Affairs and Diversity; to discuss recent changes in financial aid policies; and to express various concerns specific to their ethnic communities.

All-University Forum on Diversity

In 1990 the President requested a review of issues of intolerance -- intolerance for religious differences, racial differences, cultural differences as well as lifestyle differences -- which persist in the University of Minnesota. The intent behind the President's request was to determine how the University community could act to eliminate these intolerances. A qualitative self-reflective study of the entire University was conducted. Students, staff, faculty, administrators, and others, including some members of the Board of Regents, were interviewed. The *Report on the Self-Reflective Study: Attending to Human Details* reflected the general thrust of what emerged from that study.

The participants in the study indicated that making diversity and pluralism a reality at the University of Minnesota required the following: making the University of Minnesota more inclusive of minorities with regard to diversifying its student profile, having a greater number of minorities in the composition of its faculty and staff, and establishing a curriculum representative of the pluralistic nature of American society. They emphasized how important it is for the President to provide the leadership necessary to bring about such fundamental changes in the values, goals, and objectives of the University of Minnesota.

Respondents offered several strategies for making these fundamental changes at the University. They pointed out that, first and foremost, the quest for diversity and pluralism must be understood, supported, and catalyzed by those who are in key administrative positions (e.g., provosts, vice presidents, deans, department heads, and directors). The participants added that while societal values and norms have a considerable influence on the manner in which the University's culture is shaped, administrators cannot wait for future social or political forces to alter the values and culture of the University. The issuing of memorandums and letters of intent for the promotion of diversity and pluralism was considered inadequate. To achieve the changes that are necessary, respondents believed that administrators would have to provide bold and visionary leadership. The participants also believed that efforts to achieve greater diversity and pluralism would be resisted. Furthermore, they felt that the changes would come too slowly for some, and perhaps too quickly for others. They cited the various complexities and contradictions inherent in the culture of the University as major issues in need of consideration and attention.

The first All-University Forum on Diversity was held in May 1991. The purpose of the Forum was to begin discussing how members of an institution of higher learning, can best address one of the most challenging issues of our time: achieving unity with diversity. The central message

of the Diversity Forum was that the responsibility for carrying forward diversity initiatives rests unequivocally on the shoulders of each member of the University community.

In order to emphasize and assess further the central message of the first Diversity Forum, the second All-University Forum on Diversity was held in May 1992, at the Earle Brown Center on the St. Paul campus of the University of Minnesota. There were two distinct parts to the second annual All-University Forum on Diversity. The first part was in response to the recommendations made by the interviewees in the study summarized above. The participants of this study has suggested that the University publish evaluation reports and hold seminars and conferences to keep the University community informed about issues related to diversity. Therefore, the first part of the Forum consisted of progress reports given by internal members of the University community. The second part of the Forum was devoted to presentations by the members of the external communities regarding their experiences, understandings, and perceptions about the status of diversity at our University, a public institution in both urban and rural settings.

Diversity at the Graduate Level

In 1974, the Graduate School, in cooperation with the Office of the Vice President for Academic Affairs, established the Office of Equal Opportunity in Graduate Studies. In the early stages of development, this office focused its efforts primarily on fellowship support and recruitment (including name exchange and feeder programs). Beginning in the late 1980s, more emphasis was placed on developing the "pipeline" to graduate school, an approach that emphasizes greater involvement by graduate programs and stresses academic preparation of students for graduate study. These efforts improved not only the quantity of students of color in the recruitment pool but also the quality of applicants.

The late 1980s and early 1990s saw significant increases applications and enrollment of students of color to the Graduate School. Applications increased from 475 in the fall of 1988 to 1,022 in 1995; enrollment increased from 298 to 651 during the same period. Recently, however, the figures for applications and newly enrolled students have begun to plateau. Some of the leveling in applications may reflect the general trend in applications to the Graduate School. However, total enrollment and graduation continued to increase significantly. This reflects a shift in recent years away from the past emphasis on recruitment toward activities stressing retention and graduation. The data suggest a need to move away from quantitative to more qualitative measures evaluating our diversity efforts. For example, evaluating campus climate, and what affects it, is becoming and will become ever more important.

The lives of graduate students generally revolve around their graduate programs. As more students enroll, there will be more interactions with graduate programs. Because students of color often bring different perspectives, experiences, and ways of thinking to their graduate program, they often feel isolated from the traditional academic culture of their program. On the other hand, some graduate programs have developed a critical mass that has engendered a sense of empowerment and a desire among the students to bring about more diversity not only in the demographics of the programs but also in curriculum and research topics. Both situations, isolation and critical mass, have created conflict and frustration for students and graduate faculty. As more students of color enroll, the institution can expect more such challenges. How these challenges are faced will determine whether the new realities will degenerate into ill feeling and distrust or whether the institution will successfully integrate diversity into the life of the University. Solutions must be designed to positively affect the climate of the graduate programs. Because the Graduate School encompasses 170 graduate programs across the University, change at this level will necessarily and cumulatively affect the climate of the entire University.

The Office of Equal Opportunity in Graduate Studies is uniquely positioned to assist the graduate programs in their diversity efforts. As part of the Graduate School, it works closely with the Graduate School student services offices and provides support to students from application to graduation. It also has direct access to graduate programs with which it shares information, experiences and strategies between and with them, and facilitates their efforts to improve the climate. The following list of provides some examples of the facilitative approach to integrating diversity into the operations of the University and to supporting the specific efforts of graduate programs.

Recruitment

- Developed recruitment strategy that focuses efforts and resources on addressing specific underrepresentation needs (e.g., African Americans and American Indians in science and engineering programs).
- Presents workshops on applying to and financing graduate school for prospective students. Also prepares and distributes to prospective students a brochure on graduate study at the University.
- Has developed and is updating an Internet home page that provides information about the University's graduate programs, the application process, and sources of financial aid.
- Supports faculty travel to non-majority institutions for recruiting fairs and for developing networking relationships. In the long term, faculty networking has proven to be a very effective recruiting tool.
- Assists summer research programs in their efforts to broaden and improve the recruitment pool of students of color.

Student Financial Support

- Administers six fellowship programs, including the Graduate School's Educational Opportunity Fellowship, National Physical Science Fellowship, and Ford Foundation Fellowships.
- Works with fundraising agencies and prepares proposals to provide fellowship support for students of color entering graduate programs at the University.

Efforts at Improving Climate

- Sponsors every fall a reception for all graduate students of color. It provides an opportunity to build relationships with other students, and, thereby, reduces isolation.
- Has developed and is improving a mentoring program for graduate students of color using senior graduate students, faculty, staff, and local community members.
- Works with University agencies, e.g., University Counseling and Consulting Services and Boynton Health Service, to provide support groups and workshops on writing and research methodologies.
- Maintains an electronic communication vehicle for students of color to improve communication and provide information on resources and job opportunities.

- Plans and sponsors campus visits by a nationally recognized consultant to present workshops to students, staff, and faculty on the philosophical aspects of cultural differences and working in a diverse climate.
- Collected, compiled, and shared with graduate programs information on ongoing departmental diversity efforts.
- Works with staff and faculty to develop an all-University conference on the recruitment and retention of graduate students of color. The conference will provide graduate programs with information on successful strategies and continues a series of workshops, conferences, and meetings on diversity.
- Identifies new and more effective methods of using available resources to assist graduate programs in their diversity efforts.
- Prepared a planning grant that will develop a tribal college faculty development program. Tribal college faculty would complete their graduate education at the University of Minnesota.
- Maintains electronic capabilities to share information with faculty and staff on their diversity efforts.
- Sponsored a research project that examined the climate for doctoral students of color at the University of Minnesota. Preliminary results indicate that predictors of academic success include a mentoring relationship with a faculty member and a professional development experience, i.e., preparation of a journal article or presentation at a conference. This information will be shared in an attempt to design interventions that are specific and appropriate to the graduate programs and will increase retention and graduation rates.
- Attends national meetings on diversity and shares information with graduate programs. Generally, serves as an information resource for graduate programs as they develop their diversity efforts.

Undergraduates' View about Diversity

At the institutional level, the University has developed and conducted several initiatives to enhance diversity awareness. These include the creation of four ethnic learning and cultural centers; the creation of a program office to address issues and provide campus training focused on the gay, lesbian, bisexual, and transgender student population; the organization of the four President's Minority Advisory Committees for retention and graduation of students of color and the recruitment of faculty of color; the institution of the Disabled Student Cultural Center, the development of a series of Diversity Forums; and the reallocation of resources to create the Student Diversity Institute to conduct workshops.

A report, *Campus Diversity: Student Life and the Classroom*, published by Student Affairs Research in 1994, provided a comprehensive analysis of the attitudes and actions of undergraduate students on the Twin Cities campus with respect to a number of diversity issues. In general, 36 percent of undergraduate respondents agree or strongly agree with the statement that "the University has visible leadership. . . to foster diversity on campus." The study went beyond gender, race and ethnicity to include religion, disability and sexual

orientation. The report outlined thirteen major findings from the survey of 939 undergraduates in spring quarter 1993:

- Pervasiveness of perceived discrimination and harassment: Nearly half of all undergraduates reported feeling discriminated against or harassed on campus. The most frequently reported sources of discrimination were students (34%), professors (15%) and people in areas near campus (12%).
- Sexual orientation: The issue of greatest intensity. Questions about sexual orientation aroused much more heated responses than did any other current aspects of diversity.
- Gender differences: Women were much more likely than men to report having experienced harassment or discrimination.
- Layering of dimensions of identity: Students who represent multiple layers of differentness, each tending to be the target of discrimination, may experience cumulative effects compounding problems for them.
- Experiences of African American students: Although all four of the ethnic minorities expressed concerns about the climate for diversity, African American students were much more likely to report having had negative experiences on campus and to give a low rating for their satisfaction with the University.
- Intensity of feelings about diversity issues: An unusually large percentage of respondents added frank and intense comments, suggesting the need to foster rational dialogue about diversity issues.
- Focus on the classroom and the curriculum: Since most students are commuters, the classroom was the primary site for diversity experiences, and that was where the majority of negative incidents occurred, but overall two thirds said that the climate of the classes was accepting of "who I am."
- Contact with minorities prior to entering the University: Most undergraduates were Caucasian, and most of them had little contact with minorities before entering the University. Two-fifths reported frequent or very frequent contact with African Americans and Asian Americans prior to coming to the University, while one-fifth reported at least frequent contact with Chicano/Latino/Hispanics and only one-tenth with American Indians. Those with the greatest prior contact with minorities came from large urban areas.
- Perceived effects of University experiences: Undergraduates reported that they were more accepting of nearly all subpopulations since coming to the University.
- Overall satisfaction with the University. There were no differences in satisfaction for gender, disability status, or ethnic minorities except for African American students. The percentage of students who rated themselves as satisfied or very satisfied was 52 percent for Asian Americans 53 percent for Native Americans, 54 percent for Whites, 59 percent for Chicano/Latino/Hispanic, but was 29 percent for African Americans.
- Implications for faculty and staff development: More needs to be done to assist faculty and staff in dealing with the diverse population of students.

- Diversity in personal relationships: There was more acceptance of personal relationships with students of different race or ability status than with those of different sexual orientations.
- Positive signs in acceptance of diversity: Achievement of genuine diversity is not at hand, but there are encouraging signs. Students report greater acceptance of peoples of different race/ethnicity, ability status, and sexual orientation than before entering the University.

President's Distinguished Faculty Mentor Program

This program was initiated in 1986 to link high ability scholars of color with distinguished faculty members who serve as mentors for personal and professional growth. Faculty mentors also assist the scholars in meeting the intellectual challenges of an academic career at the University of Minnesota, Twin Cities campus. The intent is that mentoring will be a dynamic "out of classroom" learning experience that will enhance the quality of academic life while personalizing the University environment.

The goals of the program are as follows: (a) increase the recruitment and retention of high ability scholars of color; (b) enhance the quality of education for scholars of color; (c) personalize the University environment; (d) offer the opportunity for scholars to meet the intellectual challenges of academia, and to take advantage of the University environment along with its many resources; and (e) foster maximum achievement for personal and professional growth.

During the first year, 1986-87, 38 freshmen students of color participated in this program; 107 students are participating in 1995-96. During the ten years of the Program, 544 students have participated. The ethnicity of participating students during the 1992-95 period is as follows: African American (32.9%), Asian American (29.9%), Chicano/Latino/Hispanic (20.3%), American Indian (12.3%), and Multi-cultural (4.6%).

Currently, over 300 faculty serve as faculty mentors. Mentors listen to the needs and expectations of the scholar, work with the scholar to assist in developing and establishing realistic obtainable goals, offer suggestions and feedback to the scholar, serve as a resource to the scholar, and encourage the scholar to explore new areas. The scholars are high ability students of color who are recipients of scholarships.

In addition to institutional funds and federal and state financial aid, additional funding is needed to assist students of color to graduate from the institution in a timely fashion. The goal of the Puckett Scholarship Program, established in 1994, is to enable students of color, through financial assistance and faculty mentorship, to pursue an education at the University of Minnesota. Puckett Scholars receive \$3,000 each for their first year at the University which is renewable annually for up to four additional years. Merit supplements of \$1,000 or \$2,000 are given each year according to the Scholar's grade point average. Each scholar is assigned a faculty mentor. Scholarships are awarded yearly to incoming freshmen of color who are Minnesota residents and have demonstrated financial need and high academic potential based on their high school performance and community involvement. Currently, eight scholarships are awarded with an eventual goal of 13 scholarships per year.

Student Diversity Institute

The Student Diversity Institute's mission is to actively promote the multicultural development of students at the University of Minnesota. In carrying out this mission, the Institute designs and implements innovative educational strategies as it seeks to empower, challenge, inspire, liberate, and ultimately transform individuals and organizations from the fears and prejudices that hinder the achievement of their full potential.

The centerpiece of the Institute is training for transformation on issues of diversity, multiculturalism, human oppression, and authentic community building. Training and development sessions are conducted using developmental models of experiential learning that lead to reflection as well as action.

The Institute also serves the University community as:

- A center for community transformation where issues of human difference are acknowledged, appreciated, and celebrated.
- A setting from which to conceptualize, plan, and implement educational conferences on issues related to diversity and multiculturalism.
- A think tank on creative strategies that bring people together and contribute to greater contact, knowledge, support, and appreciation of human differences.
- A learning community that focuses on questions of identity development within the context of a pluralistic society.
- A catalyst for innovative research in the areas of diversity and multiculturalism that further enlighten common understandings of the complexity and interconnectedness of all human oppression.
- A vehicle to assist students, staff, faculty, and their units in assessing the environment as well as climate of their organizations for issues of inclusion as well as exclusion, and in creating more strongly diverse environments.
- A program that stands at the forefront of advocacy for a new ethic and vision of inclusivity that acknowledges, celebrates, and incorporates the contributions of all persons to the University.
- A multicultural resource center for students, staff, and their organizations on the dynamics of human oppression, conflict resolution, and community reconciliation.

The Institute offers the following programs, services, and activities:

- Training, Workshops, and Presentations: The Institute assesses needs, plans, implements, and evaluates interactive educational sessions designed to meet the needs of specific audiences on issues of diversity, multiculturalism, identity development, community building, leadership development, human oppression, inclusive organizations, and more.
- Consultation, Information, and Referral: Institute staff discuss, advise, advocate, and consult widely on issues of diversity and multiculturalism. This assistance extends to individuals, student organizations, community groups, or University units. The Institute also offers its services to greater Minnesota through an outreach

agreement with the Minnesota Extension Service. The Institute serves as a "multicultural resource center" for the University and the community. Staff as well as student-interns answer questions and provide information and resources on a variety of topics related to diversity and multiculturalism.

- Diversity Connections Internship Program: Under this program students meet weekly to explore issues of human oppression, diversity, multiculturalism, authentic community building, and ethical leadership. Students also work closely with staff in order to explore together the theory and, more importantly, the practice of multicultural training, education, and research as well as develop and practice change agent and leadership skills. This program takes place twice during the academic year.
- Diversity Immersion Small Grants Program: Small grants of up to \$500 are awarded to University students wishing to participate in extended "immersion" experiences in areas of human difference. The small grants program funds proposals for individual immersion activities that challenge traditional comfort zones, stretch mindsets, worldviews, and realities about areas of human diversity within the US and its territories.
- Social Action Theater: This is an interactive educational program that uses dialogue and drama to address complex issues of diversity and multiculturalism. In this activity, the participants are spectators who co-create archetypal scenarios of discrimination and prejudice and, in the process, learn a great deal about themselves as well as others. The Institute is in the beginning stages of launching this effort.
- Intercultural Encounters Conference: A biennial event held during fall and winter quarters and co-sponsored with the Institute of International Studies and Programs. This conference offers an opportunity for students, interns, staff, faculty, and community representatives to explore intercultural topics in an academic setting.
- Community Outreach Program: Individually tailored presentations of interactive education for high schools and other community organizations on issues related to the work of the Institute. This effort is carried out primarily by student-interns.
- Research, Publications, and Administration: The Institute collaborates, advises, conducts, and disseminates research and information on issues of diversity and multiculturalism locally as well as nationally.

Minority Scholars Development Program

Shortly after the last accreditation self study, the Committee of Institutional Cooperation (CIC) Panel on Increased Access of Minorities to Graduate Study reviewed the success of member institutions in identifying, recruiting, and enrolling minority graduate students. In reviewing the success of students enrolled in graduate programs, it seemed that students from undergraduate institutions with large minority populations experienced difficulty in adjusting to the environment of a graduate institution. The panel developed several strategies to publicize the fellowship program and, also to identify and recruit minority students for admission to graduate school.

Subsequently, a proposal was presented to the Panel which outlined an intervention, the Summer Research Opportunity Program (SROP). The members of the Panel proposed to provide six minority undergraduates with the opportunity to participate as members of

faculty research projects at their respective universities. The goals of the program are: (a) to improve the quality of the students' undergraduate academic program; (b) to enhance the likelihood that participants will complete the bachelors degree; and (c) to attract more and better prepared minority students to graduate school.

At the University of Minnesota, the summer research program for minority students was named the SuperValu Minority Scholars Development Program (MSDP) to reflect the financial commitment made by SuperValu, Inc. through the Minnesota Campaign. As the only research university in the state, the University has the faculty and resources to provide a variety of research opportunities for minority students across disciplines. Minority undergraduates at the Duluth, Morris and Twin Cities campuses of the University of Minnesota, Carleton College, Macalester College, and St. Olaf College have been invited to participate. Students who have completed 75 credits or 54 semester hours with a cumulative grade point average of 2.8 or better are invited to complete an application.

In the first six years that the University of Minnesota offered the Minority Scholars Development Program, 121 minority students have participated. Thirteen of the 121 students have participated for two summers and one student participated for three summers. There have been 49 African American, 20 American Indian, 35 Asian American, and 17 Chicano/Latino/Hispanic students that have participated. Of the 121 participants, 65 have graduated (21 African American, 14 American Indian, 22 Asian American, and eight Chicano/Latino/Hispanic) and 51 students are still enrolled (25 African American, four American Indian, 13 Asian American, and 9 Chicano/Latino/Hispanic). Of the 65 (54% of all participants) student who have completed baccalaureate degrees, 12 (20%) have enrolled in Master's degree programs, seven (11%) are pursuing the doctorate, six (9%) are enrolled in Medical School, three (5%) are enrolled in Law School, 11 (17%) are working in areas related to their majors, and the status of 25 (38%) is unknown. Twenty-two of the 29 students (76%) enrolled in graduate or professional school are enrolled at the University of Minnesota.

Proposed Community of Scholars Program

The Proposed Community of Scholars Program is designed to meet the identified needs of many of the University of Minnesota's graduate and professional students of color. By providing students the opportunity to work together as scholars and to work with faculty mentors to prepare for a professional symposium, the Community of Scholars Program will help create a group of students from across the University who provide each other support as they challenge each other academically.

The program has three major goals: (a) increase connections among students and faculty across disciplines and departments, with these connections based on the participants' scholarly work; (b) provide additional mentoring relationships, both with peers and with faculty members; and (c) support professional development activities, as students prepare and present papers at a symposium sponsored by the University. Each of these areas has been identified as a need by graduate and professional students of color, and this program is a first step toward meeting these needs.

CHAPTER XI

USER FRIENDLINESS¹

The user-friendliness strategic area is one of two enabling goals originally presented as part of University 2000. An earlier report, *Final Report of the Task Force on the Undergraduate Student Experience* (July 1984), also suggested the need to improve the "user friendliness" of the institutional environment, especially in the quality of student services provided to undergraduates. The report included two key recommendations: "University administrators and personnel should strive to make routine interactions with undergraduates as easy and efficient as possible" and "University and college administrators should establish and communicate clear performance standards for student contact personnel that emphasize concern, congeniality, quality, and consistency in student services." Forty-two specific action steps were proposed to make the campus more user friendly.

University 2000's user-friendliness strategic area focuses on building an environment that is inclusive, supportive, and participatory; on creating and maintaining a humane and physically appropriate environment in which all members of the academic community can thrive and work to their fullest potential; on a culture change whereby bureaucracy and indifference give way to a user-friendly approach to program and service delivery. More specifically, U2000 states that the University will establish a customer-oriented approach to program and service delivery, with measures of productivity and customer service standards, requiring accountability for the quality, value, and cost of the services its units provide; provide state-of-the-art technology to upgrade registration, admissions, information processing, financial aid processing, academic advising, and review of registration status; review structures, policies, and procedures that needlessly drive up operating costs, waste time, or disrupt the scholarly environment of faculty, students, and staff; eliminate low value-added activities and redirect that effort and savings toward education; and decrease functional fragmentation and redundancy when appropriate. This chapter is a description and discussion of several of the more visible and campus-wide initiatives to enhance this especially problematic concern about the Twin Cities campus of the University of Minnesota. Although not easily described or captured in a written report, a casual walk through campus today would convey a much different and more welcoming perspective than site visitors encountered ten years ago.

Task Force on User Friendliness

As part of the implementation of the user-friendliness strategic area, the Senate Consultative Committee constituted a Task Force on User Friendliness and gave it a three-fold charge:

- To operationally define the major elements of user friendliness at the University of Minnesota.
- To describe the strengths and weaknesses of user friendliness on the Twin Cities campus, with special focus on the problems that impede user friendliness as they affect the University's consumer, including students, staff, and faculty.
- To suggest one or more solutions to each of the problems defined above.

¹ <http://www.opa.pres.umn.edu/specproj/accred/user.htm>

Membership of the Task Force was deliberately drawn from a wide variety of groups and constituencies. Representation was sought from the graduate and undergraduate student governance organizations, from the representative councils and committees for civil service employees, professional and academic employees, the three unions represented on campus, administrative staff, and faculty.

The *Final Report of the Task Force on User-Friendliness*, submitted in June 1994, identified improvements needed in each of three critical areas identified by the Task Force: facilitating students' academic progress, enhancing human resources and information systems; and improving the physical plant and campus transportation. Illustrative improvements in each of the three areas are as follows:

- Student expectations for course information
- Common office hours on the Twin Cities campus
- User-friendliness refund policy
- Consolidation of financial holds
- Parking for prospective students
- Customer service cards
- Training for management that is based on creating a service-oriented structure
- Regular feedback to management and staff on service performance
- Flexibility maintained in the workplace
- Information that is readily available in many forms
- Continual review of administrative forms and procedures
- An environment for work that is safe and functional for everyone
- Critical need for improved directional information
- Need to establish a clear vision for transit services
- Improving lounge and gathering space in buildings on campus

Institutional-Level Critical Measures²

Specific questions about user friendliness are being included in the various surveys that are being designed during 1995-96 as part of the development of a set of institutional-level critical measures. One additional critical measure currently under development focuses on customer service/streamlining of operations, particularly the efficiency and effectiveness of institutional operations, and how the institution assists our many customers in achieving their goals. For the purposes of this measure, customer service and streamlining were defined initially as follows:

Customers are the University's students, faculty, staff, and the general public of the state.

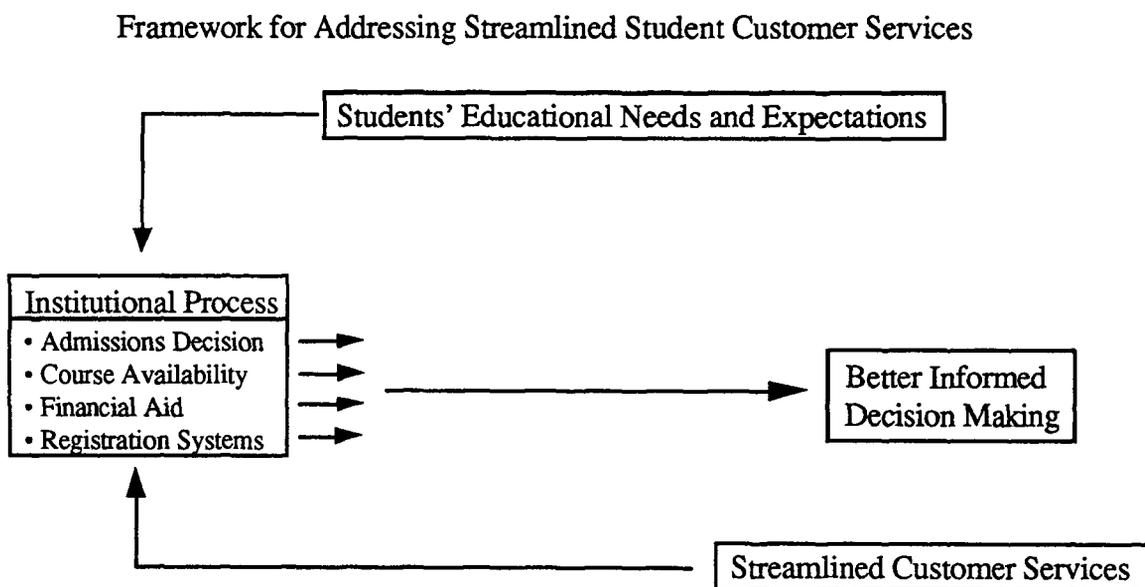
Customer service is about making the University's resources available to its many constituencies in a way that is responsive to their needs; good customer service, i.e., customer satisfaction, is assumed to result from the use of efficient and effective processes for providing services, and/or from the respectful manner in which services are provided on an interpersonal level (whether or not the process is efficient).

Streamlining is about simplifying the processes through which information, programs, or resources are made available, and/or through other ways in which the University accomplishes its mission, so as to increase their efficiency, their effectiveness or both; streamlining is assumed to have at least two kinds of outcomes: greater efficiency and potential cost savings and better service to customers.

²<http://www.opa.pres.umn.edu/specproj/critmeas/>

As is true in any complex bureaucracy that has evolved in a decentralized fashion over a long period of time, there are clearly institutional procedures that remain as "required" long after the purpose for which they were required has evaporated. In addition, the culture and values of an organization affect the way that services are provided to people; and unless customer service is an institutional value, the quality of service depends entirely upon the values of individuals. Students frequently complain about "red tape" and "student run-around," and there are parallel examples that affect faculty and staff. Although in recent years considerable efforts in the name of Total Quality Management/Continuous Quality Improvement have been devoted to institutional improvement, these efforts have not concentrated on the identification of core measures or on the mapping of the processes that are in need or reengineering. Subsequent discussions within the University commentary occurred during fall 1995 have been used to focus this measurement category on students, and to highlight measures that address admission, course access, registration, and financial aid. Figure 21 below suggests the tentative framework to be used in addressing streamlined student customer service.

Figure 21



Although some to user-friendliness issues have been discussed in each of the four chapters dealing with institutional outcomes, the Advisory Committee decided to describe and comment here on several broadly based user friendliness initiatives that cut across institutional outcome areas, and then to identify a number of critical issues affecting this strategic area as part of the overall U2000 strategic planning process.

Simplified Registration and Course Information

One of the most significant "core processes" that affect both students and faculty is the ease and efficiency with which the institution enables students to register for courses and supports faculty efforts to help students make informed educational choices. This section briefly describes recent user friendliness enhancements, but words alone are inadequate to convey how our system operates. Interested readers are encouraged to view aspects of the system by accessing the Registrar's Home Page³.

³ <http://www.umn.edu/registrar/>

The University of Minnesota recently has moved quickly in developing processes and computer support systems to enable students to register without interacting directly and in person with the Office of the Registrar (OTR). Over half of Twin Cities campus students used computer self-registration for fall quarter 1995. Initial self-registration, which generates the student's first fee statement, was used by 51 percent of the students. Any self-registration, defined by the OTR as registration that generates any subsequent fee statements, was used by 61 percent of students. Table 51 below indicates relevant statistics by collegiate units.

Nursing, General College, and Pharmacy led the way with 80-plus percent of their students using any self-registration⁴. Self-registration is available on the Student Access System on the Administrative Information Services (AIS) Public Access Information Menu.

Table 51
Students' Use of Computer Self-Registration for Fall Quarter 1995

Unit	Total Students (minus desk) ^a	Initial self-reg	% Initial self-reg	Any self-reg	% Any self-reg
Agricultural, Food, and Environmental Sciences	995	519	54%	597	63%
Architecture and Landscape Architecture	80	32	40%	45	56%
Biological Sciences	502	243	48%	2948	59%
Dental Hygiene	88	57	65%	63	72%
Education and Human Development	1,262	520	41%	622	49%
General College	1,516	1,161	77%	1,237	82%
Graduate School	7,027	2,365	46%	2,941	56%
Human Ecology	881	343	39%	410	47%
Institute of Technology	4,229	2,376	56%	2,864	68%
Liberal Arts	14,011	6,759	48%	8,276	59%
Management	878	574	65%	686	78%
Medical Technology	86	31	36%	41	48%
Mortuary Science	69	5	7%	6	9%
Natural Resources	628	330	53%	371	59%
Nursing	230	188	82%	198	86%
Occupational Therapy	82	33	40%	32	41%
Pharmacy	284	215	76%	229	81%
Physical Therapy	60	20	33%	22	37%
Public Health	253	114	45%	145	57%
University College	159	64	40%	82	52%
Total	33,280	16,849	51%	20,167	61%

^aLaw School, Medical School, and Dentistry and not included in the table, because they use "desk registrations," that is, registration where the students do not interact directly with the registration system or its staff. Students in these schools tell staff in their schools what courses they wish to take, and the information is forwarded to OTR; OTR staff process the registrations and send the fee statements back to the school. Most MBA students also register through desk registration, as do new Pharmacy students, students in the Global Campus program, and others.

⁴ <http://www.umn.edu/registrar/SELFREGISTRATION/INSTRUCTIONS.HTM>

The Office of the Registrar WebSite⁵

Starting in June 1995, the Office of the Registrar offered a World Wide Web home page as a way to present information about office services and courses to students, faculty and staff in a totally user-friendly manner. Students can learn everything they need to know to make good decisions about courses prior to registration, including course offerings⁶, teaching styles of the instructors, work load, and exams and papers. Additionally, they can access instructor and departmental home pages, building locations and services, liberal education requirements, course availability⁷ and textbooks required⁸ for their courses including location and price.

Additional World Wide Web interactive features bring information to students that they have never had access to before. For example, a student can find courses based on multiple criteria (such as day or time a course meets, building, which requirements a course meets). A student can calculate a prospective GPA⁹, find final exam times, and display diploma plaques. Another interactive tool allows students to see the financial importance of graduating in four years. A student can even electronically build a tentative course schedule that can be saved for review with an advisor.

This technology has enabled the institution to provide user-friendly information to students in a timely and easily understandable manner. It breaks down this huge institution into manageable pieces that students can assimilate and allows the Registrar's Office to be open 24 hours a day. The key to the efforts has been partnering with other departments to combine information with that maintained in other locations, such as CEE, the bookstore, academic departments, advisors, colleges, and career offices to bring students the information they need to be successful. A current project will use World Wide Web technology to allow actual registration, and will work on interactive tools for students to use to assess their progress toward their degree objectives. Students or advisers at other institutions can check to see which courses would transfer to the University, and which requirements they would meet from their home institutions.

The Office of the Registrar WebSite includes the following specific elements:

- The interactive course planner is a feature which allows students to mark courses they are interested in taking as they peruse the *Class Schedule and Course Guide*. When they are through choosing courses, they can view all courses selected in their planners as they make final decisions.
- Each course listed in the *Class Schedule and Course Guide* has links to each other, in addition to links to section status reports, the bookstore, the department home page, major requirements, building maps, and in most cases, the name of the instructor and a link to the staff directory.
- The section status reports are linked to every class, giving students information such as class size and number of students currently registered prior to registration.

⁵ <http://www.umn.edu/registrar>

⁶ <http://www.umn.edu/registrar/GUIDE/HTM>

⁷ <http://www.umn.edu/registrar/SCHEDULE.HTM>

⁸ <http://www.bookstore.umn.edu/>

⁹ <http://www.umn.edu/registrar/GPA.HTM>

- Each class is linked to the bookstore, which provides a list of the textbooks required for the course and the cost.
- Building locator maps, which are linked to each course and other informational sites, give students the exact location of a building.
- The staff directory lists the instructor's name, e-mail address, and office location, with a link to the building map.
- The restoration queue computer takes the confusion out of queues. The student enters his or her name and class standing, and the computer gives the exact day and time of registration.
- Students can use the graduation computer to get tentative graduation dates. The graduation computer asks for the total number of credits taken and the average number the student wishes to take per quarter. The computer gives the student an expected graduation date, as well as financial incentives for taking additional credits.
- Students who would like to raise their Grade Point Averages can use the GPA computer, which asks for the number of credits completed, current GPA, and desired GPA. The computer will list the number of credits with a 4.0 grade (or lower) needed to raise the GPA to the desired level.
- The site contains on-line forms so students can submit degree and other applications 24 hours a day through the web.
- This site contains everything a student needs to know about the services and information provided by the Office of the Registrar.

Course Guide

The Course Guide, now produced by the Office of the Registrar and accessible on the World Wide Web, was initially operated through a cooperative effort of the Minnesota Student Association and the Office of the Senior Vice President for Academic Affairs. The Course Guide provides students with information beyond that contained in the quarterly class schedule, to assist them in the selection of courses. It was first produced fall quarter 1992 and included about 100 courses; the most recent guide for winter quarter 1996 included information on the following aspects of the course: instructor, general education requirement, course description, class time distribution (e.g., lecture, discussion, or active learning sessions), work load, grading elements, and/or exam format.

In an effort to understand the impact of the Course Guide on student registration behavior, the OTR surveyed 1,765 undergraduates during spring quarter 1995 to evaluate how students use the Course Guide. As the results in Table 52 below indicate, the Course Guide has affected students' perceptions of how they selected courses. Although a parallel analysis of actual course registrations has not occurred, in the aggregate, it would be difficult to connect changes in registrations in particular courses with students use of the Course Guide.

Table 52

Effects of the Course Guide on Student Registration

Question Response	<u>All Respondents</u> %	<u>Lower Division</u> %	<u>Upper Division</u> %
Time spent reviewing materials			
No time	8	4	10
1 to 10 minutes	18	13	22
11 to 20 minutes	24	21	29
21 to 40 minutes	12	16	9
41 to 60 minutes	12	16	9
over 60 minutes	11	15	7
Helpfulness in choosing courses			
Not helpful	7	3	9
Slightly helpful	9	8	9
Somewhat helpful	22	21	22
Helpful	43	47	40
Very helpful	20	21	19
Effects on registration for spring 1995 courses			
Registered for a class I otherwise wouldn't have taken because of the Course Guide	36	43	30
Did not register for a class I was planning to take because of the Course Guide	19	21	17
Changed the instructor I was planning to take because of the course Guide	8	7	9
Did not alter my behavior	48	41	53

Interactive Voice Response System

A vendor was selected in fall 1995 for the new Interactive Voice Response (IVR) System, available to all campuses, that provides customer-friendly, touch-tone telephone access to student and other services.

Initial applications, to become available in early 1996, included: grade reporting (day school and CEE); a replacement for the Registration Status Notice; class section status reporting; student information (e.g., holds); financial aid application status, holds, and payments; STARS balances and payments; student loan collection status; and Human Resource's employee verification. Additional applications will be evaluated on a cost-benefit basis and added as resources permit. These additions could include: admissions application status, inquiry, cancel/add classes, order transcripts, job postings, employee benefits open enrollment, and employee benefits information inquiry.

The initial cost of the 144-line system was approximately \$300,000; ongoing operational costs will be paid by units using the system. Any University unit wishing to use the system may work with Administrative Information Services (AIS) to develop other applications.

Student Systems Replacement Project

The University of Minnesota currently is entering the second phase of a major project to replace outmoded student systems. By the end of this phase, the project team will recommend a strategy for updating the components of the University's student systems, including admissions, student records, registration, and financial aid. The existing systems do not support semesters; they do not handle the change from 1999 to the year 2000; they are not user-friendly; and they are expensive to maintain and use. The existing systems were built in the 1970s and early 1980s and, because of the technology available at that time, lack the flexibility and the reporting capabilities demanded by today's users. With today's technology, day school and CEE/UC registration systems, for example, can be integrated into one system while still supporting the needs of the student, the colleges, and the departments.

During the first phase a project plan and a communication plan were prepared, and a project management committee was established. Policies and procedures that complicate student systems and make life difficult for students, faculty, and staff were identified and forwarded to central administration (e.g., common calendar, common grading system). Existing system documentation was reviewed and found useful enough to help in upcoming project phases. In the second phase, through June 1996, the project team will assess University needs in more detail and identify potential changes in policies and practices. The project team will also investigate several development options, including purchase of a packaged system, rebuilding the system in house, and rebuilding selected parts of the system. The selected approach will be closely linked to system planning activities in the human resources and financial areas and would respond to the needs of the semester conversion planning process. An aggressive approach to changes in policy and procedure will greatly enhance services, with lower onetime cost to the institution and with potential recurring cost savings.

U Card

The University of Minnesota, Twin Cities campus, initiated in the spring of 1995 an identification process, referred to as the "U Card," that has revolutionized and greatly simplified the interactions between students, faculty and staff and those campus offices that provide a wide range of services. Every member of the University of Minnesota community -- student, faculty, or staff -- gets a U Card. The U Card is a photo ID but also serves as a key to campus services and buildings, a debit card for making campus purchases, and, if the individual chooses, a student's bank card and long-distance calling card. The students receive their U Card at New Student Orientation. The U Card makes life easier and more convenient because it is a campus photo ID; it gives students access to University libraries to check out books; it shows a student's current student status, so he/she can get into Recreational Sports buildings to use the pools, fitness centers, etc., without carrying proof that student services fees have been paid, and allows students who live in a residence hall to eat at any residence hall dining room. The U Card will become a complete financial card, so that it will function as a debit card for an optional U Card student checking account.

A presentation at the December 1995 meeting of the Board of Regents indicated that the implementation of the U Card has had a significant impact on the user-friendly strategic area. The original mission of the U Card Office was "to support the U2000 initiative and significantly contribute to a more user-friendly environment for students, faculty, and staff by providing a high-quality, single card system that allows efficient access to all

card-related services throughout the University of Minnesota.” The short-term implementation strategy had three components: replace old ID card, establish revenue streams, and add applications (services). The following timeline indicates the major milestones during the past two years.

	<u>Milestones</u>	<u>Cards Issued per Month</u>
March 1995	First U Card issued	1,554 Pilot
March-April 1995	U Card pilot issuance	227 Pilot (April)
May 1995		2,659 Pilot
June 1995		2,316
July 1995	U Card Office opened	3,175
August 1995		8,204
September 1995		10,703
October 1995		4,013
November 1995		1,794
June 1996		20,993 (projected)

U Cards allow access to University Libraries, Bursar’s Office services, residence hall dining facilities, and Recreational Sports facilities. Building access is available to six buildings (more than 1,000 people work in these buildings), four buildings are in the process of setting up card readers, and six additional buildings are scheduled for future U Card access. Minneapolis Student Unions, housed in Coffman Memorial Union, is currently using the U Card for staff time and attendance records.

The estimated revenue streams for bank commission are \$377,227 for FY95 through FY97. Similar calling card commissions during the same time frame are projected to be \$713,463.

Future uses include more campus vending and copy machines and restaurants, athletic concessions, Bursar’s office (fines and holds), U Bookstores (small-value purchases), public parking, printing services (course notes, Copies on Campus), residence hall guest dining and video games, and Student Unions (games, stores, restaurants).

Campus Safety and Security

As concerns about safety and security have increased, especially for students on campuses in large metropolitan areas, institutions have responded by increasing attention to issues of campus safety. The institution’s concerns for campus safety and security are well articulated in the following comment that appears on the brochure *Safety and Security on Campus: 1995-96, Twin Cities Campus*: “We must strive to be a community that is as free from safety and security problems as personal and institutional actions can make it. The University of Minnesota is committed to providing a safe and secure environment for its students, staff, faculty, and visitors.”

Minnesota and the Twin Cities remain low in crimes per capita compared with other U.S. cities. Over the past several years, the University police department¹⁰ has focused its efforts on prevention and early notification. It has increased its number of foot patrols and has relied more on uniformed student security monitors. The total number of arrests per number of crimes reported on campus has increased over the past three years, as the statistics in Table 53 below indicate.

¹⁰ <http://www.umn.edu/umpolice>

Table 53

Crime Statistics for the Twin Cities Campus^a

	Year		
	1992	1993	1994
Total number of crimes reported	2,098	2,019	2,070
Total number of arrests	357	379	446
Violent crimes reported			
Murder	0	0	0
Sex offenses (forcible and nonforcible)	7	32	46
Robbery	3	7	7
Aggravated assault	13	4	5
Nonviolent crime reported			
Burglary	84	100	78
Motor vehicle theft	16	4	9
Violations			
Of the total number of arrests, secondary charges were filed as followed:			
Liquor law violations	124	193	221
Drug abuse violations	12	12	17
Weapons possessions	3	2	3
Campus surroundings ^b			
Murder	0	1	0
Sex offenses (forcible and nonforcible)	22	8	20
Robbery	40	24	49
Aggravated assault	41	27	38
Burglary	336	243	128
Motor vehicle theft	165	117	125

^aAdditional statistics reflect crime in the off-campus areas surrounding the University most frequented by students, staff, and faculty.

^bThe areas fall under the Minneapolis and St. Paul police departments' jurisdiction.

The University police department is responsible for law enforcement, security, and emergency response on the University's Twin Cities campus. The department seeks to maintain a staff of 40 full-time fully empowered police officers. It has access to national crime databases and works closely with federal, state, and local law enforcement agencies including the Minneapolis and St. Paul police departments. Officers are on duty 24 hours a day, seven days a week year-round and provide police help in investigations, medical emergencies, fires, traffic accidents, crime reports, and the enforcement of laws regulating the use of alcohol, weapons, and controlled substances. It is University policy to encourage the reporting of all crimes committed on campus and to assist victims of those crimes. Weekly campus crime reports¹¹ are printed in *The Minnesota Daily* campus newspaper.

¹¹ <http://www.umn.edu/umpolice/crimstat.htm>

The University police department emphasizes crime prevention by minimizing crime opportunities and encouraging students and employees to be responsible for their own and others' security. The police department works closely with the University's Program Against Sexual Violence. The Program Against Sexual Violence conducts extensive education and prevention programs on such topics as sexual exploitation, sexual assault, child sexual abuse, protection and street safety, sex-role stereotyping, date/acquaintance rape, and historical perspectives relating to sexual violence. A one-hour program reaches about 4,000 entering freshmen and their parents each fall. University police officers receive sexual violence training and work as volunteer counselors with the Program Against Sexual Violence. The University police department employs between 50 and 60 students each quarter as security monitors and escorts. Uniformed student security monitors routinely inspect exterior lighting, campus telephones, and the operation of residence hall door and window locks. Student escorts¹² are available to all campus travelers. The escort service is free and available 24 hours a day, seven days a week year-round. University Transit Services offers a free evening residence hall shuttle bus service that runs every day during the school year. It stops at each campus residence hall, main classroom buildings, and study centers.

Most campus facilities are accessible during normal business hours Monday through Friday, and for limited hours on weekends. Outside doors of newer University buildings are equipped with electronic card access control systems that keep a record of entrances and exits. Older buildings are being retrofitted with such systems. More than 200 campus telephones are available for emergency, medical, and service-related calls.

Since 1988, Parking Services has invested more than \$3.9 million in ramp, garage, and lot safety improvements. Improvements include brighter lighting, more telephones, and state-of-the-art security systems. The majority of the campus ramps and garages have closed circuit television monitors. Ramps and surface lots are routinely patrolled by University police officers and student security monitors.

Reception areas in residence halls are open to the public on weekdays during regular business hours. Living areas, however, remain locked 24 hours a day. Guests and visitors may gain access to student rooms only when escorted by a resident.

All sorority and fraternity houses¹³ are located off campus and therefore fall under the jurisdiction of the Minneapolis or St. Paul police departments. The University police department offers sororities and fraternities crime prevention and self-defense seminars and helps plan safety and security for large-scale events.

In 1990, the University of Minnesota commissioned a task force regarding sexual violence on the campus. The task force recommended greater attention to the issues of prevention and to services regarding sexual assault. The Program Against Sexual Violence (formerly known as the Sexual Violence Program) was moved out of University Counseling and Consulting Services¹⁴ and given status to an independent unit reporting to the Office of the Vice President for Student Affairs. A director was hired in January 1991, and developed a service management plan that results in four functional areas: Community Relations and Outreach, Education Services, Advocacy Services, and Policy and University-wide (including coordinate campuses) training. The Program Against

¹² <http://www.tc.umn.edu/nlhome/g127/escort/>

¹³ <http://www.umn.edu/ucbp/living.htm#sorority>

¹⁴ <http://www.uccs.umn.edu/uccswww/uccs.html>

Sexual Assault has received nation-wide attention for its proactive partnerships with the University Police Department, Boynton Health Service, University Counseling and Consulting Services and the University Hospital. The Program Against Sexual Violence is the only college program in the nation to have an agreement with a campus police department for police transportation of both sexual violence survivor and program advocate to the emergency room for the victim's medical treatment and to court for orders of protection. The Program Against Sexual Violence provides a 24 hour a day advocacy service to the campus. In 1994-95, 58 volunteer advocates contributed more than 15,000 hours of service which represents more than \$88,000 of programming staff support (based on federal standards of \$12.13 per hour for volunteer service).

The Campus Safety Improvement Project began two years ago when the Minnesota Women's Center and the Program Against Sexual Violence formed a partnership to address ongoing campus safety issues. To determine the extent of concerns about safety at the University, surveys were sent to residence halls, staff associations, student boards, and other groups and organizations. From the nearly 1,000 responses, it became clear that many students, staff, and faculty, -- especially women -- limit their time and activities on campus because they do not feel safe.

Two-thirds of the respondents in the survey noted they have taken special precautions to protect their safety on campus. They described precautions ranging from walking with someone else, using the escort service, and staying in well-lighted areas to working in locked offices, wearing an alarm or whistle, and carrying mace or a weapon.

University departments concluded they had a responsibility to take action since fear had become a barrier to participation in academics, campus activities, and social opportunities. In the survey, students and faculty noted they do not take or teach classes at night because of safety concerns. Staff members reported that they avoid working late or on weekends. A number of students said they do not go to the library at night and do not participate in evening activities on campus. Some staff members said they would rather park illegally at night and risk a ticket than park in a lot or ramp and walk across campus.

After studying the results of the survey, administrators and staff in the Office of Student Development and Athletics, College of Architecture and Landscape Architecture, University Police, and the Office for Health and Safety formed a partnership to address safety problems at the University.

The Office for Health and Safety contributed funding to install 20 "Code Blue phones," lighted emergency telephones on the St. Paul and Minneapolis campuses. Plans were also developed for a comprehensive audit of the campuses to identify specific factors that cause concern for safety, such as lighting, signage, sight lines, and sense of isolation, and general locations of risk.

A safety audit was designed, and plans were developed to survey each of the seven campus zones. A pilot audit of the Law School was conducted in April 1995. An active group of women law students previously had raised specific safety concerns. Law School students, the group pointed out, traditionally study long into the night at the law library. The group concluded that women law students are not getting the education they need. Some of the problems at the Law School turned out to involve parking and maintenance issues, and solutions have been proposed with the Campus Escort Service and Parking Services. Following the pilot audit, a full-fledged study of the West Bank was planned. Plans are underway to conduct a study of the health sciences complex during the summer, and the central East Bank zones will be audited in the fall of 1995. Audits will be

continued during winter and spring quarters of 1996, with a goal of completing all zones within the next year. Many of the recommended improvements are likely to involve significant lighting and even structural alterations. These will be incorporated into the University's Master Planning process and will be made along with other building projects. In some cases, however, safety improvements can be made through scheduling changes, better communication, and increased or modified use of existing services.

Total Quality Management/Continuous Quality Improvement

Starting around 1989, the University of Minnesota began to embrace some of the philosophy and strategies of Total Quality Management/Continuous Quality Improvement (TQM/CQI). The initial efforts began as a result of personal interests on the part of some faculty and administrators. Faculty members were familiar with CQI and the potential for using these techniques to help transform the work processes and improve the organization and the institutional culture. Although they wanted to teach this material in their degree and certificate programs, they also encouraged the University to utilize CQI internally. The Vice President for Finance and Operations believed that CQI had the potential for use within the institution, and had the support of President Hasselmo to move forward. The untimely death of the initial administrative champion for CQI considerably slowed the CQI initiatives. Subsequently, a second effort, housed in Academic Affairs, was initiated in 1991 and featured the use of external trainers for President Hasselmo and his cabinet, the hiring of a coordinator, and the appointment of the CQI steering committee. CQI efforts continued as of fall 1995, in part because of the continuing support from various external constituency groups, particularly the local business community, and the belief within the institution that CQI can make a difference in the University's efforts at academic renewal and organizational improvement. CQI practitioners continue to be very interested in helping the institution embrace CQI strategies for institutional improvements.

A more detailed analysis of the institution's CQI efforts within the last five years suggests that the institution, as has been true in other similar institutions, has not embraced wholeheartedly the philosophy and strategies of CQI. In the publication *25 Snapshots of a Movement: Profiles of Campuses Implementing CQI*, published by the AAHE Continuous Quality Improvement Project, the University of Minnesota provided the following overview of key success factors and obstacles in implementing CQI:

Success factors

- A continuing strong verbal commitment from the President to the use of CQI as a driving force for change initiatives.
- An interest within the local and state business community in the University's successful implementation of CQI.
- Enthusiastic responses to training and consultative support offered by the Finance and Operations office, despite limited staffing and budget.
- Increased awareness and interest as a result of the training and other outreach or public relations activities.

- A commitment from the vice president and associate vice president for finance and operations to recharter and strengthen CQI, including providing adequate staffing and financial support.
- A belief among project team members that they are making a significant difference -- creating change.
- Observations of real empowerment among persons involved in CQI teams.
- Potential for process improvement and people committed to making a difference.

Obstacles

- Although the top administration advocate CQI, their true commitment is unclear.
- Although a CQI coordinator was hired, the person also was assigned to other projects and activities.
- Skepticism, particularly among faculty members, runs high. They are not convinced of the value or wisdom of taking what they view as an industrial concept and attempting to translate it within an academic setting.
- In some sectors of the institution, the University cannot use such words as "quality," "customer," or "client."
- There is a distrust that CQI may be yet another guise for cost-cutting and staff reductions.
- The initiative has been inadequately staffed and funded.
- For a couple of years, the University had an "administrative paradox" in that the coordinator of the Quality Steering Committee reported to Academic Affairs, whereas the vice president for finance and operations, who chaired the committee, was being held accountable for its actions.
- The University has never really reached and obtained commitment from a key internal stakeholder group -- the deans of the academic units.
- In using the pilot project approach to stimulate interest and visibility, some people began to mistake CQI for a "project" rather than an ongoing commitment to Continuous Quality Improvement.
- The initiative never became a part of the overall institutional strategy.
- Due to staff and budget limitations, the University has been unable to provide adequate visibility to the good projects and teams and the positive results they have achieved.
- Once the University began to offer training and consultative support, the University's limited staff and budget did not allow the institution to keep up with the demands.
- Many questions raised about CQI implementation within an institution as large and complex as the University are not readily answered by the literature.

One aspect of the institution's quality improvement efforts has been centrally funded projects. The three quality improvement teams formed during 1991-92 completed their work in 1992, and served as a model for funding of additional projects during the next year. The three cross-functional projects addressed registration improvements, prospective student relationships, and intra-campus mail efficiencies. The President's Cabinet approved in October 1992 three additional quality improvement projects as recommended by the Quality Improvement Steering Committee, and three additional projects were named in January 1993. These projects received training, consultation, and staff support to implement structured quality improvement. Three of the improvement projects are briefly described below.

Continuous Quality Improvement in Undergraduate Advising

Regular faculty in the Department of Food Science and Nutrition have responsibility for advising students on a variety of University and departmental procedures, but have no formal training in how to do this. The goal of this project was to analyze the student advising process, share faculty and staff perspectives on advising, and improve the total program. It led to more consistent and uniformly high quality advising for students, and greater faculty satisfaction with the process.

Department-Wide Teaching Evaluation in Physics and Astronomy

The goal of this projects was to develop a methodology for evaluating teaching on a department-wide basis. The project helped to improve teaching in individual courses and to achieve consistent, high quality instruction and ancillary service to students across the entire spectrum of departmental offerings.

Direct Deposit of Employee Reimbursements

The goal of this project was to develop direct deposit capabilities for flexible benefits, travel, and other miscellaneous reimbursements. Approximately 61 percent of University employees use direct deposit for payroll checks, but checks for these other reimbursements must be issued, signed and mailed to employees. This project provided a convenience to staff, and involved considerable University savings in checks, envelopes, bank processing fees, postage, and handling time.

Recent Matching Fund Projects

In the most recent matching fund process, financial grants totaling approximately \$200,000 were awarded to 12 units to implement specific University of Minnesota Quality projects are as follows:

- Center for Early Education: improvement in graduation rates, user friendliness, and diversity.
- Chicano/Latino Learning Resource Center: increasing graduation rates for Chicano/Latino undergraduates.
- College of Liberal Arts: increasing efficiency of academic advising scheduling.
- Continuing Education and Extension: student registration improvement; CEE market research study and task force on personal phone registration.

- Carlson School of Management: quality management approach to the freshman year experience.
- Education Student Affairs: college-wide improvement of student support services.
- Food Science and Nutrition: improving student personal and professional development.
- Human Ecology: improving first year experience in Human Ecology.
- Human Resources Development: continuous improvement process for the undergraduate/graduate student experience.
- Humphrey Institute of Public Affairs: redesigning career services to better serve the employer.
- Office of the Registrar: continuation/expansion of CQI efforts to improve student services in the Office of the Registrar.
- University of Minnesota, Crookston: redevelopment of computer program that integrates billing charges with the statement producing system.

CHAPTER XII

INSTITUTIONAL FINANCES¹

One reason for using the six strategic areas as the organizational structure of this self-study report is to illustrate the connections between planning, evaluation and budgeting at the University of Minnesota. The connection between the strategic areas and the budgeting process becomes clearer when the institution's strategic investments for fiscal years 1996 and 1997 are considered. The overarching concern relative to institutional finances is the long-term financial health of the institution, especially in view of the changing federal and state policies in the areas of funding of research, direct support to institutions, and financial aid policies. This chapter reviews several key financial issues that are not addressed more appropriately in another chapter.

Fundamental to the institution's continuing ability to achieve its mission is the availability of sufficient financial resources to support the University of Minnesota as a leading land-grant, research institution. Three central concerns were identified in the *University 2000 1995 Supplement*: (a) the provision of reasonable multi-year financial prospects that represent guidelines for operating and planning in light of the ambiguities regarding future state funding levels; (b) the need to recognize the importance of the relationship between state support and the University's tuition/financial aid posture, especially if the state reduces or freezes direct state subsidy and simultaneously relies more heavily on need-based financial aid; and (c) the implications of limited state support in terms of the necessity to increase the support of other public agencies and of the private sector. The institution's planning and budgeting procedures must reflect the best practices in promoting good stewardship. In particular, the University must more effectively consider the complete mix of funding opportunities available in making allocations of discretionary resources.

The central questions posed by the U2000 Strategic Planning Group are as follows: How can the institution attain stability and adequacy in long-range financing? How should the budget be developed to properly emphasize state funds in conjunction with tuition and other income? The Strategic Planning Group indicated that the institution should estimate the level of general state support for the institution as a whole over the next five years, and then to specify the support that will be allocated to major areas (units). To provide sufficient funds to maintain the University as a leading land-grant research university, tuition and outside funding must be sufficient to augment the state support. The Strategic Planning Group suggested that the President initiate the following actions: (a) provide financial guides in the next cycle of planning instructions; (b) charge the Chancellors/Provosts and Vice Presidents to analyze and present alternate major operating unit budget plans with mixed funding options to allow improved institutional funding discussions; (c) clarify the relationship of tuition/financial aid to the level of state support and market conditions; and (d) complete a careful evaluation of the merits of a Responsibility Center Management (RCM) system at the major unit level.

¹ <http://www.opa.umn.edu/specproj/accred/finance.htm>

Implications of Changes in Legislative Funding for the University of Minnesota

As is true in other states, the percentage of state funds allocated to public postsecondary education has decreased in the past decade, in part because of increased allocations to other high priority areas (e.g., corrections). The state funding figures from the Minnesota Department of Finance summarized in Table 54 below, suggest that state funding to the University of Minnesota has declined in recent years.

Table 54

Funding from the State of Minnesota for the University of Minnesota^a

Fiscal Year	Constant 1993 Dollars
1980	\$402,219,200
1981	\$358,792,400
1982	\$378,197,000
1983	\$376,141,300
1984	\$410,651,300
1985	\$408,054,400
1986	\$426,249,400
1987	\$486,102,400
1988	\$477,623,800
1989	\$473,809,400
1990	\$491,112,900
1991	\$482,720,500
1992	\$459,720,500
1993	\$432,082,000
1994	\$432,134,800
1995	\$436,292,200

^aSource: Minnesota Department of Finance

As a key provision in its 1991 omnibus education bill, the Minnesota Legislature created the Task Force on Postsecondary Funding, with eight members appointed by the Legislature and Governor and seven members designated by their positions in the higher education field. The group's charge was to develop an alternative funding formula for postsecondary education that would create incentives for quality education while maintaining access for students, and that could be funded within the projected constraints of the state budget in the coming decade. The state's investment is substantial, representing nearly 13 percent of total state general fund spending in the 1992-93 biennium.

The 1993 Final Report to the Governor and the Legislature outlined the following five state-wide objectives for higher education:

- Promote Democratic Values: To enhance Minnesota's quality of life by developing understanding and appreciation of a free and diverse society.
- Ensure Quality: To provide a level of excellence that is competitive on a national and international level, through high quality teaching, scholarship and learning in a broad range of arts and sciences, technical education and professional fields.

- **Foster Student Success:** To enable and encourage students to choose institutions and programs that are best suited to their talents, interests and abilities, and to provide an educational climate that supports students in pursuing their goals and aspirations.
- **Maintain Access:** To provide an opportunity for all Minnesotans, regardless of personal circumstances, to participate in higher education.
- **Enhance the Economy:** To assist the state in being competitive in the world market, and to prepare a highly skilled and adaptable workforce that meets Minnesota's opportunities and needs.

The Task Force submitted recommendations in seven categories:

Funding Formula

Higher education should be funded through a "base-plus" mechanism, including formula and non-formula components. The recommended formula component that maintains the core of the academic enterprise should recognize fixed and variable instructional costs as well as noninstructional costs. The funding mechanism should also provide for change items that may be requested by the systems in the areas of new initiatives and performance.

Operational

Base Budget. The state should recognize the importance the base budget plays in ensuring and sustaining academic quality and should protect that base through biennial adjustments for inflation. In the event of a budget shortfall, the state should fund as great a percentage of its obligation as possible and provide the systems with the necessary flexibility to create and manage their budgets. The systems, in turn, should set funding priorities in light of the recommended state objectives.

Tuition Policy. The state should make no changes in its comprehensive cost-related tuition policy, in order to maintain its historical commitment to access and to help ensure Minnesota's quality of life through strong participation.

Performance Criteria. The public postsecondary systems should develop explicit criteria to place campuses that are not performing well on probation.

Continuous Analysis. Implementation of the new funding mechanism should be accompanied by a process that provides for continuous analysis and refinement as well as a formal review after five years.

Related

Review of Mandates. The state should conduct a comprehensive review of the statutory mandates and executive and legislative reporting requirements that now affect higher education.

Reward Savings. The state should examine and adopt policies that encourage and reward families to save for the costs of their children's education. The policies should be subject to regular reviews and modifications.

An August 1995 report by the Citizens League has suggested a major change in funding for higher education in the State of Minnesota:

“Minnesota’s current practice of appropriating 90 percent of its general fund monies for higher education to the two large systems fails to reward innovation and efficiencies in delivery of higher education. The following recommendations propose a radical change in Minnesota’s approach to funding higher education. In this scheme, 60 percent of appropriated funds would go to students, who would be free to spend those funds at the Minnesota campuses the students believe provide the highest quality education. Increased emphasis would be placed on performance-based funding for the University of Minnesota and the Minnesota State Colleges and Universities System (MnSCU). Support for the state’s long-term economic growth would be enhanced through increased higher education opportunities for more Minnesotans and through direct appropriations to support research in sectors vital to the state’s economy.”

The committee based its deliberations on the following six assumptions about Minnesota’s financial future, and prepared recommendations in four areas (K-12 education, higher education, local governments, and long-term care of the elderly):

- The U.S. economy will grow more slowly than it has in the past two decades.
- Slow growth in the economy means slow growth in the revenue base for state expenditures. Assuming no changes are made in tax rates, the average annual increase in General Fund revenues over the previous year) is forecast to be 2.8 percent, compared with 5.4 percent in 1994 and 5.7 percent in 1995.
- While revenue growth is slowing dramatically, the demand for public services is increasing even more dramatically. That demand is driven largely by demographic forces, including the growth in K-12 and college enrollment and the huge increase in the population of elderly people.
- Even without the prospect of reduced federal aid, Minnesota’s fiscal gap -- the difference between anticipated expenditures and projected revenues -- is expected to reach \$800 million by the 2004-2005 biennium. The cumulative gap will reach \$2.5 billion by 2001.
- Federal aid to Minnesota will be reduced by \$88 million in 1996. In each year through 2002, federal aid will be reduced from the 1995 baseline, with the steepest reduction, \$438 million, occurring in 2000.
- The state does not have an easy target for budget reductions. Nearly 85 percent of the general fund budget is devoted to education, health and human services, and local government aid -- programs that most citizens view as high priorities for state government.

The recommendations in each of the four areas were based, in part, on the following five principles outlined in the 1993 Citizens League Report:

- Target public subsidies directly to people who are financially needy -- rather than spreading subsidy around randomly, or providing aid to institutions or units of government.
- Use competition to align institutional self-interest with the public interest. Give consumers choices so that suppliers must respond to their preferences.

- Allow prices of public services to reflect true costs, including the social cost of individual decisions.
- Meet more public responsibilities through communities in which people already have relationships of mutual obligation.
- Consider long-term economic growth to be one of the objectives of state spending.

The central recommendation is that the state appropriations process should shift from supporting existing public higher education systems to funding learning opportunities for students in a new 30-30-30-5-5 formula allocated as follows: 30 percent appropriations to systems; 30 percent for "lifetime learning grants" to all Minnesota students; 30 percent need-based for financial aid; 5 percent for research; and 5 percent to new higher education initiatives and technologies.

The content and tone of the Citizens League report are similar to those in a more recent report to the Governor, *An Agenda for Reform: Competition, Community, Concentration*, that suggested fundamental changes in the way that the state delivers taxpayers' services. They concluded that Minnesota cannot meet its responsibilities without sweeping reforms based on achieving results through competition, encouraging communities, and concentrating spending on people most in need.

Concerns were expressed that both the quality of and access to higher education could be in peril. The trends of intensifying competition for public resources and increasing reliance on private sources to finance higher education show no signs of abating. The fact that real tuition rates increased 41 percent at the University of Minnesota from 1984 to 1994, and 32 percent at state universities underscores that students now pay a greater share of education costs.

The report suggests that since the demand for postsecondary education is increasing at a time when the government is less able and the public is less willing to fund it, radical changes are needed to avoid a weak and unresponsive system with too many campuses delivering insufficient programs to fewer and fewer students. If traditional higher education does not provide what students need, then nontraditional providers will.

Among their 39 specific recommendations in the report, three were specifically about postsecondary education:

- Radically change the way state funds or higher education are appropriated by giving more to students and less to institutions. The current practice is to allocate 90 percent of the state's appropriation to institutions and 10 percent to students. They propose reserving 30 percent of appropriations for direct institutional support in the form of block grants to the two public higher education systems; placing 60 percent directly in the hands of citizens seeking education and training; and allocating 10 percent for basic and applied research and for statewide programs.
- Let governing boards set standards for institutions. They should articulate statewide goals, set both academic and management performance standards, and be able to exercise strong fiscal oversight and hold presidents accountable for their actions.
- Give college and university presidents more authority. Let them make and be accountable for management decisions affecting academic programs and financial operations, including the authority to set tuition rates and admissions standards.

Resource Allocation Guidelines

In a November 1995 presentation to the Board of Regents on resource allocation guidelines, five central financial strategic issues and trends were identified:

- State support for public higher education institutions will not increase in real terms
- Tuition levels will increase faster than the overall rate of inflation
- Federal support for research and education is likely to level off
- A significant proportion of professional schools at public institutions will become largely self-supporting
- Academic entrepreneurial activities will increase dramatically as critical revenue generators

The following eight resource allocation guidelines suggested the framework for the institution's operating budget for 1997: (a) retain and create high quality programs; (b) implement quality improvements systemwide; (c) ensure the University's national competitive position; (d) promote values of institution and long-term strategic directions of U2000; (e) ensure access; (f) enhance infrastructure; (g) advance redesign of administrative processes; and (h) continue reallocations.

Allocation to Six Strategic Areas

Table 55 below indicates the institution's overall proposed budget for 1996 and 1997 for total additional dollars allocated to each of the six strategic areas. Appendix L contains a list and description of specific strategic investments included in each of the six categories, and illustrates, in the broadest sense, the connections between planning and budgeting processes.

Table 55

Strategic Investments Categorized Under Strategic Directions of U2000 Fiscal Years 1996 and 1997

Strategic Area	Fiscal 1996	Fiscal 1997
Research	\$4,725,000	\$7,395,000
Graduate & Professional Education	\$1,660,000	\$1,410,000
Undergraduate Education	\$2,045,920	\$5,045,920
Outreach & Access	\$1,784,602	\$2,082,664
Diversity	\$319,800	\$576,050
Total Investments FY96 & FY97	\$17,569,322	\$18,774,634

For fiscal years 1996 and 1997, the University of Minnesota's biennial budget Partnership Proposal was linked to of the programmatic and financial plans of the University of Minnesota. The choices, decisions, and investment plans contained in the two-year budget framework, summarized in Table 56 below, was constructed to emphasize the following financial goals: (a) implementation of the academic programmatic investments and financial plans, consistent with the principles of University 2000 and based upon a responsibility shared by the state, students and the University; (b) balancing the University's operating budget for fiscal years 1996 and 1997; (c) avoiding a significant future structural imbalance through the use of one-time state resources; (d) careful programmatic and financial planning and programmatic flexibility to ensure that the University took actions to accommodate restructuring, as well as to position itself for fiscal years 1998 and 1999; and (e) delegation of financial accounting and strong stewardship of scarce resources.

Table 56
Updated Biennial Budget Partnership Proposal
Fiscal Years 1996 and 1997

	Operating Budget Plan FY 1996	Financial Plan FY 1997	Biennial
<u>Source of Financing</u>			
State Funds	\$29,746,000	\$31,010,000	\$60,756,000
Tuition Income	\$13,617,983	\$27,927,365	\$41,545,348
Tuition Base Reforecast ^a	(\$4,944,669)	(\$4,944,669)	(\$9,899,338)
Other Income	\$795,391	\$568,464	\$1,363,855
University Responsibility/Reallocations	\$25,499,221	\$32,641,081	\$58,140,302
Subtotal Resources	\$64,713,926	\$87,202,241	\$151,916,167
<u>Investments & Financial Needs</u>			
Maintain Current Performance Level	\$8,100,000	\$8,100,000	\$16,200,000
Compensation Pool/Programmatic Needs	\$22,914,558	\$37,900,092	\$60,814,650
Utilities & Bldg Maintenance Inflation	\$2,000,000	\$3,999,600	\$5,999,600
New Buildings Operations	\$1,912,000	\$4,884,000	\$6,796,000
Building Maintenance	\$3,900,000	\$7,350,000	\$11,250,000
Capital Debt	\$135,000	\$988,000	\$1,123,000
Investment U2000/1994 Supplement	\$7,085,000	\$2,315,000	\$9,400,000
Investment U2000 Critical Initiatives	\$9,731,000	\$24,382,000	\$34,113,000
Additional Financial Pressures	\$3,674,888	\$2,545,029	\$6,219,917
Grand Total	\$59,452,446	\$92,463,721	\$151,916,167
Difference Resources to Investments	\$5,261,480	(\$5,261,480)	\$0

^aNote: Tuition shortfall averaged over two years.

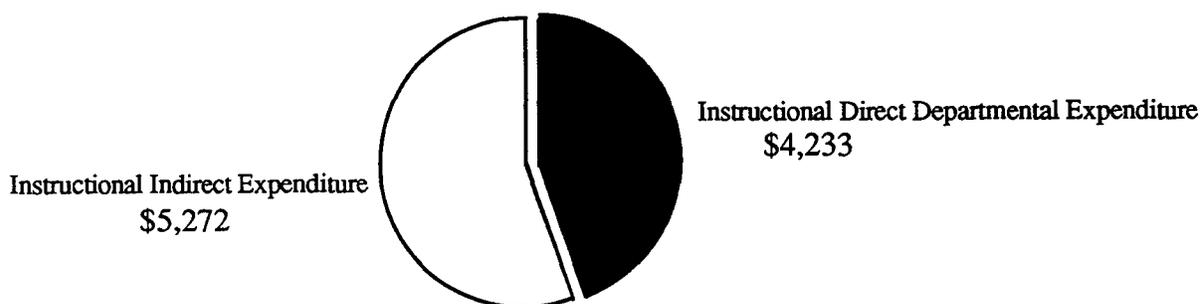
Instructional Costs/Investment per Student²

The Instructional Cost Study, produced bi-annually by Management Planning and Information Services (now the Office of Planning and Analysis), provides a detailed analysis of instructional costs by campus and collegiate unit. As a result of actions of the Minnesota Legislature in recent sessions, the University of Minnesota has had to rely more heavily on tuition funding to support the institution's instructional mission. Direct and fully allocated instructional expenditure per student for the period 1977 to 1992 is available in the University report *Instructional Cost Study, 1991-92* dated June 9, 1993. The 1993-94 Instructional Cost Study indicates that tuition accounted for 44.2 percent of the instructional funds for 1993-94, an increase of 2 percent over 1991-92, which was due primarily to a 6.4 percent average increase in tuition rates for 1993-94.

The critical measure of Investment per Student, approved by the Board of Regents in December 1994, is the percent difference in instructional direct departmental expenditure per student between the University of Minnesota and other comparable institutions. The Board of Regents approved an institutional performance goal to achieve a funding level of two percent above the mean for comparable institutions in dollars of instructional direct expenditure per student. The critical measure of Investment per Student is only a subset of expenditure per student. Instructional direct department expenditures, as defined here, exclude indirect costs, the costs of deans' offices and all fringe benefit costs for the Twin Cities campuses. While it would have been desirable to use total expenditure per student for the specific measure of Investment per Student, analytic procedures must use cost definitions available from other institutions, an essential feature for use of this measure. For the years 1990, 1991 and 1992 institutional direct expenditures were \$3,863, \$4,086 and \$4,451 for a set of comparable institutions. For example, as shown in Figure 22 for the Twin Cities campus, direct departmental expenditure per student for 1992 (\$4,233) is less than half of fully allocated costs (\$9,505).

Figure 22

Instructional Direct Departmental Expenditures as a Part of Fully Allocated Expenditure per Student for 1992, Twin Cities Campus



Note: Fully-allocated expenditure per student in 1992 for the Twin Cities campus was \$9,505.

² <http://www.opa.pres.umn.edu/findata/ics/ics.htm>

Investment per student as a critical measure addresses implications for effectiveness and efficiency. It is most useful in comparison to similar information at the college and program level from other universities in the context of specific planning goals for other critical measures relating to instruction. The general goal for the specific measure of instructional direct expenditure per student for the Twin Cities campus is to gradually increase the expenditure per student to a level that is slightly above the average for other comparable institutions. Reaching University 2000 goals depends on closely linking planning and budgeting. The critical measure of investment per student provides a means to monitor expenditures for the University 2000 strategic areas of Undergraduate Education and Graduate and Professional Education. Caution is suggested in drawing any relation between investment per student and quality of instruction; however, increases in performance on other measure related to instruction often have cost implications and, therefore, reaching performance goals for Investment per Student may be important to success with other measures.

Undergraduate Tuition and Tuition Revenues³

There are several key issues facing the University of Minnesota regarding undergraduate tuition:

- Need to promote quality of instruction (value added instruction in a research environment), particularly in terms of price competition with public institutions within the State of Minnesota. Even though the University has been able to improve its selectivity, continuing tuition increases without clear evidence of value added may eventually prove to be unsatisfactory.
- Review reciprocity agreements carefully. Approximately 4,000 undergraduates from Wisconsin represents considerable tuition revenue and state appropriation.
- Consider alternative strategies to non-resident tuition assessment. Non-resident (and non-reciprocity) students represent the smallest population of undergraduate students.

Table 57 below ranks tuition and fees in ascending order for a set of comparison institutions. In spite of the large increase in Minnesota's tuition rates for 1995-96, the rank order of institutions has changed little in 11 years. The University of Minnesota is perceived to be a provider of quality education at a reasonable price. This national perception has been a strong element of the recruiting process employed by admissions. Tuition and fee increases over the past 11 years have placed Minnesota more or less in the same rank, price wise, as it was in fall 1984. Because national surveys indicate that student choices, even students from the upper parental income groups, are most heavily influenced by offers of financial aid and then by low tuition, the University of Minnesota must be sensitive to students (consumers) in future years. If tuition and fees are to continue to outpace inflation, increased financial aid will be necessary.

Although Chapter II of this self-study report included an overview of recent developments in the State of Minnesota that have had and will continue to have effects on the institution's finances, the discussion did not focus on how changes in financing of higher education have affected the University of Minnesota in particular. The October 1993 report *Sources of Tuition Increase in the University of Minnesota System 1971-72 through 1991-92* indicated that the major tuition increases beyond the rate of inflation have occurred as a result of declines in the state support. The Office of the Legislative Auditor conducted a similar analysis and came to the same conclusion. In the University of Minnesota from 1972 to 1982, there was no significant increase in average tuition per student beyond the general rate of inflation. From 1982 to 1992 there was

³ <http://admissions.tc.umn.edu/info/tuition.html>

a real increase of \$1,187 per FYE. This consisted of \$884 (74.4%) from change in state share of instructional cost, \$154 (13%) due to decreased student numbers, \$82 (6.9%) attributable to salary increases beyond inflation, \$187 (15.8%) because of increases in non-personnel costs beyond inflation, and a decrease of \$120 (-10.1%) achieved through retrenchment in positions.

Table 57
Annual Undergraduate Tuition and Fees
Selected Comparisons for 1995-96^a

Institution		1984-85	1989-90	1994-95	1995-96	Increase FY96 Over FY85
Community Colleges	Resident	1,609	1,705	1,927	1,934	20.2%
Iowa	Resident	1,830	2,239	2,541	2,558	39.8%
State Universities	Resident	2,112	2,194	2,589	2,628	24.4%
Wisconsin	Resident	1,884	2,457	2,833	2,881	52.9%
Purdue	Resident	2,257	2,491	2,985	3,056	35.4%
Ohio State	Resident	2,418	2,685	3,195	3,273	35.4%
Indiana	Resident	2,260	2,666	3,491	3,582	58.5%
Minnesota -- LD ^a	Resident	2,653	2,865	3,511	3,857	45.4%
Illinois	Resident	2,712	3,569	3,881	3,958	45.9%
Minnesota -- UD ^b	Resident	3,095	3,498	3,843	4,301	39.0%
Michigan State	Resident	2,924	3,878	4,789	4,747	62.3%
Penn State	Resident	3,775	4,602	5,212	5,258	39.3%
Michigan	Resident	3,462	4,245	5,664	5,842	68.7%
Iowa	Non Resident	5,083	7,334	8,604	8,808	73.3%
Illinois	Non Resident	6,740	8,210	8,994	9,130	35.5%
Wisconsin	Non Resident	6,175	7,524	9,414	9,636	56.1%
Ohio State	Non Resident	6,263	7,698	9,641	9,813	56.7%
Purdue	Non Resident	6,712	7,679	9,890	10,128	50.9%
Minnesota -- LD	Non Resident	6,646	6,548	9,510	10,344	55.7%
Indiana	Non Resident	6,326	7,662	10,510	10,770	70.2%
Penn State	Non Resident	7,582	9,685	11,099	11,310	49.2%
Michigan State	Non Resident	6,737	9,353	11,573	11,572	71.8%
Minnesota -- UD	Non Resident	7,860	8,129	10,628	11,803	50.2%
Augsburg	All Residents	8,191	10,831	12,434	12,604	53.9%
St. Thomas	All Residents	8,029	11,085	12,523	13,106	63.2%
St. Catherine	All Residents	7,993	8,118	12,880	13,190	65.0%
St. Olaf	All Residents	11,190	14,045	14,852	15,000	34.1%
Macalester	All Residents	11,190	14,045	16,570	16,686	49.1%
Michigan	Non Resident	10,366	13,996	17,046	17,671	70.5%

^aLD = Lower Division

^bUD = Upper Division

Tuitions in postsecondary institutions have been increasing at a rate that exceeds general inflation, but the causes are less clear. Much of the discussion has suffered from the presupposition that the causes are the same across all levels, sectors, geographic areas, and institutions. Also present is the tendency to jump to simplistic conclusions. Much of the current national discussion tends toward assigning the guilt to decreasing faculty workload, salary rate increases beyond general inflation, a proliferation of middle-level administrative and technical personnel, or some combination of these.

Whether measured by tuition per headcount student or tuition per full year equivalent (FYE) student, tuition in the University of Minnesota rose about 486 percent from 1971-72 to 1991-92. The general inflation increase over that same period, as measured by the Consumer Price Index (CPI) was 236 percent. Table 58 below compares tuition with inflation using FYE as a divisor: since total FYE was not calculated prior to 1980, previous years had to be estimated. The results show the same basic pattern for both headcount or FYE student and enable analysis of the most recent ten-year period in which the FYE numbers were known accurately. The growth of tuition beyond inflation is confined almost entirely to the period 1982 through 1992. On a headcount basis, the 1982 tuition was actually lower in real terms than in 1972. On an estimated FYE basis it was only about six percent higher.

For public institutions, there are only three reasons for changes in inflation adjusted tuition per student: (a) a rate of change in instructional expenditures that differs from inflation; (b) a change in the number of students who pays the tuition; and (c) a change in the proportion of instructional expenditures financed by net appropriation.

Table 58
Tuition Relative to General Inflation
in the University of Minnesota System
FY 1972 - FY 1992

FY	Tuition Revenue	FYE Enrollment	Tuition		Cumulative Increase in CPI	Tuition Increase Above or Below CPI
			per FYE	Cumulative % Increase		
1972	\$28,251,985	54075	\$522			
1973	\$29,296,048	53985	\$543	3.9%	4.1%	-2.2%
1974	\$32,969,640	54567	\$604	15.6%	12.4%	2.2%
1975	\$36,527,408	57070	\$640	22.5%	26.0%	-3.5%
1976	\$42,706,682	58813	\$726	39.0%	34.8%	4.2%
1977	\$44,426,089	59622	\$745	42.6%	42.7%	-1.1%
1978	\$49,264,134	57936	\$850	62.8%	52.3%	10.5%
1979	\$52,636,147	57589	\$914	74.9%	66.6%	8.3%
1980	\$58,075,595	58855	\$987	88.9%	88.8%	-1.1%
1981	\$67,473,210	60923	\$1,108	112.0%	110.5%	1.5%
1982	\$74,842,037	61034	\$1,226	134.7%	128.6%	6.1%
1983	\$88,698,088	58774	\$1,509	188.9%	138.7%	50.2%
1984	\$95,945,978	57046	\$1,682	221.9%	147.5%	74.4%
1985	\$104,660,101	55884	\$1,873	258.5%	157.0%	101.5%
1986	\$113,970,177	56143	\$2,030	288.5%	164.4%	124.1%
1987	\$118,068,102	57162	\$2,065	295.3%	170.4%	124.9%
1988	\$124,833,281	56047	\$2,227	326.3%	181.6%	144.7%
1989	\$128,922,858	55574	\$2,321	344.3%	194.6%	149.6%
1990	\$140,427,019	54959	\$2,555	389.1%	208.8%	180.3%
1991	\$149,286,551	54833	\$2,723	421.1%	225.5%	195.6%
1992	\$165,955,000	54213	\$3,062	486.1%	236.0%	250.1%

Source: Management Planning and Information Services, September 13, 1993.

The conclusion from a detailed analysis was that the \$1,187 increase in excess of inflation, \$884 (74.4%) resulted from change in the proportion of instructional cost financed through net appropriation, \$154 (13%) was the result of spreading the tuition burden over fewer students, and \$149 (12.6%) was caused by net increases in instructional costs. It is of some importance to note that per student expenditures in constant 1982 dollars were 20.8 percent higher in 1992 (\$4,827) than in 1982 (\$3,995). Two-thirds of this increase is attributable to the decrease in student numbers that was deliberately planned and brought about through agreement between the University of Minnesota and the Minnesota Legislature. Although the result has been modified and inhibited by necessary retrenchment and changes in the proportion of legislative funding, available real resources per student have increased, though probably less than was hoped in 1987 when the planning was agreed to by the University and legislative leadership. The change in the proportion of instructional costs financed through net legislative appropriation is the overwhelming factor in real tuition change over the past 10 or 20 years, at least for the University of Minnesota System. The period under analysis includes the decision in 1983, when the Average Cost Funding formula was adopted, to lower the appropriation proportion of instructional cost to no more than 67 percent of instructional cost.

Minnesota Campaign

The Minnesota Campaign, the largest and most comprehensive fund-raising campaign in University history, was publicly announced April 3, 1986, with \$113.5 million raised. The goals of the Minnesota Campaign were to raise \$300 million in private gifts and to establish at least 100 new endowed University chairs, building stronger academic, research, and service programs to serve community and state needs well into the future. The highly successful effort surpassed the goal in January 1988, with \$305.7 million and 116 chairs, and concluded June 30, 1988, with a total of \$364,727,830 and 127 chairs.

The University of Minnesota Foundation Board of Trustees began planning for a major fund-raising campaign in fall 1984, shortly before the self-study process for the 1986 Accreditation Review, to build greater financial support for University priorities. Fund-raising progress moved quickly forward during spring 1985 when then-University President Keller introduced *A Commitment to Focus*, a long-range, strategic plan to strengthen the University and eventually establish its place among the top five public universities in the nation. At the time of its announcement, the Minnesota Campaign was the largest three-year, fund-raising campaign drive announced by a public university.

The key to setting campaign goals was the June 1985 vote by the Minnesota Legislature to release the Permanent University Fund--about \$65 million accumulated from proceeds from various land grants, sales, and royalties--for the express purpose of matching private gifts that would create new endowed academic positions for University faculty.

National campaign chair Curtis L. Carlson, Minneapolis entrepreneur and 1937 University graduate, donated an unprecedented personal gift of \$25 million to fund nine endowed faculty positions in the School of Management and College of Liberal Arts and to support faculty recruitment and retention, research, student financial aid, and new curricular programs such as international business. More than 400 volunteers assisted with cultivation and solicitation of donors.

Most University deans were actively involved in identifying their colleges' priorities and greatest needs for private support. Several colleges and their volunteers solicited campaign gifts to complete funding of specific programs such as endowed chairs.

More than 180,000 gifts and pledges from alumni and friends were made to the Minnesota Campaign between January 1, 1985 and June 30, 1988. The campaign total includes the following: all current gifts and pledges; campaign contributions; matching dollars from the Permanent University Fund; and corporate and foundation gifts and research grant funds.

The 127 campaign chairs, each with endowments of \$500,000 to \$2 million, brought the most direct benefit to University faculty members and students in the decade ahead as these prestigious positions have been filled.

One of the campaign's earliest successes was the fund-raising effort among the University's own faculty and staff members that, with a projected \$3 million goal, raised more than \$11.3 million. The following leading gifts from area businesses and foundations illustrate the institution's strong support by the private sector:

- \$10 million from the McKnight Foundation to support *A Commitment to Focus*, the largest unrestricted gift ever received by the University.
- \$8 million from the Variety Club of the Northwest to support the children's unit of the University of Minnesota Hospital and Clinic and renovation of the Variety Club Heart Hospital.
- \$11.5 million from IBM in cash and equipment.
- \$3 million from 3M that established chairs to honor two former 3M chief executives and included a challenge to employees whose gifts to the campaign were matched three-to-one by the corporation.

Many University programs have been significantly affected by campaign support. A few examples include the following:

- Junior faculty. McKnight Land-Grant Professorships provide a three-year stipend to encourage professional development and a year of paid research leave.
- Minority programs. A model partnership, created by Super Valu Stores and McKnight Foundation funds, among the University, Minneapolis and St. Paul public schools, and other Minnesota colleges involved approximately 3,000 minority students from seventh grade through college graduation in programs that support personal and academic achievement, encourage college enrollment and success, and provide research, career development, and mentor opportunities.
- Dance program. The program is now supported through the Sage Cowles Land-Grant Chair in Dance, represented a strong community commitment to the importance of developing performing arts in University students.
- University Raptor Research and Rehabilitation Program. Housed in a new St. Paul campus building enabled the University to expand its internationally leading program in restoring injured birds of prey to health and freedom.
- Urban Design Center. A national model program created with Dayton Hudson Foundation contributions, combined University expertise in architecture, landscape architecture, urban planning, geography, political science, and management to expand knowledge about urban design issues, particularly in cold climates.

- Agriculture. Four new chairs and a grant to increase interdisciplinary research and problem solving in the agriculture curriculum brought resources to further the University's preeminent research in international food and agriculture policy, plant biotechnology, grain chemistry, and the development of disease-resistant, new, and improved crops.

Investment and Voluntary Support

The institution's performance in wisely investing its financial resources and in increasing its voluntary support for the University of Minnesota has been considered to be essential in realizing the goals articulated in University 2000. Although the Minnesota Campaign was successful, the institution needs to build a larger basis of financial support, especially among its alumni. The goal is to increase the University's ability to withstand changes in public funding through successful investment growth and fund-raising, including increased financial support from alumni.

Investment earnings and voluntary support are two important additional revenue sources to offset decreasing levels of higher education funding from traditional sources (i.e., state appropriations, federal grants, tuition). Endowment funds in particular play an important role because their earnings, when invested strategically to grow over time, represent an ongoing source of financial support that provides resources for future generations, as well as revenue for current operations. The University also has non-endowment funds that are invested, some on a long-term and some on a short-term basis, and that provide additional revenue for current operations. Finally, private gifts, grants, and other private non-contract financial support greatly increase the University's ability to fund its programs and are an increasingly important aspect of the University's overall funding.

Alumni support is an invaluable resource for the University in many ways, including their donations of time (e.g., assistance in recruiting new students, in mentoring students, or in providing internships) and their advocacy on behalf of the University at the Minnesota Legislature. Alumni financial support is another important resource and also a tangible reflection of the commitment of alumni to the University. In this regard, it is important to note that the extent of alumni support reflects alumni feelings about the education they received here.

Other "non-traditional" sources of revenue, such as royalties, sales/services of educational activities, and income from sales and rental of real estate, may be useful, but are not included at this time because their treatment may be affected by the possible adoption of Responsibility Center Management.

Return on Invested Funds

The return on invested funds is about stewardship -- the management and growth of invested funds available to support the University's mission and programs. In the broadest sense, invested funds include endowments (the principal of which must be preserved, but which generates usable revenue through investment earnings), non-endowment, short-term investments (temporary investment funds, or "TIF"), and investments of non-endowment long-term reserves.

Endowment funds are managed by three different entities: the University of Minnesota's Office of Asset Management, the University of Minnesota Foundation, and the University of Minnesota Medical Foundation. Because these three entities utilize somewhat different investment strategies, the return on invested funds is not currently represented in a single

number but in three different numbers. Beginning in fall 1997, however, the University will be expected to consolidate financial information on both of these foundations into the University's financial reports. At that time, it may be useful to review the possibility of consolidating information on the return on invested funds into a single figure as well. Thus, since a single figure would be ideal but is not now available for this measure, it may be several years before this part of the measure can be fully implemented. In the interim, separate figures on each of the three endowment pools can be reported.

Because of market fluctuations, at least a five-year and possibly a ten-year average will be used (rather than a single year) to reflect the current performance and future goals for this measure. This measure would be based on the University's performance (ranking) among the approximately 400 higher education institutions reporting this information through the National Association of College and University Business Officers (NACUBO).

As noted above, there is currently no mechanism in place to report in a single number the return on all endowment funds held and managed for the University's benefit. The largest amount of this endowment money is managed by the University and the University of Minnesota Foundation, and data on the investment performance of these funds may be useful in the short term (until a single number can be developed) for illustrative purposes. Using a five-year average, for example, for the five-year period ending on June 30, 1994, the University-held funds had earned a 9.6 percent return and the University Foundation-held funds had earned an 11.3 percent return. For comparative purposes, the mean (average) return achieved for that period by the approximately 400 colleges and universities reporting through NACUBO was 9.3 percent. The University's long-term investment performance objective is to be within the top quartile of the NACUBO colleges and universities over five to ten year periods.

National Ranking in Total Voluntary Support

The national ranking in total voluntary support measure component is about the University's success in generating new sources of private support. Voluntary support includes private gifts, non-contractual research grants, and bequests and excludes income from invested funds, government support, and contract research. A more specific definition of voluntary gifts is as follows:

"all restricted and unrestricted transfers of money made to a recognized University Foundation or College by an individual, group, business, or non-governmental agency when the use of the funds is not intended to result in direct economic benefit or any other tangible compensation (i.e., goods and services) to the donor."

National rankings are based on information from over 1,000 colleges and universities collected through an annual survey by the Council for Financial Aid to Education (CFAE), and can serve as an overall measure of performance in generating new voluntary support from the sources noted above. Because the dollar amount of voluntary support and the related rankings can vary considerably from year to year, based on special campaigns or other major fund-raising activities of the colleges and universities that are included in the rankings, this measure targets staying within a certain range in the rankings, rather than a specific ranking or a specific dollar amount.

Table 59 shows the University's total voluntary support and rankings for the last five years, and Table 60 shows the University's position among the top 20 higher education institutions for the 1993-94 year. A year 2000 goal of maintaining a voluntary support ranking within the top 15 of public and private higher education institutions has been endorsed by the Board of Regents.

Table 59

University of Minnesota National Ranking in
Total Voluntary Support

Year	Total Voluntary Support	Rank
1990	105,289,301	12
1991	109,131,731	11
1992	127,177,219	7
1993	121,809,613	9
1994	116,441,774	13

Table 60

Voluntary Support of Higher Education 1993-94
Top 20 in Total Giving

Institution	Dollars
Harvard University	289,069,109
University of Pennsylvania	259,554,067
Stanford University	226,554,067
University of Southern California	222,935,822
Yale University	184,356,800
Cornell University	175,658,011
Duke University	148,330,789
University of Wisconsin	147,275,837
Columbia University	139,597,948
University of Illinois	124,186,569
University of Washington	122,675,778
University of Michigan	120,957,582
University of Minnesota	116,441,774
New York University	101,742,915
Indiana University	101,197,111
University of California at Berkeley	99,214,128
Northwestern University	96,840,266
Ohio State University	94,884,179
Massachusetts Institute of Technology	93,781,475
Texas A&M University	91,725,560

Number of Donors

The third component focuses on alumni support for the University, as expressed in their willingness to give back financially to the institution. One of the challenges in increasing alumni giving is the frequency with which alumni move after graduation and the resulting difficulty of maintaining current address information. Obviously, this problem makes it difficult to reach many alumni for any purpose, including not only appeals for their support, but also information about the University's plans and accomplishments. Efforts to increase the number of "addressable" alumni have been made in the last several years, with some success. The number of alumni donors is used as the measure, rather than the percentage of addressable alumni who give. The percentage of alumni who give is not used for the measure because, even if the numbers who give increase, the percentage would go down if the number of addressable alumni increases at a faster rate. As a result, the percentage would be difficult to use for goal setting purposes.

The number of financial contributors to the University over the last four years has been 35,938, 35,819, 36,566, and 36,279, respectively. Since the cultivation of new donors takes time, it is expected that the increase from the baseline of 36,279 donors in 1994 to the year 2000 goal of 43,600 (a 20% increase) will occur in the last year or two of the six-year period, rather than in more or less equal increments within the six-year period.

University of Minnesota Foundation

The University of Minnesota Foundation was founded in 1962 to advance the University's missions of teaching, research and public outreach. It does this by raising and managing private support for scholarships, outstanding faculty, research, new facilities and academic programs. Most gifts to the Foundation are designated by donors to support a favorite college, campus or program. The Minnesota Medical Foundation, for example, received 15,508 gifts totaling \$14,000,000; and the Minnesota Landscape Arboretum received 3,722 gifts totaling \$1,200,000. Gifts to the Foundation support all colleges, schools, departments, and programs of the University's four-campus community. They also receive and distribute gifts for General College, the Graduate School, special projects, and student financial aid. Private support enables the University to go beyond the limits of state funding to provide innovative and top-quality programs for the thousands of students, patients, community groups, businesses and private citizens whose lives are touched by its work.

The Foundation's 1995 Annual Report states that for fiscal 1995, there were 60,501 donors, and a total of \$72.5 million in gifts received for the University, an increase of \$15.7 million over 1994 gifts. The endowment fund grew by 18 percent. Table 61 below summarizes their \$34,399,901 in disbursements to the colleges and programs in 1995.

Responsibility Center Management⁴

In May of 1995, the President appointed a steering committee to move forward in designing the "Minnesota Version" of Responsibility Center Management (RCM). The overall goal of the effort is to "share responsibility for generating revenue and containing costs consistent with the University's academic mission." A draft report was issued in October 1995 and an update was presented to the Board of Regents in January 1996. Work group reports are scheduled to be completed during May to September 1996, and an operational target date of July 1, 1997 has been established.

⁴ <http://www.opa.pres.umn.edu/specproj/rcm/rpt1.htm>

Table 61

Summary of Disbursements from the University of Minnesota Foundation
to University Colleges and Other Programs
July 1, 1994 to June 30, 1995

Colleges/Programs	Amount
Academic Health Center	
Dentistry, School of	\$373,167
Health Sciences and School of Public Health	\$773,820
Health Services	\$3,072
Hospital and Clinic	\$181,031
Medical School	\$1,010,398
Minnesota Medical Foundation	\$17,212
Medical Technology	\$23,666
Nursing, School of	\$147,436
Pharmacy, College of	\$947,002
Raptor Research Center	\$363,634
Veterinary Medicine, College of	\$888,428
Arts, Sciences and Engineering	
Biological Sciences, College of	\$561,783
General College	\$55,760
Liberal Arts, College of	\$2,377,926
Technology, Institute of	\$3,970,825
Professional Studies	
Agricultural, Food, and Environmental Sciences, College of	\$1,722,039
Architecture and Landscape Architecture, College of	\$621,955
Education and Human Development, College of	\$332,915
Human Ecology, College of	\$708,869
Humphrey Institute of Public Affairs	\$2,890,410
Law School	\$2,133,324
Carlson School of Management	\$5,604,553
Minnesota Extension Service	\$10,638
Minnesota Landscape Arboretum	\$74,729
Natural Resources, College of	\$875,873
Coordinate Campuses	
University of Minnesota, Crookston	\$467,433
University of Minnesota, Duluth	\$1,023,100
University of Minnesota, Morris	\$79,832
Other University Programs	
Athletics, Men's Intercollegiate	\$731,530
Athletics, Women's Intercollegiate	\$541,669
Continuing Education and Extension/University College	\$408,852
Graduate School	\$324,418
Libraries	\$201,389
Press, University of Minnesota	\$31,569
Sports Facilities	\$993,796
Student Financial Aid	\$405,789
Weisman Art Museum	\$278,205
Other	\$2,181,854
Total Disbursements	\$34,339,901

The institution is already functioning within an RCM framework in the following ways: year-end balances carried forward within the units; telephone costs and staff benefits have been decentralized; tuition incentive plans have been negotiated with several colleges and campuses; and unit cost studies have been prepared annually.

The most recent presentations outlined the desired results, but also suggested possible adverse effects. Desired results include the following: integrate and coordinate academic and fiscal planning; recognize the importance of tuition revenues and importance of students; decentralize decision making; enhance authority and responsibility of deans; match costs and benefits; increase awareness of costs and opportunities for income generation; make tradeoffs more explicit; clarify current maze of cross-subsidies and entitlements; and subject support units to increased scrutiny for efficiency, effectiveness, and proper incentives. Possible adverse effects include: unit's goals may contradict institutional goals; negative competition; excessive decentralization; negative impact on inter-disciplinary activities; and decreased ability to subsidize essential programs. If the institution is to move forward with additional RCM elements, a sophisticated information system needs to be in place to support RCM. Although the institution has an extensive information system, it is not clear that existing systems are adequate. A second concern is the need for adjustments in the existing procedures for the allocation of funding received from the State of Minnesota.

The following ten principles will guide the work groups that have been established: Leaders at all levels must be fully committed; innovation and investment in new programs should be stimulated; timely and accurate reporting and information systems; changes should be made before adequate tools to manage the responsibilities are in place within the units; to the extent possible, all revenues and costs should accrue to the units which activities generated them; responsibility units must have identifiable boundaries; responsibilities and consequences must be clearly defined; forums for jurisdictional disputes must be created to address the negative aspects of competition; costs over which a unit has not control should not be allocated to it; and to the extent possible, units should have the authority to seek outside services.

Financial Assistance⁵

One recent reorganization on the Twin Cities campus transferred three functional areas (Office of Admissions, Office of the Registrar, and Office of Student Financial Aid) from the Vice President for Student Development and Athletics to the Senior Vice President for Academic Affairs, in particular the Associate Vice President for Planning. Since salient issues in admissions and registration are discussed elsewhere in this report, only issues in the financial aid arena are discussed here.

Tuition Waivers

The Board of Regents' Tuition Policy allows tuition to be waived or remitted for several reasons:

"Tuition may be waived or remitted selectively in order to accommodate state law, to provide financial discounts to students the University is seeking to attract, to offer University employees a benefit, to promote cooperation with other higher education institutions, to support the international exchange of students, and to service humanitarian purposes. The cost of all tuition waiver programs not financed by legislative appropriation will be recovered by the tuition revenue generated from students who are not receiving them. As a general

⁵ <http://admissions.tc.umn.edu/info/financialaid.html>

rule, a tuition waiver program should be offered only if the University intends to provide it to all students meeting the program's criteria, regardless of their financial circumstances. The cost of a tuition remission program will be recovered from the unit(s) offering this benefit.

The President will make final recommendations regarding the terms and conditions under which tuition waivers and tuition remission benefits are provided. The University will state publicly the exceptions it will approve and provide such information to students who might qualify for them.

The President may recommend that all tuition be waived for students in a limited number of categories, and will make final recommendations regarding the conditions under which the nonresident portion of tuition is waived for nonresident students. In general, waivers of the nonresident portion of tuition for individual students will be for fixed periods of time.

Tuition waivers and tuition remission benefits will be reported as student aid expenditures in University financial records and reports." (Approved by the Board of Regents, February 10, 1995)

The institution enables students in financial need with several types of financial aid, one of which is a set of tuition waiver and tuition remission programs. The August 1995 *Final Report of the Committee on Tuition Waiver and Tuition Remission Programs*, appointed by the Senior Vice President for Academic Affairs, examined each of the University's tuition waiver programs and determined whether they were meeting their programmatic objectives, examined their costs and ways of containing these costs, and recommended whether these programs should be maintained, eliminated, or modified. The report is divided into two parts. The first part examines waiver programs in the following seven categories: required by law, contract, or convention; targeted populations/international programs/student exchange programs; summer session tuition waivers; waiver programs that are not waiver programs; other waiver program; and inactive waiver programs. The second part of the report covers employment related tuition waiver and tuition remission programs, and provides the following information about these programs: program name, benefit provided, category, registrar's subcode, FY94 cost, FY94 number of students, date program was established, program description, background and/or Board of Regents' policy regarding waiver program, discussion of the program's effectiveness and cost, and recommendation to retain, eliminate, or modify the program.

The University of Minnesota has more than 50 waiver programs. These programs are not defined in any single publication. The committee was unable to find an authoritative list of waiver programs in either the Registrar's Office or the Office of the Senior Vice President for Academic Affairs. Some of these programs are very old, with origins dating back as far as 1907, and some of these programs were established only several years ago. The background information about these programs is varied, ranging from good history and written documentation to no written documentation at all. When these programs are grouped together under the categories used to organize this report, clear patterns do emerge along with a rationale for each program that in most cases is consistent with the Board of Regents' policy on tuition waivers.

In 1993-94, the University of Minnesota granted tuition waivers to 4,961 students on its four campuses -- mostly waivers of nonresident tuition. Many of the University's tuition waiver programs are of long standing. Their cost, however, has grown significantly over just the past eight years, from \$5.3 million in FY88 to more than \$19.8 million in FY95. The increase in just the last year, from 1993-94 to 1994-95 was more than \$4 million (an increase of 26.6%). The University's tuition remission programs for employees have grown at about the same rate, because of significant increases in the cost of tuition remission benefits for graduate and professional students with academic appointments as teaching assistants, research assistants, and in other academic employee classifications.

Financial Aid

The objective of the University of Minnesota's financial aid programs is to provide financial assistance and financial rewards to students at all levels who might not otherwise be recruited, retained, and graduated.

Each student's financial circumstances are unique. The Office of Student Financial Aid works with more than 30,000 individual students each year, one at a time. Nearly all of the information in the report is for the Twin Cities campus for academic year 1992-93. In 1992-93 the average per-student educational cost (tuition, books, room & board) was about \$11,000 for undergraduate students, \$12,500 for graduate students, and \$17,500 for professional students, with significant variation by professional program (e.g. more for medicine, less for law). Tuition and fees were generally less than one-third of educational cost. Detailed information in the report is provided for three student levels: undergraduate, graduate, and professional. The report provides detail by student level for the following forms of financial assistance: loans, grants, University of Minnesota scholarships, non-University of Minnesota scholarships, employment, employee tuition benefits, tuition waivers, reciprocity benefits, third-party payments, and CEE tuition reductions.

The August 1994 *Report of the University of Minnesota Task Force on Financial Aid* posed the question "How do University of Minnesota students pay for their educations?" The following 11 questions provide the framework for a brief overview of the major findings in the report:

- How much financial assistance is available to the University's students?

In 1992-93, University of Minnesota students on the Twin Cities campus received more than \$300 million in financial assistance to help them pay for their educations from resources other than their families or their own non-University employment. This assistance came from a wide variety of sources and in a wide variety of forms including University employment, which is far and away the largest resource.

University students on the Twin Cities campus receive more than \$307 million in various forms of financial assistance. Of the \$307 million, \$183 million is from University resources, and of the \$183 million, \$162 million is in the form of University employment or employment-related waivers and benefits. Only five percent of the total assistance available is in the form of University scholarships.

- How many University students have financial need?

For Twin Cities students 44.3 percent of undergraduate students, 16.2 percent of graduate students, and 73.3 percent of professional students have financial need based on their submission of a financial aid request. The graduate student number is misleading, since graduate students are often offered employment opportunities when recruited, many who would have need do not apply for need-based assistance.

- What are the University's scholarship/fellowship and tuition waiver resources?

The University is able to award to Twin Cities students \$15.7 million in University scholarship funds and \$13.1 million in waiver benefits. Only \$3.4 million in nonathletic University scholarship funds is awarded to undergraduate students.

- Who benefits from the University's student employment resources?

The student payroll is more than \$137 million. Employment-related tuition waivers and benefits provide an additional \$25 million, bringing the total employment-related resource to \$162 million, most of which is funded from non-state sources. Although students at all levels benefit, graduate students (e.g., TAs, RAs) and individuals in post-degree professional training (e.g. medical fellows) earn more than \$125 million of the \$162 million total.

- How do undergraduate students pay for their educations?

Undergraduate students rely on their families or their own resources for nearly two-thirds of their educational costs. Undergraduate students with need rely on federal and state grant and loan programs, borrow about \$2,700 per year on average. Undergraduate students without need work more on campus than undergraduate students with need.

- How do graduate students pay for their educations?

Graduate students rely on University employment and associated tuition waivers and employee tuition benefits. Graduate students with need rely heavily on loans, borrowing more than \$5,000 per year, on average.

- How do professional students pay for their educations?

Professional students rely most heavily on loans. Professional students with need borrow more than \$12,000 per year, on average. The average first year medical student borrows \$24,000.

- Are the University's financial aid resources targeted to students with need?

Federal and state financial aid programs are almost all need-based. The various forms of University financial assistance (e.g., employment, scholarships, waivers) are not targeted to students with need, but are instead designed to meet other objectives such as support for academic achievement and diversity.

- Are the University's financial aid resources targeted to students of color?

The University's financial aid resources are targeted to students of color. For example, undergraduate, graduate, and professional students of color, representing 11.6 percent, 5.5 percent, and 11.7 percent of their respective student populations, receive 27.8 percent, 11.9 percent, and 27.3 percent of University scholarship funds.

- Are the University's financial aid resources targeted to high ability students?

At the graduate and professional levels, where the University competes nationally for talented students, most forms of financial assistance are clearly targeted to high ability students. Resources are also targeted to high ability students at the undergraduate level, but to a lesser extent.

- Is there a gender bias in the awarding of the University's financial aid resources?

The financial assistance provided to women on the Twin Cities campus is roughly proportional to their enrollment. Most exceptions are explained by variations in the enrollment demographics and resources of individual colleges.

CHAPTER XIII

FACULTY¹

Strategic issues relative to the institution's faculty were identified as one of three "enabling" areas of concern (along with supporting infrastructure and finance) suggested in the *University 2000 1995 Supplement* drafted by the U2000 Strategic Planning Group. Two issues were noted: productivity (i.e., the need for everyone to work smarter and to utilize new technologies or procedures); and recognition and rewards (i.e., the system of recognition and rewards for faculty and staff must effectively promote the needs of the University for excellence, efficiency, effectiveness, and adaptability). Faculty and staff experiences also was a focus in the development of the phase two institutional-level critical measures, approved by the Board of Regents in July 1995.

This chapter contains additional descriptive information on the characteristics of the faculty, commentary on selected initiatives and programs for faculty and staff, and some of the current concerns and salient issues for faculty. Other timely concerns of faculty, such as the future of tenure, have been noted elsewhere.

Overall Faculty Characteristics

The faculty of the University of Minnesota are the key to the institution's success in addressing its teaching, research and outreach missions. The vast majority of faculty are tenured within academic departments organized into collegiate units, each college of which reports (as of July 1, 1995) to one of the three provosts on the Twin Cities campus. The characteristics of full-time faculty in each collegiate unit as of October 1995, are described in Table 62.

The size and composition of the faculty have changed in the last ten years. The total number of full-time faculty on the Twin Cities campus has decreased from 3,910 at the beginning of fall quarter 1985 to 3,198 in the fall of 1995, a decrease of 18.2 percent. This decline reflects the intentional downsizing that has occurred over the past decade. Comparisons between 1985 and 1995 indicate that there have been increases in the percentage of full professors, the percentage of tenured faculty, the percentage of women and minority faculty, and the average age of full-time faculty.

A comparison between the percentages of faculty at each rank for each of the colleges on the Twin Cities campus for fall quarter 1985 and fall quarter 1995 indicates that the percentage of full professors for the Twin Cities campus has increased from 34.2 percent to 46.7 percent, in part as a result of declines in the number of new hires. The provostal areas of Arts, Sciences, and Engineering and of Professional Studies have an average of about 56 percent full professors, while the Academic Health Center units are generally closer to 33 percent. Units with particularly high percentages of full professors are Biological Sciences (65.9%) and the Law School (69.6%), and the collegiate unit with the lowest percent of full professors is Nursing (18.0%). Ten years ago, the Health Sciences had 19.4 percent full professors, and Biological Sciences had 67.4 percent.

¹ <http://www.opa.pres.umn.edu/specproj/accred/faculty.htm>

Table 62

Descriptive Characteristics of University of Minnesota Faculty for Fall 1995
Total University, Twin Cities Campus, and by College^a

	Rank											Ethnic Status ^b									
	Total Faculty	Full N	Full %	Associate N	Associate %	Assistant N	Assistant %	Instructor N	Instructor %	Other N	Other %	Asian N	Asian %	African Am. N	African Am. %	Native Am. N	Native Am. %	Hispanic N	Hispanic %	White N	White %
Total University	3,774	1,654	43.8	1,097	29.1	880	23.3	135	3.6	8	0.2	234	6.4	47	1.3	14	0.4	42	1.2	3,296	90.7
Twin Cities Campus	3,198	1,494	46.7	911	28.5	720	22.5	66	2.1	7	0.2	197	6.4	43	1.4	7	0.2	36	1.2	2,796	90.8
Academic Health Center	1,266	432	34.1	353	27.9	424	33.5	55	4.3	2	0.2	78	6.4	9	0.7	2	0.2	13	1.1	1,124	91.7
Dentistry	239	47	19.7	69	28.9	122	51.1	1	0.4	0	--	9	3.9	1	0.4	1	0.4	3	1.3	216	93.9
Medical School	702	253	36.0	179	25.5	222	31.6	47	6.7	1	0.1	50	7.4	6	0.9	0	--	8	1.2	608	90.5
Nursing	39	7	18.0	11	28.2	18	46.1	3	7.7	0	--	0	--	0	--	0	--	1	2.6	38	97.4
Pharmacy	53	18	34.0	17	32.1	17	32.1	0	--	1	1.9	5	9.4	0	--	0	--	0	--	48	90.6
Public Health	96	37	38.5	30	31.3	26	27.1	3	3.1	0	--	6	6.6	1	1.0	0	--	0	--	89	92.7
Veterinary Medicine	94	55	58.5	28	29.8	10	10.6	1	1.1	0	--	8	8.5	1	1.1	0	--	1	1.1	84	89.4
University Hospitals	3	0	--	0	--	3	100	--	--	0	--	0	--	0	--	0	--	0	--	2	100.0
Duluth Medicine	40	15	37.5	19	47.5	6	15	0	--	0	--	0	--	0	--	1	2.5	0	--	39	97.5
Arts, Sciences, and Engineering	1,100	617	56.1	314	28.5	162	14.7	6	5.5	1	0.1	83	7.9	15	1.4	4	0.4	16	1.5	935	88.8
Biological Sciences	88	58	65.9	25	28.4	5	5.7	0	--	0	--	4	4.6	0	--	1	1.1	0	--	82	94.3
General College	36	9	15.0	17	47.2	9	25.0	1	2.8	0	--	1	2.9	1	2.9	0	--	0	--	33	94.3
Institute of Technology	449	274	61.0	94	20.9	80	17.8	0	--	1	0.2	59	13.6	2	0.4	0	--	4	0.9	368	85.0
Liberal Arts	527	276	52.4	178	33.8	68	12.9	5	1.0	0	--	19	3.8	12	2.4	3	0.6	12	2.4	452	90.8
Professional Studies	757	421	55.6	223	29.5	107	14.1	4	5.3	2	0.3	345	4.8	18	2.4	1	0.1	7	1.0	674	91.7
Agr. Food, and Environ. Sciences	252	148	58.7	70	27.8	34	13.5	0	--	0	--	12	4.8	4	1.6	0	--	1	0.4	231	93.1
Agriculture Experiment Station	19	9	47.4	4	21.1	4	21.1	0	--	2	10.5	0	--	0	--	0	--	0	--	19	100.0
Arch. and Landscape Arch.	38	17	44.7	7	18.4	14	36.8	0	--	0	--	0	--	0	--	0	--	1	2.9	34	97.1
Education and Human Develop.	144	81	56.3	52	36.1	11	7.6	0	--	0	--	2	1.4	5	3.5	0	--	3	2.1	132	93.0
Extension Service	11	6	54.6	4	36.4	1	9.1	0	--	0	--	0	--	0	--	0	--	0	--	10	100.0
Human Ecology	74	31	41.9	25	33.8	16	21.6	2	2.7	0	--	0	--	2	8.7	0	--	0	--	21	91.3
Humphrey Institute	25	16	64.0	4	16.0	5	20.0	0	--	0	--	0	--	3	4.1	0	--	1	1.4	69	94.5
Law School	46	32	69.6	12	26.1	1	2.2	1	2.2	0	--	2	4.5	3	6.8	1	2.3	0	--	38	86.4
Management	107	58	54.2	32	29.9	17	15.9	0	--	0	--	19	18.8	0	--	0	--	0	--	82	81.2
Natural Resources	41	23	56.1	13	31.7	4	9.8	1	2.4	0	--	0	--	1	2.5	0	--	1	2.5	38	95.0
Other	75	24	32.0	21	28.0	27	36.0	1	1.3	2	2.7	1	1.5	1	1.5	0	--	0	--	63	96.9
Continuing Educ. and Extension	11	3	27.3	2	18.2	5	45.5	1	9.1	0	--	0	--	0	--	0	--	0	--	10	100.0
Information Systems	1	0	--	0	--	0	--	0	--	1	100.0	0	--	0	--	0	--	0	--	1	100.0
Libraries	37	10	27.0	13	35.1	14	37.8	0	--	0	--	0	--	1	2.7	0	--	0	--	36	97.3
VP Academic Affairs	2	1	50.0	0	--	0	--	0	--	1	50.0	0	--	0	--	0	--	0	--	2	100.0
VP Finance and Operations	2	0	--	1	50.0	1	50.0	0	--	0	--	0	--	0	--	0	--	0	--	2	100.0
VP Research	11	4	36.4	5	45.5	2	18.2	0	--	0	--	1	8.3	0	--	0	--	0	--	11	91.7
VP Student Affairs	11	6	54.6	0	--	5	45.5	0	--	0	--	0	--	0	--	0	--	0	--	11	100.0

^aExcluding 410 retirees.^bThere were 271 ethnic codes missing.

Table 62 (Continued)

Descriptive Characteristics of University of Minnesota Faculty for Fall 1995
Total University, Twin Cities Campus, and by College^a

	Total Faculty	Gender ^b				Tenure Status						Ph.D. Holders					Leaves ^c			
		Male		Female		Tenured		Track		Other		U of M		Other		Avg	Avg Yrs	Since	SBL	SOL
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	Age	at U	Tenure	%	%
Total University	3,774	2,831	75.0	942	25.0	2,650	70.2	463	12.3	661	17.5	--	--	--	--	--	--	--	--	--
Twin Cities Campus	3,198	2,430	76.0	767	24.0	2,274	71.1	390	12.2	534	16.7	443	21.4	1,623	78.6	49.9	15.5	14.8	28.2	26.8
Academic Health Center	1,266	933	73.7	333	26.3	688	54.3	190	15.0	388	30.6	189	36.3	331	63.5	47.9	12.4	12.3	13.0	7.7
Dentistry	239	181	75.7	58	24.3	61	25.5	16	6.7	162	67.8	17	53.1	15	46.9	46.0	10.9	15.1	2.5	5.9
Medical School	702	536	76.4	166	23.6	399	56.8	134	19.1	169	24.1	73	29.4	175	70.6	47.9	11.9	11.6	6.0	6.7
Nursing	39	1	2.6	38	97.4	23	59.0	12	30.8	4	10.3	19	67.9	9	32.1	53.1	15.8	12.4	59.0	20.5
Pharmacy	53	40	75.5	13	24.5	32	60.4	4	7.5	17	32.1	19	41.3	27	58.7	45.2	12.9	11.4	60.4	17.0
Public Health	96	62	64.6	34	35.4	58	60.4	15	15.6	23	24.0	23	34.8	43	65.2	48.3	12.5	11.9	58.3	18.8
Veterinary Medicine	94	79	84.0	15	16.0	80	85.1	6	6.4	8	8.5	29	45.3	35	54.7	49.8	15.2	12.7	0.0	0.0
University Hospital	3	2	66.7	1	33.3	0	--	0	--	3	100.0	0	--	0	--	39	13.0	0.0	0.0	0.0
Duluth Medicine	40	32	80.0	8	20.0	35	87.5	3	7.5	2	5.0	9	25.0	27	75.0	87.9	17.5	14.9	19.0	5.0
Arts, Sciences, and Engineering	1,100	879	80.0	220	20.0	909	82.6	112	10.2	79	7.2	110	11.7	831	88.3	51.0	17.5	16.4	45.5	45.6
Biological Sciences	88	69	78.4	19	21.6	79	89.8	6	6.8	3	3.4	11	13.1	73	86.9	51.5	18.0	16.1	51.1	39.8
General College	36	25	69.4	11	30.5	29	80.6	6	16.7	1	2.8	19	76.0	6	24.0	51.8	20.1	15.9	27.8	41.7
Institute of Technology	449	417	92.9	32	7.1	356	79.3	46	10.2	47	10.5	40	9.8	367	90.2	49.3	16.3	16.5	32.7	38.5
Liberal Arts	527	368	70.0	158	30.0	445	84.4	54	10.2	28	5.3	40	9.4	385	90.6	52.2	18.3	16.4	56.7	52.9
Professional Studies	757	575	76.0	182	24.0	610	80.6	88	11.6	59	7.8	131	22.5	450	77.5	50.9	16.7	14.9	28.5	31.4
Agr. Food, and Environ. Sciences	252	218	86.5	34	13.5	211	83.7	33	13.1	8	3.2	48	27.0	178	78.8	50.3	16.7	14.5	16.7	28.6
Agriculture Experiment Station	19	19	100.0	0	0.0	14	73.7	3	15.8	2	10.5	7	43.8	9	56.2	52.1	19.4	22.3	15.8	5.3
Arch. and Landscape Arch.	38	30	78.9	8	21.1	17	44.7	5	13.2	16	42.1	0	--	3	100.0	49.6	15.3	15.0	13.2	23.7
Education and Human Development	144	91	63.2	53	36.8	132	91.7	7	4.9	5	3.5	38	32.5	79	67.5	53.4	20.2	17.0	36.8	58.3
Extension Service	11	9	81.8	2	18.2	5	45.5	0	--	6	54.5	3	75.0	1	25.0	60.7	29.9	21.0	0	9.1
Human Ecology	74	27	36.5	47	63.5	59	79.7	8	10.8	7	9.5	13	23.2	43	76.8	52.0	15.7	12.0	79.7	54.1
Humphrey Institute	25	18	72.0	7	28.0	18	72.0	4	16.0	3	12.0	3	13.0	20	87.0	51.2	12.5	15.4	24.0	16.0
Law School	46	32	69.6	14	30.4	35	76.1	4	8.7	7	15.2	0	--	4	100.0	49.7	14.7	15.7	19.6	6.5
Management	107	93	86.9	14	13.1	84	78.5	19	17.8	4	3.7	6	6.5	87	93.5	48.2	14.0	13.1	25.2	16.8
Natural Resources	41	38	92.7	3	7.3	35	85.4	5	12.2	1	2.4	13	33.3	26	66.7	49.9	14.9	12.3	29.3	14.6
Other	75	43	57.3	32	42.6	67	89.3	0	--	8	10.7	13	54.2	11	45.8	58.0	26.5	18.5	26.7	26.7
Continuing Education and Extension	11	7	63.6	4	36.4	10	90.9	0	--	1	9.1	1	50.0	1	50.0	58.0	26.2	20.3	18.2	27.3
Information Systems	1	1	100.0	0	0.0	1	100.0	0	--	0	--	0	--	0	--	61.0	33.0	26.0	0.0	0.0
Libraries	37	16	43.2	21	56.8	37	100.0	0	--	0	--	3	75.0	1	25.0	58.4	26.1	20.5	40.5	43.2
VP Academic Affairs	2	2	100.0	0	0.0	2	100.0	0	--	0	--	1	100.0	0	--	58.5	25.0	18.5	50.0	0.0
VP Finance and Operations	2	1	50.0	1	50.0	2	100.0	0	--	0	--	0	--	0	--	48.5	16.0	11.5	50.0	0.0
VP Research	11	9	81.8	2	18.2	4	36.4	0	--	7	63.6	2	22.2	7	77.8	55.1	27.7	6.0	0.0	0.0
VP Student Affairs	11	7	63.6	4	36.4	11	100.0	0	--	0	--	6	75.0	2	25.0	61.6	28.7	23.4	9.1	9.1

^aExcluding 410 retirees.^bThere was one gender code missing.^cThe statistics on sabbaticals and single quarter leaves may be based on incomplete information.

The University of Minnesota, like most large research universities, had a relatively small number of minorities (N=219, 6.0%) among its faculty in 1985. As part of its continuing efforts to become a more diverse institution, the Twin Cities campus now has a somewhat larger number faculty of color (N=283, 9.2%). About one-fifth (20%) of the full-time faculty in 1985 were women, a percentage that has increased now to 24 percent. Comparisons among colleges indicated percentages of women in 1985 that ranged from a low of five percent in the Institute of Technology to a high of 57 percent in the College of Human Ecology. Percentages in those two units in 1995 are 7.1 percent and 63.5 percent, respectively.

Table 62 also contains statistics on other faculty characteristics. The percentage of faculty who are tenured has increased from 49.8 percent to 71.1 percent. Biological Sciences has the highest percentage who are tenured (89.8%) and Dentistry has the lowest (25.5%). For Ph.D. holders, a higher percentage received those degrees from institutions other than the University in 1995 than in 1985 (78.6% versus 72.7%), suggesting an increase in institutional diversity represented in the faculty, a concern which had been noted in previous site visit reports. The mean age of faculty has increased from 46 to 50 years of age over the ten years. The average number of years on the faculty has increased from 12 years in 1985 to 15.5 years in 1995. Years on the faculty since receiving tenure has increased from 12 to 16.4 years. The percentage of faculty members who have taken leaves has increased slightly. In 1985, 36.1 percent reported having had a sabbatical and 30.5 percent reported having had a single quarter leave; the 1995 percentages increased to 45.5 percent and 45.6 percent, respectively.

Statistics contained in the 1985 report suggested that large numbers of faculty were first appointed in the late 1960s and early 1970s, and that relatively few faculty members had been appointed in the period from 1975 to 1985. The importance of maintaining an adequate flow of highly qualified new faculty into academic research continues to be an issue of concern. Budgetary constraints in the last decade have made it increasingly difficult to bring in talented new faculty.

In many fields today, the majority of recent doctoral graduates begin their research careers in the business world. This change is the result of three key forces: decreased state funding for public colleges and universities, decreases in the amount of research funding to colleges and universities, and high retention rates of present tenured faculty. Financial conditions continue to restrict the flow of new Ph.D.s into academic positions.

During the nine-year period from 1975 to 1984, there were 87,002 applications for faculty positions across all campuses of the University of Minnesota, 3,032 of whom were hired for faculty positions. In 1994-95, there were 119 new faculty hired across all campuses of the University of Minnesota.

Faculty and Staff Experiences

The centrality of the institution's efforts to enable faculty and staff to contribute to the institution's well being was recognized in the development of a set of institutional level critical measures to guide the implementation of University 2000.

The Faculty and Staff Experience Critical Measure² addresses the experience of University faculty and staff from two perspectives -- the institution's and the employee's -- and focuses on three key areas: (a) skill and career development of employees (as facilitated by

² <http://www.opa.pres.umn.edu/specproj/critmeas/phase2/facsta-s.htm>

the institution); (b) supportiveness of the environment (as reflected in employees' perceptions of the climate); and (c) market competitiveness in compensation (as viewed for the institution in the aggregate, not on an individual level). In July 1995, the Board of Regents approved a general goal to increase the preparation and satisfaction of University faculty, and staff and the University's overall compensation position among leading research universities (for faculty and academic staff) and relative to market (for civil service and union represented staff).

The rationale for focusing this critical measure on the three specific areas identified above is that the quality of the experience of faculty and staff, as employees of the University and as members of the University community, is central to their effectiveness and performance. To the extent that the experience is a positive one, the likelihood of successful outcomes is increased, and to the extent that there are problems in the faculty/staff experience, they need to be addressed so that the quality of the experience is improved. Figure 23 below indicates the detailed framework to be used in monitoring the three elements of this critical measure.

Recruitment of faculty and staff continues to be an important aspect of University 2000, but will not be included as part of this critical measure because it would be difficult, if not impossible, to measure in a meaningful way at an institutional level, given the significant differences among disciplines and departments. It is therefore more appropriate to measure at the college and departmental levels, and these units will be expected to address this issue in their own unit-level measures. To the extent that competitive compensation is an important factor in the recruitment of top faculty and staff, the compensation focus here supports recruitment, even while not addressing it directly.

While retention of faculty and staff in general, and underrepresented/diversity groups in particular, continues to be important to the University 2000 vision and goals, a retention rate is not included as part of this critical measure because it would not distinguish among the different reasons that employees leave, only some of which reflect problems in the environment. In addition, to the extent that employees leave because of a negative experience here, these issues should be reflected in the measurement of faculty and staff satisfaction with the climate. Although it would not be part of this institutional critical measure, a general exit survey of all faculty and staff who leave the University will be a useful supplemental measure, allowing for a more systematic monitoring of the causes of attrition and the development of appropriate initiatives where problems exist. In the case of underrepresented/diversity groups, interviews and focus groups might be also be used to obtain additional information on climate-related causes of attrition. A subsequent section of this chapter describes faculty retention cases in three recent years.

The development of this critical measure built on the work of several offices, including the University's Human Resources Office, the Office of the Associate Vice President for Academic Affairs with Responsibility for Minority Affairs and Diversity, and the Commission on Women. Several recent reports also provide an important basis for this critical measure, including the Compensation Working Group's March 1995 report, the Office of the Associate Vice President for Minority Affairs and Diversity's January 1995 report *A Five-Year Progress Report on Tenured and Tenure-Track Faculty and Academic Administrators of Color: Recruitment and Retention*, and the Commission on Women's May 1995 working paper "Minnesota Plan II, 1995-2000 Recommendations to Increase the University Community's Capacity to Improve the Campus Climate for Women."

Figure 23

Faculty and Staff Experience Critical Measure

<i>Institutional Perspective</i>	<i>Employee Perspective</i>
<p>Development Goals: effective skills and career development of faculty and staff:</p>	<p>Climate Goal: overall satisfaction with climate including at least the following areas:</p>
<ul style="list-style-type: none"> • systematic preparation of faculty and staff for skills required in current jobs, through many different kinds of development, mentoring, training, support • effective career planning and development of faculty and staff, including development for future University jobs and others 	<ul style="list-style-type: none"> • sense of supportive interpersonal climate, including respect, value, recognition for work, collaborative working relationships, availability of mentoring and other forms of interpersonal support • experience of welcoming, supportive, safe, accessible, functional physical environment
<p>Measure: the extent to which faculty and staff receive support and development that prepare them to perform effectively in their jobs, and that advance the mission of the institutions (current and future)</p>	<ul style="list-style-type: none"> • overall sense of community, including informal opportunities for communication • understanding of and sense of shared commitment to institutional mission/goals
<p>Compensation Goal: market competitiveness in compensation:</p>	<ul style="list-style-type: none"> • experience of clear communication of expectations/role, and feedback on performance
<p>Measure: for faculty and academic staff, the University's compensation position among peer institutions; for civil service and union represented groups, the University's position relative to appropriate labor markets</p>	<ul style="list-style-type: none"> • sense of meaning, challenge, and creative opportunities in work; time for reflection, collegiality, and quality in work • perception of institutional, collegiate, and/or departmental support for work including all aspects of mission and goals • opportunities for participation in decision-making • effective problem solving mechanisms for dealing with interpersonal/work issues • meaningful compensation and rewards • opportunities for development and advancement • commitment to the institution, vs. a desire or intention to leave
	<p>Measure: the extent to which faculty and staff perceive their work as respected, valued, supported, and recognized, in a welcoming, collaborative, safe, and functional physical and interpersonal environment, expressed as satisfaction with the overall climate</p>

Development Measure

This measure addresses the extent to which faculty and staff receive developmental support and/or training that prepares them to perform as expected in their jobs and that advances the mission of the University, with particular emphasis on: (a) developmental support for the mission activities of research, scholarship and artistic activity; teaching and learning; and outreach and public service; (b) preparation for administration, management, and leadership to accomplish institutional, campus, and unit goals; (c) training for specific skills, including effective use of information technology; and (d) individualized orientation and developmental support for junior faculty and new staff.

Although the need has been recognized and preliminary work has begun, development of a comprehensive institutional strategy and a plan identifying the skill and career development needs of faculty and staff (and appropriate organizational responses) will likely take one to two years to complete. In the short term, one of the more important steps may be to set an institutional expectation concerning the importance of increased attention to development and training and to determine at a unit level what types of development and training are needed. Once the planning process is completed, baseline information can be collected and goals set for this part of the Faculty and Staff Experience Critical Measure. At that time, it may also be useful to consider supplemental measures, including ratings by recipients and others on the impact of development support or training received.

Climate Satisfaction Measure

Although some faculty and staff surveys have been done in the past for more specific purposes, there has not been a comprehensive survey addressing the issues of climate for all faculty and staff groups on a regular basis. This measure is being developed in collaboration with campuses, colleges, and departments so that the results will be meaningful at all levels of the institution, and meaningful results can be obtained for each of the major faculty and staff groups and the underrepresented/diversity groups.

The institutional critical measure for climate satisfaction will be based on an annual faculty/staff survey that includes an overall question on satisfaction with the climate, as well as more specific questions. A draft, prepared by the Office of Human Resources and the Office of Planning and Analysis, is being reviewed in early spring quarter 1996 by human resources staff in collegiate offices and other appropriate offices on campus. Survey results will be disaggregated for each faculty and staff group, as well as for underrepresented/diversity groups. This information could be supplemented by using more in-depth interviews or focus groups if more information was needed to understand survey findings. Additional supplemental measures might include the percent of staff jobs filled by promotion vs. external hires; for faculty, time in rank/time to promotion and tenure; and the percent of retention cases who decide to stay.

Compensation Measure

This measure refers, for faculty and academic staff, to the University's compensation position among peer institutions. Recognizing that faculty salaries vary among the different disciplines and that, on a working level, salaries need to be competitive with comparable departments/disciplines in peer institutions, it is nevertheless useful to look at the University of Minnesota's "competitive position" overall when establishing compensation performance goals. Because of the different campus missions, competitive position and future performance goals are being based on different sets of peer institutions for each campus. For the Twin Cities campus, the Compensation Working Group has recommended using the top 30 U.S. research universities. For civil service and union represented groups, the measure refers to the University's position relative to appropriate labor markets.

A more recent analysis of faculty salaries comes from the results of the 1995-96 salary survey comparing salaries by rank for the University of Minnesota, Twin Cities campus, and other major research universities. Results contained in Table 63 include 34 research institutions since five schools tied for the rank of 30. Five schools passed Minnesota in rank: UC San Diego, Washington (Seattle), Texas, Duke, and Johns Hopkins. Full professors at Minnesota now rank 30/34 at \$12,900 below the mean. Associates now ranked 29/34 at \$6,400 below the mean. Salaries for Assistant Professors rank 25/34 or \$3,200 below the mean, reflecting increased competitive pressures.

Comparing the University of Minnesota to the institutions of the "Big Ten" plus Chicago, full professors rank 9/12 or \$5,600 below the mean, associates rank 10/12 or \$4,000 below the mean, and assistant professors rank 7/12 or \$1,700 below the mean. What is critical for the University is that it be competitive with other leading research institutions, known as well for excellence in their undergraduate, graduate, and professional programs. For the Twin Cities campus, the Compensation Working Group has recommended using the leading 30 U.S. research universities cited in *Change* magazine as a basis for comparison. In the 1994-95 AAUP Salary Survey, the University of Minnesota was below the mean salary by rank in all categories. For the overall mean faculty salary, for example, the mean for the University was \$59,841 compared to a mean of \$69,414 for the other institutions, and ranked 26th out of 30.

Principles for Human Resources Systems

In May 1995, a Task Force on Human Resources was appointed by the President. The impetus for the review of human resource policies and practices came from a recognition that the University must become more strategic about increasing the effectiveness and efficiency of its human resources. While a number of actions have been taken in recent years to streamline human resource management and to address specific grievance procedures and compensation issues, the President urged the Task Force to take a comprehensive and probing look at the fundamentals of human resource policy and management. The Task Force was asked to include four major topical areas: (a) recruitment and staffing; (b) developing administrators and reviewing their performance; (c) employment grievances and dispute resolution processes; and (d) compensation policy, principles, and structures. The preliminary report of the Task Force was presented to the Board of Regents in March 1996. The final report is expected to be completed by August 1996.

The preliminary report included the following statement of precepts for human resource policies:

"The University's mission is the creation and dissemination of knowledge which is accomplished through research, teaching, and outreach. HR policies must support the goals and strategies established in each area. While uniformity of policy throughout the system is desirable, some flexibility may be required to support differing goals and strategies.

Human Resource policies are interconnected: staffing and recruitment activities are impacted by the University's commitment to training and career development, by compensation practices, and by the fairness and efficacy of dispute resolution procedures. Thus, all policies must be viewed as integrated parts of a larger system.

For Human Resources policies to succeed, they must be integrated into the general management philosophies, policies, procedures and practices of the University. They are doomed to fail if they represent only the aspirations and mechanics of the Human Resource staff.

Table 63

1995-96 Salaries of the Top 35 Research Universities
Ranked in Order of 1982 and 1995 NRC Rankings^a

	Previous Rank	New Rank	School	Prof	Assoc Prof	Asst Prof	Mean Salary 9 mos	Mean Total Comp
PUBLIC	1	1	UC Berkeley	86.5	57.1	48.9	71.9	91.6
	2	2	Stanford	103.3	69.9	55.1	88.5	106.5
	3	3	Harvard	107.0	58.8	54.9	85.4	105.0
	6	3	Princeton	101.4	60.3	46.5	78.2	95.1
	11	5	Cornell	82.2	59.4	48.3	65.7	82.6
PUBLIC	7	6	Chicago	96.5	62.1	55.4	80.0	98.4
	8	7	Michigan	85.0	62.0	50.1	65.7	82.1
	5	8	MIT	96.9	67.1	54.3	80.4	100.9
	3	9	Yale	100.5	56.0	47.2	76.0	92.3
	11	9	Columbia	93.0	61.0	49.1	73.8	98.2
PUBLIC	8	11	UCLA	84.5	56.8	48.4	68.1	86.9
PUBLIC	8	12	Wisconsin (Madison)	70.4	52.5	46.4	61.3	77.4
	14	12	Pennsylvania	96.5	64.2	55.6	80.8	102.8
PUBLIC	21	14	UC San Diego	82.3	55.0	46.3	67.3	85.8
PUBLIC	20	15	Washington (Seattle)	70.2	49.9	44.6	58.0	71.3
	15	16	Cal Tech	103.1	75.0	59.0	92.5	115.0
PUBLIC	16	16	Texas (Austin)	76.1	49.3	44.9	60.3	72.9
PUBLIC	13	18	Illinois (C-U)	75.2	53.4	46.6	62.9	72.1
	25	19	Duke	91.7	62.6	50.1	75.2	93.1
	30	19	Johns Hopkins	84.8	57.8	47.2	62.5	77.7
PUBLIC	16	21	Minnesota TC	73.0	51.5	45.5	61.7	78.7
	18	22	Northwestern	92.0	64.5	54.7	77.1	93.4
PUBLIC	18	23	Chapel Hill NC	75.9	54.1	45.7	61.5	73.5
	21	24	NYU	96.8	63.7	54.4	74.0	98.0
	25	24	Brown	80.0	54.4	46.7	66.6	83.6
PUBLIC	25	26	Purdue	75.7	51.2	44.5	59.3	75.8
PUBLIC		27	Penn State	77.6	53.5	43.6	55.2	68.9
PUBLIC		27	UC San Francisco	70.1	51.4	42.5	58.6	75.0
PUBLIC		29	UC Santa Barbara	81.0	52.7	45.1	63.7	81.3
PUBLIC		30	Arizona	70.9	49.5	43.9	58.6	70.2
PUBLIC		30	SUNY Stony Brook	80.5	56.2	43.0	62.1	78.5
PUBLIC	28	30	Virginia	81.4	54.4	44.2	63.7	78.4
		30	Rochester	78.5	54.9	47.8	64.6	77.4
	30	30	Carnegie Mellon	88.6	59.1	52.6	73.6	88.1
Average without Minnesota				85.9	57.9	48.7	69.5	86.4
Minnesota below mean				12.9	6.4	3.2	7.8	7.7

^aDescriptive results provided by the Twin Cities AAUP.

^bAverage includes rank of instructor and is weighted by number of individuals at each rank.

Institutional values will determine Human Resource philosophies. From these philosophies are drawn the governing design principles for policies, which, in turn, are translated into action through procedures and practices. It is critical to understand that the procedures and practices of an institution as large and complex as the University will require a highly effective and efficient information management system. Because the present information systems are inadequate, a major investment must be made to develop this capability. Policy reform without the means of implementation is a futile exercise that will engender increased frustration and further reduce management's credibility.

Human Resource policies and practices must support the University's mission, vision, goals and strategies. In so doing, the policies must balance the needs and rights of the institution's constituencies -- students, taxpayers, and communities -- with the needs and rights of those who work for the institution."

The preliminary report also identified the following 17 goals to guide the revision of human resources policies:

- That Human Resources and general management policies contribute to a climate of trust throughout the institution. A demonstrated shared belief in the dignity of every University employee is essential to the creation of trust.
- That Human Resources and general management policies will recognize the importance of morale in achieving optimum institutional performance.
- That each job position in the University contributes to the institution's mission. And that every employee understands their role in contributing to the institution's success.
- That each position is occupied by an individual who can now, or within a reasonable period of time, perform the job in an exemplary manner.
- That both the University and the individual share responsibility for developing the skills necessary for high level performance, and that as a leading proponent and provider of career education, the University will assist its employees to achieve their maximum employment potential through internal and external education, training or development opportunities.
- That every individual whose compensation, job security, advancement, and workplace civility is determined by a superior may expect that superior to be held accountable for managerial competence and conduct.
- That where possible and appropriate, compensation will be based on performance rather than longevity and that some part of compensation will be variable. (This only will be possible when employees believe in the competency of supervisors to set achievable goals and to fairly measure performance, and when the University can assure continuous funding for performance pay.)
- That total compensation -- salaries, benefits, working conditions, and job security -- will approximate compensation paid for similar positions in the private sector, other units of the public sector, or peer institutions. Each category of our work force has an appropriate comparison group against whom we can measure the competitiveness of our compensation. The institution must be careful, however, to constantly evaluate a wide variety of employment sectors to insure the reasonableness of any one sector.

- That all university members will understand what is expected from them, how their performance will be assessed, and what they can expect in return from the University for various levels of performance. Or put another way: in return for their compensation, rights and privileges, each university member will agree to meaningfully assist the University in reaching its goals and be willing to be compensated according to their level of contribution.
- That job security is a function of the ability of the University to competitively fill public needs and the ability of the individual to perform adequately the work required by the University in fulfillment of that goal. As a responsible employer, the University will endeavor to assist its employees through training and career development to qualify for its ever changing work force requirements. This responsibility must be balanced against the public's expectation that the University will not provide sinecures for any group of employees.
- That job design and compensation systems will seek to make congruent the interests of the individual and those of the University.
- That Human Resources systems promote the concept of teaming and strive for unity between the various sectors of the university's population.
- That authority be delegated to the lowest possible level, subject to assignment of accountability and completion of appropriate training.
- That all Human Resources systems and policies promote the University's commitment to fairness in all employment issues, including equal employment opportunity and freedom from harassment and discrimination.
- That Human Resources policies honor and support the concept of academic freedom.
- That supervisors and managers throughout the University system be held accountable for fulfillment of these philosophies.
- That policies are written to provide working procedures for the 95 plus percent of the work force who are diligent, loyal, and competent -- not as procedures to protect against the small number of miscreants who will found in any large work force.

Faculty Retention Cases On The Twin Cities Campus

A recent informal report by the Office of Planning and Analysis summarized faculty retention at the University of Minnesota, Twin Cities campus, for the years 1991-92, 1992-93, and 1993-94. Special attention was given to the number, substance, and scope of retention offers, successes and failures, the financial impact on the University of successful retention offers in terms of both salary increases and non-recurring commitments, and some factors affecting faculty's decision to remain or leave.

Overall Retention Cases

Based on the information provided by the Twin Cities Campus colleges, there were 113 formal faculty retention cases over the past three academic years. This number is believed to be lower than the actual number of cases because the retention data were incomplete for several departments of some collegiate units. Overall, the University retained 65 of the 113 (58%) faculty; failed to retain 41 of 113 (36%); and 7 (6%) cases were pending at the time the survey was completed.

Salary Increases and Non-Recurring Costs

Over the three year period, 72 University of Minnesota faculty were offered approximately \$3,102,000 in salary increases and one-time benefits. There was insufficient financial information for 41 retention cases. The total value of salary increases offered to 72 University faculty by outside institutions were worth approximately \$1,502,000 in recurring costs per year; the non-recurring portion of the offers was worth approximately \$4,797,000 over three years. About 90 percent of the offers were from other higher education institutions.

On average, the University offered a 25 percent increase in salary to retain a faculty member; the outside offer averaged 36 percent. There were larger differences in other institution's non-recurring commitments for laboratories, research assistants, and travel and equipment expenses. Excluding the Humphrey Institute, the Law and Medical Schools, outside non-recurring commitments (\$4,797,600) were approximately 160 percent higher than those made by the University (\$1,865,000). The actual recurring cost of salary increases to the University in meeting successful retention cases (65) was \$942,100 per year; approximately \$1,766,200 were provided in non-recurring costs over the past three years. The average annual cost of the retention efforts was approximately \$1,530,830 over the past three years.

Salary Increases by Rank of Faculty and Discipline

Assistant and full professors were offered an average increase of 37 percent for their salaries; associate professors were offered a 35 percent increase. There was a large discrepancy between and within the collegiate units reflecting major differences in the academic labor market. Anticipated average salary increase was approximately 35 percent in CLA and the Carlson School of Management, and 28 percent in the College of Agricultural, Food and Environmental Sciences, and 46 percent in the Institute of Technology.

Faculty Rank and Successful Retention

Published studies on faculty mobility suggest differences in retention patterns by faculty rank. Our data suggest some differences by faculty rank with respect to retention decisions. Overall, of the 113 retention offers during the past three years, 45 (40%) were to full-time professors, 33 (29%) were to associate professors, 26 (23%) were to assistant professors, and three (3%) were to other academic staff (e.g., lecturer, librarian). There was insufficient information for six cases to determine their faculty rank. Collegiate units differed with respect to retention cases by faculty rank. For example, 8 of the 10 retention offers at the Medical School were to assistant professors, while 22 out of the 39 retention cases in the College of Liberal Arts were to full time professors. The combination of associate and full professors accounted for 87 percent of retention offers in CLA. The University successfully retained 48 percent, 67 percent, and 62 percent of assistant, associate, and full professors, respectively. The Medical School appears to have a particular retention problem since it lost nine of the ten faculty during the past three years.

Faculty Promotion Offers

The inclusion of promotion in an offer is sometimes used as an additional incentive to lure individuals from one school to another. Of the 59 assistant and associate professor retention cases, 21 of the faculty received promotion offers from other institutions of higher education. Six of these faculty who were offered promotion from outside and not from the University decided to leave, while three other cases were pending. On the other hand, the University offered promotion to 12 faculty and all were retained.

Factors Influencing Faculty's Decision

Faculty compensation was often mentioned as the most important factor affecting the decision to leave the University of Minnesota. The overall level of salary has become less competitive, and there were two recent years of salary freezes. In some cases it was reported that salary was not a key issue but rather, the research environment and work conditions. Family reasons and spousal employment were also mentioned as important factors in influencing decisions for leaving the University.

Policy Implications

There are several policy implications that need to be considered if the University of Minnesota is to be successful in retaining its productive faculty members.

- The costs of annual retention efforts are significant (\$1.5 million) and need to be included in the budget.
- The size of outside offers and the lower University response is more significant if the difference between the two continues to increase.
- Faculty rank does not seem to be basis of a problem.
- Salary, current or potential, is an important determinant in retention, but non-recurring commitments that support faculty efforts are also significant. Faculty pay structures need to be competitive, and the institution needs flexible resources to respond quickly to outside offers.

Commission on Women

A May 1995 report from the University of Minnesota Commission on Women, *Improving the Climate for Women at the University of Minnesota, Findings and Recommendations for the MN Plan II 1995-2000* described the results of a study to determine how well the University community had increased its capacity to improve the climate for women since 1988. The choice of the words "Minnesota Plan" links these current efforts with the original Minnesota Plan, which was created in 1960 with funding from the Carnegie Foundation and was the first program in the United States to focus on women's continuing education.

In the aftermath of the Rajender Consent Decree, the University created the Minnesota Plan II, a proactive initiative to improve the environment for women. This overview of the recent MN Plan II report briefly describes the review process, the major findings, the major needs, action strategies, and suggestions to disseminate the plan recommendations and monitor its progress.

The review process was comprised of the collection of two sets of information: interview data and "thermostats." Individually or as members of small focus groups, 158 people participated in interviews. These included members of the Commission on Women, members of the wider Twin Cities campus community, key faculty, administrators, academic professional, civil service and bargaining unit staff.

The "thermostats" were numerical indicators for the distribution of institutional rewards, privileges and opportunities, and came in varied formats from varied sources. The major findings were grouped into three categories: accomplishments, challenges, and barriers:

Accomplishments (Good News)

- The overall percentage of women in top positions was up 11 percent (from 72 to 119) since 1988.
- Male dominated colleges and fields were making real headway in increasing the number of female faculty.
- Some colleges with ample hiring opportunities made significant strides in successfully recruiting women.
- Women at the Assistant and Associate Professor ranks increased by five percent since 1988.
- Women were being promoted and tenured at a slightly higher rate than men.
- The attrition rate for women was lower than that of men in both 1989-90 and 1993-94.
- The percentage of women holding distinguished professorships (e.g., endowed chairs) was higher than the percentage of women who were full professors.
- A notable number of women received University sponsored research and sabbatical leaves.

Challenges (Troubling News)

- Although the overall percentage of women earning doctorates was up, the percentage of women earning some professional degrees and Ph.D.'s in some fields was down.
- Although women did very well in receiving Graduate School fellowships, they did not appear to be earning degrees at a rate comparable to men.
- The overall number of sexual harassment complaints had increased in recent years.
- Most sexual harassment complaints were filed by women students or civil service or bargaining unit women.

Barriers (Bad News)

- The percentage of women was highest at the lower administrative levels.
- Many historically male-dominated colleges remained so, despite increasing pools of possible applicants.
- The overall percentage of women on regular faculty appointments had only increased 2.5 percent since 1989.
- Colleges with ample hiring opportunities had not done as well as could be expected.

- There had been no increase in the percentage of women full professors university-wide.
- In the female dominated Academic-Professional category, fewer women than men were eligible for promotion.
- Women were under-represented in influential positions such as chairs of major senate and search committees.
- Women holding distinguished professorships were highly concentrated in the most predictable areas (e.g., dance, creative writing).
- Women continued to be under represented among those receiving outside research funding in excess of \$100,000.

The major needs suggested to implement *The Minnesota Plan II* included leadership initiatives, administrative accountability, professional development opportunities for women, campus-wide training programs and local initiatives, successful programs and activities, and thermostats to indicate the climate.

President Hasselmo, after reviewing *The Minnesota Plan II* charged University chancellors, provosts and vice presidents to carefully study the working paper, to identify two or three recommendations of greatest salience for improving the climate for women in their particular areas, and to outline the concrete actions they intended to implement beginning in 1995 in response to the Commission's recommendations.

The future agenda for the Commission on Women is to build from these proposed actions and to integrate them into a comprehensive plan, to collect data and information, analyze it and report periodically on progress in the various areas, and to identify trends in action strategies and activities in general terms. They will develop a plan for identifying levels of performance and establish how the commission will work with the University community, survey and report areas of agreed performance criteria and needs. They will comment on progress in units regarding their strategies for 1995-96 to identify strengths and areas for improvement, and they will give area specific feedback in terms of improving the campus climate for women, incorporating useful comparisons with selected campus units and other universities.

Continuing Resolution of Consent Decree

When the Rajender decree was lifted in January 1991, a new policy, *Affirmative Action and Equal Opportunity: Policy Statement on Women Academic Employees*, that had been adopted by the Board of Regents in July 1990 stated that "the University of Minnesota shall not tolerate discriminatory practice against women in any personnel actions including instruction, hiring, evaluation, promotion, pay or any form of institutional reward or recognition," and added more detail about personnel practices and data collection. During the 1991-92 academic year, approximately \$3 million was allocated to address salary discrepancies for women.

Subsequently, the current *Consolidated Diversity Statement* was approved by the Board of Regents in September 1995, and states that the University of Minnesota community is committed to achieving excellence through diversity and shall seek to:

- Provide equal access and opportunity to its programs, facilities and employment.
- Advocate and practice affirmative action including the use of recruiting and search processes to enhance participation of racial minorities, women, persons with disabilities and Vietnam era veterans.
- Establish and nurture an environment that actively acknowledges and values diversity.
- Provide equal access to members of underrepresented groups and develop affirmative action admissions programs where appropriate to achieve this goal.

Annually for the past several years, analyses have been conducted by Management Planning and Information (now the Office of Planning and Analysis) and provided to the Compensation Committee of the salary increases given to various categories of male and female staff members at the University of Minnesota. Highlights from the March 1995 report *Analysis of Salary Increases for Faculty and Professional and Administrative Staff at the University of Minnesota* are as follows: (a) no evidence that recent salary increases vary by gender, including when staff who changed job classifications were excluded from the analysis; and (b) no evidence of differential treatment by gender for faculty in the Rajender cohort.

The mean salary increases for the 1994-95 year was 7.4 percent (N=4,911); the increase for females was 7.7 percent (N=1,641) and for males 7.3 percent (N=3,270), but the difference is not statistically significant. No statistically significant gender difference was present for either the faculty or professional/administrative categories. Percentage increases by rank were as follows: assistant professor (6.9%), associate professor (7.6%), and professor (7.3%); there were no gender differences within each of the ranks.

System and Campus Governance Structure

The University of Minnesota has long been regarded as an institution with a very high level of faculty, staff, and student participation in governance and a strong tradition of consultation. The basic governance unit is the University Senate with 211 members elected from colleges depending on the size of the college. There are 164 faculty and academic professionals and 47 student members of the Senate. Bargaining unit faculty on the Duluth campus are the only University faculty not represented through the Senate.

In addition to the Senate there are Campus Assemblies; on the Twin Cities campus the Assembly consists of those elected to the Senate. As the provostal structure is accomplished, there will be elected consultative committees to serve each provostal area. Finally, there are governance structures in each college and department based on their separate constitutional provisions.

An elected Consultative Committee consisting of faculty and students manages the business of the Senate and the 16 standing committees. Faculty, staff, students, and administrators (ex officio) serve as members of the committees, the more significant ones of which are Finance and Planning, Education Policy, and Faculty Affairs. The committees serve a significant consultative role, with appropriate administrators and also forward items for approval through the Consultative committee to the Senate. The Consultative Committee meets at least twice monthly with the President, the senior vice presidents, and others consulting on all major issues facing the University

The tradition at the University of Minnesota has been significant participation by faculty, staff, and students in university governance at all levels with consultation as the primary mechanism. In particular, students are involved in significant numbers in the Senate, serve as members on most Senate committees, and have a full-voting representative on the Board of Regents.

As is true for other large institutions of higher education, faculty and student involvement in both system and campus governance is complicated and sometimes cumbersome in its structures to provide advice to system and campus administrators. The University Senate is governance mechanism for the University of Minnesota, and the Twin Cities campus. Figure 24 describes the committee structure for both governance entities. Copies of the agendas for the meetings as well as minutes of committee meetings of those two bodies for the 1995-96 academic year are available. The minutes for meetings of several committees have been made easily available in the past three years through e-mail.

Faculty Members' Class Contact Hours

A faculty member's role in a large research university includes teaching, research, and service responsibilities. Information in Chapter VIII: Research and Chapter IX: Outreach summarized faculty productivity in research and service, and other statistics (e.g., students enrolled and degrees confirmed) described some aspects of faculty members' instructional responsibilities. Each collegiate unit recently developed faculty workload policies that are now available for review. Faculty instructional workload may be defined and measured in any number of ways. Among the commonly accepted instructional workload measures are number of courses taught, numbers of undergraduate and graduate advisees, student credit hours, and number of contact hours in the classroom. It is likely that instructional workload has some relationship to research productivity, but the exact nature of the relationship is unclear.

The measure of instructional workload that has been chosen for comparative analysis between 1985 and 1995 is weekly class hours in the classroom. As a measure of workload, it has the same basis across colleges and departments on the Twin cities campus, and is a better measure than courses taught or credits generated. The data used in calculating weekly class hours come from the Course Inventory Report which is completed by departments/colleges for each of the three quarters of the academic years. A measure of faculty workload was obtained by summing class hours over a three-quarter period and then dividing by the number of ranked FTEs in a unit.

Table 64 contains the results for 1984 and for the most recent year for which data are available. Class contact hours varied widely across colleges on the Twin Cities campus in each of the three years. For example, class contact hours for 1984 ranged from a low of 3.36 for the College of Biological Sciences to a high of 14.95 for the college of Veterinary Medicine. Within colleges, class contact hours vary widely across departments, although those departmental variations are too detailed to include here. Across the colleges on the Twin Cities campus, the average number of hours of classroom instruction per week was about 8.5 hours in 1985 compared to 9.5 currently.

Figure 24

Organization of the University of Minnesota Senate and
Twin Cities Campus Assembly

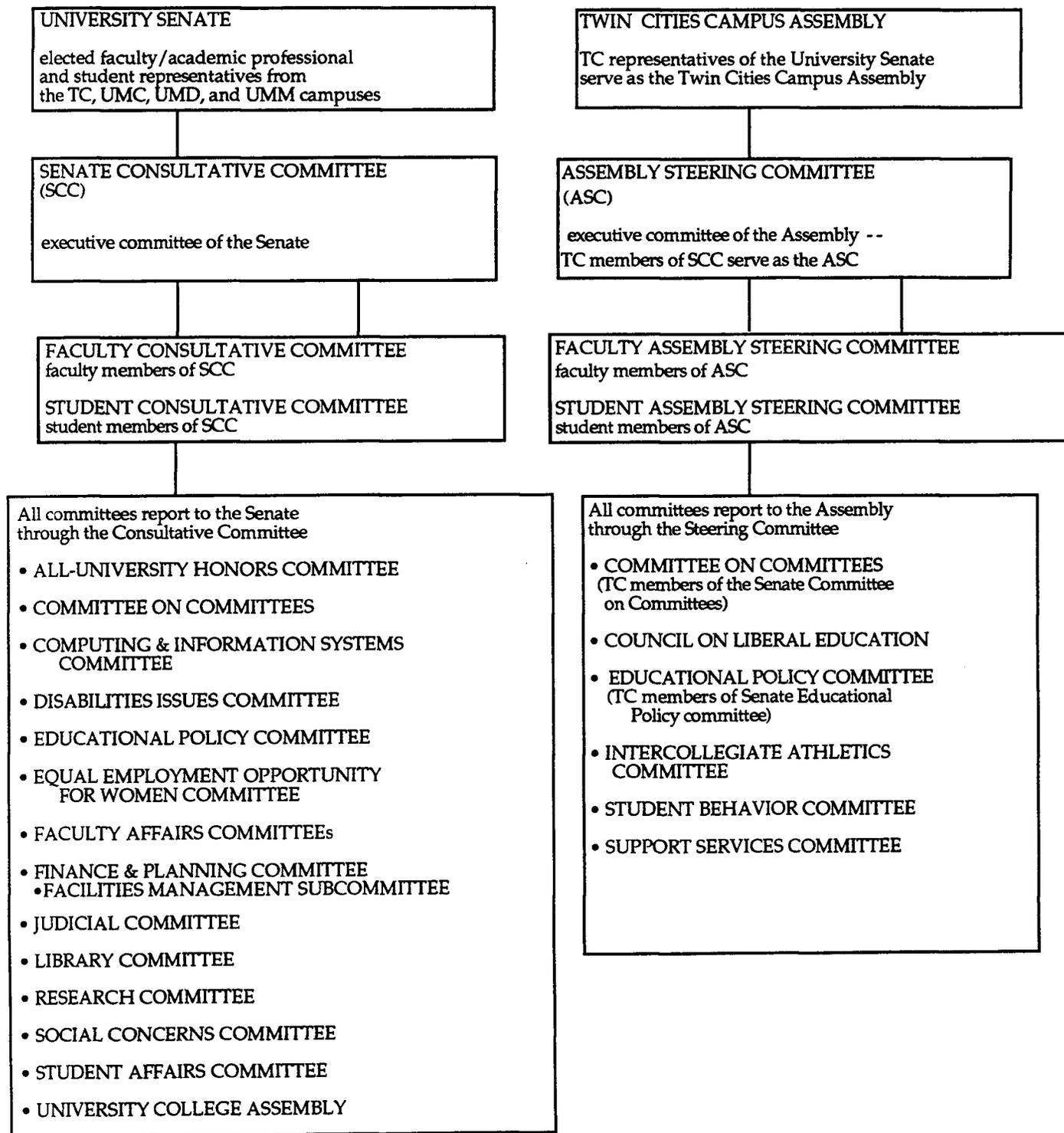


Table 64

Weekly Faculty Class Contact Hours, by College and Year^a

College ^b	FY84 Ranked FTE	Fall 91 Ranked FTE
Academic Health Center		
Dentistry	-	16.16
Medical School	-	16.09 ^c
Nursing	-	9.05
Pharmacy	-	18.02
Public Health	-	7.66
Veterinary Medicine	14.85	20.33
Arts, Sciences, and Engineering		
Biological Sciences	3.36	10.05
General College	9.91	9.53
Institute of Technology	6.08	7.00
Liberal Arts	7.46	8.31
Professional Studies		
Agricultural, Food, Environmental Sciences	7.16	10.11
Architecture/Landscape Architecture	-	14.93
Education and Human Development	8.13	10.00
Human Ecology	7.39	9.64
Humphrey Institute of Public Affairs	4.18	2.10
Law School	6.47	6.64
Management	6.45	5.44
Natural Resources	6.94	9.16

^aThese data are derived from the Course Inventory Report and indicate the number of hours spent in class for the average faculty member across all units in the college.

^bBecause these data are collegiate means, they give equal weight to each department. Although figures are available on a department-by-department basis they are too detailed for inclusion in this report.

^cBasic Sciences only.

Institutional Culture that Supports Teaching

Faculty-led discussions in recent years have supported a change in the institutional culture to give greater priority to high quality teaching. In April 1995, the Report of the Committee on Teaching and Learning was submitted to the President and the Senate Consultative Committee. The report included the following five key recommendations:

- Support the development of a University-wide culture of teaching and learning centered at the department level.
- Develop guidelines that allow colleges and departments to offer flexible, differential assignments for faculty.
- Assure that the reward structure supports departmental responsibility for the quality of teaching and atmosphere of learning.
- Support department-based initiatives to use new techniques and technologies for teaching and learning.
- Improve the physical environment for instruction.

Information contained in the chapters on undergraduate education and graduate and professional education discussed some of the recent initiatives in support of the recommendations in the 1995 report. In addition, specific initiatives in each of the collegiate units on the Twin Cities campus are discussed in Chapter V: Collegiate Overviews, Plans, Actions, and Concerns. Among the changes in the last decade is increased visibility of the institution's efforts to reward excellence in teaching.

Research, Scholarship and Artistic Accomplishments³

University 2000 identifies research as one of the six strategic areas for the University of Minnesota and states a goal of "sustaining and improving the University's position as one of the premier research universities in the country." The plan emphasizes a commitment to the relationship of basic research to applied research; to undergraduate education, graduate, professional and continuing education, and to outreach; to an appropriate balance of effort between basic and applied research, within and across the disciplines; to maintaining and enhancing the quality of academic disciplines that are the core of a land-grant, research university; to promoting interdisciplinary and/or cooperative activities; and to effectively responding to the demand for applied research. The results of faculty effort are therefore a critically important area to monitor in measuring the success of the University in meeting its goals for the future. This particular critical measure, which focuses on "scholarly products" and "scholarly recognition," is closely related to two other critical measures that also reflect the success of our faculty: Reputation of Programs (undergraduate, graduate, and professional education) and Sponsored Funding.

The second relevant Critical Measure: Scholarship, Research and Artistic Accomplishments, currently being developed by the Office of Planning and Analysis, is an Annual University Scholarly Accomplishments Portfolio reflecting the individual and collective scholarship, research, and artistic accomplishments of faculty across the institution. This measure will have two components: (a) a count of each of the basic types of "scholarly products" that reflect acceptance within the academic field; and (b) a descriptive listing of "highlights," forwarded by the disciplinary units, to reflect their more significant individual and collective scholarship, research, and artistic accomplishments, which might include both scholarly products and externally bestowed recognition. This second component is especially important, since it is not possible to reflect the significance of faculty accomplishments across the breadth and diversity of the University of Minnesota's colleges, and departments in simple numbers.

This measure reflects collective accomplishments (for example, of a group of faculty within a department, a college, or a campus), as well as results achieved by individual faculty members. The focus of the measure is on scholarly products and recognition, not on the performance or productivity of individuals. "Scholarly products" and "scholarly recognition" are defined below:

- All faculty are expected to engage in scholarship, research, or artistic activity that contributes to the discovery of new knowledge and produces original research, scholarship, and creative products across a wide range of fields. Creative, scholarly, and research products include the following major items: (a) scholarly books, monographs, book chapters, etc.; (b) articles published in scholarly or professional journals; (c) conference proceedings; (d) exhibits, exhibitions, performances and/or compositions; (e) patents and licenses; (f) software; and (g) designs. These items are public and easily identifiable; they are also extensively used in assessing faculty performance in the tenure and promotion process.

³ <http://www.opa.pres.umn.edu/specproj/critmeas/phase2/schola-s.htm>

- The quality and importance of the scholarly work of faculty can also be seen in the scholarly recognition received from national and international scholarly, scientific, and artistic organizations, associations, and societies. Scholarly recognition includes many types of awards, prizes, honors, and appointments by professional organizations or societies, and reflects the quality of a faculty member's scholarly work and relative standing in his or her field. Scholarly recognition includes the following major categories: (a) membership of faculty in important professional and scientific societies (e.g., the National Academy of Sciences, National Academy of Engineering, the Institute of Medicine, and other national institutes); (b) major educational, research, scholarly, or artistic awards (e.g., Nobel, Pulitzer, NIH MERIT awards); (c) major best book, best paper, other scholarship, research, or artistic awards; and (d) editorship or associate editorship of (leading) journals or book series. Although largely subjective, scholarly recognition -- particularly by national and international organizations -- provides important information about the quality, importance, and significance of the creative and scholarly work of faculty as determined by peers.

In the process of preparing for the 1986 Accreditation Review, several efforts were undertaken to describe the level and quality of scholarly productivity of the faculty, and provide historical context for the interpretation of results from the Critical Measure: Research, Scholarly and Artistic Accomplishments. The previously reported information is not a comprehensive and reliable basis for comparison, however, because of how the information was collected previously.

“The average number of publications in refereed journals for faculty members in the 1983-84 annual departmental review was obtained on the Departmental Information Form. These figures were not lifetime totals, since some departments responded in terms of those faculty being reviewed for promotion and tenure, rather than for the department's faculty as a whole. The mean number of publications listed was 28.3, and the median number of publications was 20.4.”

Information for the most current year is being collected as part of the implementation of this critical measure. The categories listed reflect the breadth of scholarly work across a broad range of disciplines. This measure will not be a single count of scholarly products across the categories, but separate counts for each of the different product types for two reasons. First, measures for creative, scholarly, and research accomplishments should reflect the broad mission of the University and thus be able to include all possible forms of faculty accomplishment in various fields. Second, because scholarly and artistic work in these fields results in significantly different kinds of products in a wide variety of forms, it would be extremely difficult -- and probably meaningless -- to reduce such a large number of diverse products to a single, numerical count. Figure 25 indicates how the measures would look for the different types of important scholarly products of our faculty.

Although it is becoming increasingly important to communicate publicly what faculty accomplish, there is currently no systematic process for collecting information about the actual products or results of University faculty scholarship, research, and artistic activity. As a measure of the important creative contributions of University faculty in discovering new knowledge, this critical measure should allow for better communication of its usefulness and importance to the public, as well as facilitating discussion and celebration of faculty accomplishments within the University community. It should be noted that a similar recommendation for reporting faculty accomplishments was made by the Faculty Workload Task Force in 1992. The Task Force noted that the University “must have a means of summarizing faculty effort and accomplishments . . . However, the current institutional information seems substantially deficient in providing an overview of the full range of effort and, most importantly, of the broad array of faculty accomplishments.” The Task Force

noted that such a report of faculty accomplishments would be a form of accountability and could also be used for internal management and planning needs and for communication with external audiences.

Figure 25

Annual Scholarly Scientific and Artistic Products

Type of Scholarly Products	Number of Scholarly Products
Publications	Number
Scholarly books	
Edited books	
Textbooks	
Monograph	
Journal articles	
Book chapters	
Published conference proceedings	
Artistic accomplishments	
Exhibits	
Exhibitions	
Performances and/or compositions	
Commissioned works	
Computer software programs	
Architectural designs	
Patents and licenses	
Patents	
Licenses	
Other	

Centers and Institutes

During the past decade several disciplinary and cross-disciplinary centers have been created that have addressed varying aspects of the institution's tripartite mission. There are about one hundred centers, ranging from the Center for Advanced Research on Language Acquisition to the Center for Youth Development. A fairly comprehensive list is as follows:

- Center for Advanced Research on Language Acquisition (CARLA)
- Center for Alternative Plant and Animal Products
- Avian Research Center
- Babbage Institute-Center for the History of Information Processing
- Coordinating Centers for Biometric Research
- China Center
- Cloquet Forestry Center
- Conflict and Change Center
- Corrosion Center
- Community Program for Clinical Research on AIDS
- Minnesota/South Dakota Dairy Foods Research Center
- Regional Daylighting Center
- Center for Death Education and Research
- Design Center for American Urban Landscape
- Center for Early Modern History
- Economic Development Center

- Center for Economic Education
- Center for Economic Research
- National Center on Educational Outcomes
- Minnesota English Center
- Carlson Center for Entrepreneurial Studies
- Center for European Studies
- Executive Development Center
- Center for Experiential Education and Service Learning
- Center for Farm Financial Management
- Center for Advanced Feminist Studies
- Geometry Center
- Horticultural Research Center
- Imaging Center
- Center for Integrated Natural Resources and Agricultural Management
- Center for Interdisciplinary Studies of Writing
- Center for Interfacial Engineering
- Landscape Studies Center
- Language Center
- Center for Research in Learning, Perception, and Cognition
- Life Course Center
- Limnological Research Center
- Center for Long-Term Care Administration
- Lung Health Study Coordinating Center
- Macarther Interdisciplinary Program on Peace and International Cooperation
- Minnesota Area Geriatric Education Center (MAGEE)
- Midwest Aids Training and Education Center (MATEC)
- Center for Medieval Studies
- Minnesota Journalism Center
- Center for Natural Resource Policy and Management
- Nutrition Coordinating Center
- Midwest Center for Occupational Health and Safety
- Minnesota Center for Philosophy of Science
- Center for Political Economy
- Polymerization and Polymer Process Engineering Center
- PRIME Institute (Pharmaceutical Research in Management and Economics)
- Institute on Race and Poverty
- Raptor Center
- Reflective Leadership Center
- Refugee Studies Center
- Center for Research on Interpersonal Relationships
- Center for Restorative Justice, and Mediation
- The Retail Food Industry Center (TRFIC)
- Rural Health Research Center
- Center for Rural Sociology and Community Analysis
- Scoliosis Spine Center
- Silha Center
- Center for Speech Equality and Harm
- Center for the Science and Application of Superconductivity
- Minnesota Center for Survey Research
- Minnesota Institute for Sustainable Agriculture
- Center for Tourism Center Technological Leadership
- Center for Transportation Studies
- Center for Vocational Education Minnesota Research and Development
- Center for Youth Development

International Activities and Contributions

Although internationalization is not one of the separate strategic areas identified in University 2000, interests in international issues are embedded in the discussion of the institution's teaching, research and outreach activities. Recent teaching developments include the Foreign Language Immersion Program⁴ (FLIP), and new distance education opportunities at international sites. Research initiatives include the MacArthur Scholars in the Developing World and the Refugee Studies Center⁵. Local outreach activities include summer institutes for secondary and community college educators, and International Encounters conferences. International outreach activities include the Papua New Guinea Higher Education Project and the Environmental Training Project in Eastern Europe. Other recent innovative partnerships include:

- Joint scholarship support for study abroad by Department of Civil Engineering, and Danish Technical U.
- Carlson School of Management and the Humphrey Institution's effort to assist the Warsaw School of Economics in developing MBA programs.
- Ford Foundation grant to develop global and international curriculum.
- Honors Program in International Studies with Chicago State University.
- USIA affiliations grant for comparative higher education administration project with Universidad de la Republica in Uruguay.
- Partners of the Americas faculty and community in Uruguay.
- MUCIA/University of Minnesota/MnSCU collaboration in Malaysia.
- Collaboration with Minnesota State University-Akita for undergraduate studies in engineering and management.
- Collaboration with the Minnesota International Center for outreach to the community and to international scholars.

Other important outreach activities include reconnecting with international alumni and friends by establishing international alumni chapters. The institution has active alumni groups in Japan, Korea, China, Taiwan, Thailand, Indonesia, Nigeria, and interest expressed in many other countries including Barbados, Finland, India, Kenya, UK, Uruguay, and others. The Internet provided new opportunities to maintain contact with international alumni. During the 1994-95 year on the Twin Cities campus, there were 2,897 students from 133 countries, and 1,236 scholars from 93 countries. The estimated economic impact on Minnesota in 1993-94 for University of Minnesota students only is \$52,396,278.

The institution operates a variety of study abroad programs: Global Campus programs in 16 sites (MSID internships in Ecuador, India, Kenya, Senegal); exchanges in 15 countries, plus 100 more sites through national ISEP consortium; cosponsored programs at 46 sites; Law School programs in Sweden and France; and Carlson School of Management programs in Australia, Austria, Belgium, Brazil, France, Italy, Japan, Netherlands, Spain, Sweden, Switzerland, and UK.

⁴ <http://carla.acad.umn.edu/immersion.html#FLIP>

⁵ <http://www.isp.acad.umn.edu/HomeISP/RSC/rec.html>

The long-term international strategy is being addressed in a recently appointed committee chaired by a Regents' Professor. The committee report is expected in May 1996. In addition, a separate East Asia Strategy Committee completed its report in March 1996.

The Institute of International Studies and Programs, Office of the Senior Vice President for Academic Affairs, works closely with international programs and centers in the 20 colleges on the Twin Cities campus. The Colleges of Agricultural, Food, and Environmental Sciences, Human Ecology, Liberal Arts, the Hubert H. Humphrey Institute of Public Affairs, and the Carlson School of Management all have offices devoted to international programs and activities. Key academic programs in international studies, intercultural communication, and international development education are offered in the College of Liberal Arts and the College of Education and Human Development.

The mission of the Institute is to act as a catalyst for innovation and cooperation in programs, services, and curricula. Of particular importance are: development of international research linkages and networks; recruitment of high ability international students; faculty involvement in international technical assistance; increased study abroad opportunities for Minnesota students; promoting better understanding of the many cultures that enrich our lives and communities; and provision of excellent support services for international faculty, students, and visitors.

Faculty services are provided from the director's office of the Institute. Staff advise faculty and graduate students about funding for their international research activities. Each year the Institute provides more than 150 small grants in support of overseas travel by faculty from the University's four campuses and manages several graduate student funding competitions.

As a member of the Midwest Universities Consortium for International Activities (MUCIA) the University of Minnesota participates in institution-building projects in the developing world. Through MUCIA, the Institute administers a project in Papua New Guinea, where U.S. faculty teach and develop university curriculum while Papua New Guinea faculty obtain advanced degrees abroad.

The Institute also provides guidance to colleges, departments, and faculty in establishing and administering international exchange agreements, hosting international visitors, and seeking institutional grants and contracts in support of research, teaching, and services to institutions abroad.

International Student and Scholar Services is a national leader in providing services and programs to international students and faculty in support of their educational career goals. Each year the University of Minnesota is home to about 3,000 students and 1,000 scholars from abroad. Staff include professional counselors who specialize in intercultural counseling and advising, and seasoned professionals in government document preparation. Staff in this unit also promote better understanding of intercultural interactions through research, training, consulting, and programming.

The Global Campus collaborates with University faculty and academic units to administer 30 study abroad programs in 16 countries and to continually explore new initiatives. Through the Global Campus, students in any college can receive comprehensive academic advising and program services, enroll in programs sponsored or cosponsored by the University, and earn a foreign studies minor. More than 800 students now study in over 50 countries through the University of Minnesota, many at non-Western sites.

The China Center coordinates all-University academic exchange and collaborative research activities with the people's Republic of China, Taiwan, and Hong Kong. It serves as a national and statewide resource on China and fosters understanding of Chinese culture by sponsoring seminars, lectures, and other activities. The University of Minnesota has the largest community of Chinese students and scholars outside China, and the China Center assists them in adapting to academic life and culture in Minnesota.

An important goal of the Institute is to strengthen the University's capacity to organize knowledge around problems such as the environment, food and nutrition, population studies, and sustainable agriculture. The Institute provides a home for initiative such as the following two recent examples that cross disciplinary and college boundaries.

The Center for Advanced Research on Language Acquisition (CARLA), established in 1993, is home to one of the six National Language Resource centers supported by the U.S. Department of Education. Through this and other funded projects, the Center supports a research community dedicated to the study of language acquisition and the discussion of related policy issues.

The Southeast Asian Refugee Studies Project (SARS) provides a multidisciplinary, collaborative research environment to address contemporary problems of refugee populations, with Minnesota's large Southeast Asian population as a focal point for comparative studies and international collaboration.

Faculty Development Program on Excellence and Diversity in Teaching

The University has had a special faculty development program in place since 1991-92, funded by the Bush Foundation. The *Bush Faculty Development Program on Excellence and Diversity in Teaching* has had the complementary objectives of improving instruction while helping faculty to develop culturally inclusive curricula and classroom environments as primary components of excellence in teaching and learning. Discussions are currently underway with provosts, chancellors and others concerning the funding for the Program after the special funding from the Bush Foundation ceases.

In each year of Program funding, approximately 50 tenure-track or recently tenured faculty worked in small groups (five in each group) with ten Resource Teachers (RTs) over a full academic year to increase their teaching competence by addressing such matters as syllabus design, effective instruction in large and small class configurations, learning styles, cooperative learning models, peer observation and self-assessment, and the importance of diversity on what and how students learn. More than one hundred and eighty faculty members have participated in this part of the Program's activities.

In addition, an annual small grants program totaling approximately \$120,000 funded 39 proposals in 29 departments or units representing 12 colleges to support departmental or college-level curriculum transformation related to cultural diversity as a critical factor of teaching and learning excellence. These grants affected literally hundreds of students in many courses and involved an additional 46 faculty members as project directors. Diversity grants also had other long-term consequences for larger-scale, unit-level collaborations and support of diversity initiatives supporting the administration's commitment to inclusiveness as an institutional priority. The list of roles the Program has had in addressing institutional priorities include the following:

- Providing assistance to newer faculty in improving the effectiveness of their classroom performance.
- Providing modest financial resources stimulating individual faculty and departments in the implementation of curriculum acknowledging cultural diversity as a critical component of educational excellence.
- Developing a significant critical mass of faculty and administrators engaged in thinking and working within a "culture of teaching" that relates to and balances in complementary ways the university's "research culture" in the service of improved undergraduate education.
- Developing a program of collegial networking and collaboration that has potential to increase faculty satisfaction, improve retention, and provide opportunities for professional development.
- Developing strategies of outreach to and investment at departmental, college, and central administrative levels to facilitate institutionalization of some version of program activities.

The following outcomes and recommendations have emerged from the first three years of the Program:

- The most effective Resource Teachers (RT) are more than intuitively excellent classroom teachers. They need, in addition, to have reflected on pedagogical issues, read and perhaps contributed to relevant research on today's undergraduate classrooms, and remained open to new strategies and types of students.
- The core aspect of the Program is the small groups of faculty working with RTs. These units allow for crucial one-on-one applications of ideas and theories; they foster an atmosphere of collegial support of taking risks in the classroom; and they facilitate cross-disciplinary discussion of central issues facing today's faculty.
- Assigning participants to small groups with an eye to diversity of academic fields continues to reinforce the program's belief that pedagogical concerns and good teaching strategies are transferable across curricular boundaries.
- Program activities at all levels succeed best when potential participants and supporters understand specific outcomes or gains for themselves and their colleagues.
- Establishing firm and friendly links between the Program and collegiate units is crucial to the success of the Program over the long term.
- Funding Diversity Grants in a time of scarce resources does significantly promote cultural diversity at classroom and unit levels. Funded projects seem to have substantially broader and longer term impact than their modest size of investment might predict.

The activities of this Program have addressed broad institutional goals of the University of Minnesota, consistent with those outlined in the Undergraduate Initiative and in University 2000. These included the development of more balanced and complementary faculty priorities of teaching and research and the advancement of the principle that cultural inclusiveness is necessary to effective instruction. It has contributed to a culture supportive of excellent teaching by encouraging intra-unit collaboration to achieve maximum benefits from diversity efforts at the curricular level, and by providing tools and opportunities for self reflection about teaching. The Program helped to create specific communities for younger faculty to continue their association beyond the year of their grant participation.

Faculty and Teaching Assistant Enrichment Program

In the fall of 1988, the University of Minnesota began a centrally administered effort in teaching assistant development. In addition to central services, many if not most departments have departmental support services for teaching assistants. This program, called the TA Development Program, provided opportunities for Teaching Assistants (TAs) to enhance their teaching effectiveness by participation in workshops on teaching issues and a consulting service where TAs could receive one-on-one help with their teaching. In 1991, the services offered to TAs through the TA Development Program were extended to faculty with the creation of the Teaching Enrichment Opportunities for Faculty Program. In the Spring of 1995 these two similar programs merged to become the Faculty and TA Enrichment Program, housed in the Office of Human Resources. All funding for the program has come from central administration.

The mission of the Faculty and TA Enrichment Program is to enhance the culture of teaching and learning on the Twin Cities campuses of the University of Minnesota by: (a) helping departments develop teaching support options for their teaching assistants and faculty; (b) providing interdisciplinary opportunities for faculty and teaching assistants to improve their teaching; (c) working with individual faculty members and teaching assistants to improve their teaching; and (d) disseminating information about good teaching practice.

Several interrelated activities have been developed to assist faculty and staff in their instructional responsibilities:

- *An Orientation for New Teaching Assistants.*

For the past five years this program has offered a half-day orientation for all new teaching assistants. The orientation begins with a large group session which features a keynote address by a University faculty member known as an outstanding teacher. This large group session is followed by concurrent small group sessions that address such topics as University resources, course policies and procedures, principles of teaching and learning, and strategies to create equitable, effective learning environments.

- *University-wide Workshops to Improve Teaching.*

Campus-wide workshops are offered each quarter on instructional techniques and strategies and are open to both faculty and TAs. In addition, an annual workshop series for TAs is offered before the start of fall classes.

- *Customized Workshops for Departments.*

Workshops on a variety of topics are customized to meet specific departmental needs and offered throughout the year. Workshops are facilitated by program staff or university faculty members.

- *Individual Consultations.*

Education specialists observe teaching assistants and faculty members teaching and then they provide feedback, resources, and assistance. They also consult with individuals on issues such as course design or using student evaluations to improve teaching.

Consultations are available to departments on such topics as planning a departmental orientation for teaching assistants or developing a system of peer review for faculty members.

- *Dissemination of Resources on Good Teaching.*

A teaching resource collection of books, articles, videotapes, and newsletters on many aspects of teaching and learning has been assembled. Faculty and TAs can also call to request that information be sent to them on a particular topic (e.g. cooperative learning). The program provides a joint service with University Film and Video in which the program selects, advertises, and pays the rental fee for videos on topics related to teaching that are used for training purposes.

- *Publications.*

Publications created by the Faculty and TA Enrichment Program staff include: *Using Student Evaluations to Increase Classroom Effectiveness*, TA Handbook, a resource packet for TA supervisors, and *Teaching & Learning*, a quarterly newsletter for classroom instructors.

- *Special Events Focused on Teaching and Learning Issues.*

Special events sponsored by the program include a mini-conference for TA supervisors, a symposium for teachers of pedagogy classes, a mini-conference on teaching and technology issues, and a training session for TA supervisors on how to use student evaluations to improve teaching. The program has also co-sponsored an annual teaching and learning resource fair and the President's faculty Forum on Peer Review of Teaching.

Program evaluation methods include tracking participation and distributing evaluation surveys at all workshops and conferences. This information is used to select workshop facilitators, and make changes in content. The program also surveys various segments of our population to learn needs and assess the usefulness of our current surveys. Table 65 below indicates the number of events sponsored in each of the past four years, as well as the number of participants who evaluated the events. Selected results are as follows:

- In 1994, 84 percent of the participants in the New TA Orientation rated the overall quality of the session as good to excellent with mean rating of 4.4 on a six point scale (between good and very good).
- For campus-wide workshops given in 1994-95, 93 percent of participants agreed or strongly agreed with the statement "Participation in this workshop was valuable for me." Ninety-five percent of participants in customized workshops agreed or strongly agreed with this statement.
- Over 98 percent of the TAs and faculty utilizing this service since its inception in 1989 agreed or strongly agreed with the statement "One or more aspects of my teaching has improved as a result of the consultation."
- The publication *Using Student Evaluations to Increase Classroom Effectiveness* was first evaluated by an in-depth pilot study with nine TAs and faculty members using a combination of written survey and personal interviews with the participants. After the first edition was printed, the first 100 users were sent follow-up surveys to elicit reactions.

A number of surveys have been undertaken to assess the usefulness of our services and/or assess needs including: a survey of TA supervisors to learn the content they would wish to see in a handbook for TA supervisors, a survey of TAs to assess which workshop titles they would find most relevant, and a survey of directors of graduate studies to assess the usefulness of current services to specific departments.

Challenges faced by the program include the following:

- Creating an effective system to work with new provostal areas.
- Developing stronger partnerships with department and colleges (e.g. helping departments design orientations for their TAs, subject-matter specific courses in pedagogy, departmental TA handbooks).
- Supporting departments as they work to fulfill University of Minnesota mandates (e.g. mandatory use of student evaluations, peer review of teaching). We must find ways to support the mandates while maintaining a supportive role for faculty rather than the role of policy enforcer.
- Supporting faculty and departments as they make the change from the quarter system to the semester system and helping them use this mandate for change as an opportunity to promote more effective student learning.
- Coordinating our efforts with other programs that share similar goals.
- Balancing and coordinating centralized and decentralized services (e.g. coordinating a central orientation for new TAs with the many departmental or college-wide orientations for TAs).
- Maintaining positive morale in the face of an extended period of budget cuts accompanied by calls for increased responsibilities and accountability.

Table 65

Event and Participant Totals for Faculty and Teaching Assistant Workshops and Consultations

Event	1991-92		1992-93		1993-94		1994-95	
	Events	N	Events	N	Events	N	Events	N
U-wide workshops	23	--	45	--	41	700	44	720
Customized workshops	16	--	19	--	33	320	21	375
TA Orientation	--	416	--	475	--	375	--	332
Consultations	--	45	--	56	--	75	--	64

Administrative Development Program

Since its inception in 1989, the Administrative Development Program (ADP) has provided management and leadership education, training, and support activities to faculty and professional and administrative employees serving in all positions of academic administration, from department head to provost. Starting in 1994, the ADP also began delivering the University's only comprehensive training program for first level supervisors of civil service and represented bargaining unit employees.

ADP activities help administrators and supervisors understand management issues, develop leadership and management skills, and access information resources and professional networks on and off campus. Activities are developed through regular needs analysis, cooperative planning with other training units, and consistent program and service evaluation. Offered free of charge, they are flexibly delivered at multiple times during the work-day, in evenings, and through interactive television (ITV) at accessible sites in coordinate and central campus locations. About 150 presenters -- 95 percent of the total -- have been recruited from within the University, many offering their expertise free of charge.

In its activities, the ADP has delivered about 200 classes to over 3,200 participants. Major ADP activities include:

- An annual 30-hour Orientation Seminar Series for New Chairs, Heads, and Directors of Academic Departments, emphasizing the roles and responsibilities of department administration. The series has attracted about 150 new chairs (20 per year) or approximately 75 percent of those who have accepted administrative appointments. In post-seminar evaluations, over 60 percent of the participants have said they "learned a great deal" about administrative practices and 80 percent said they would "highly recommend the series to colleagues." Moreover, an 11 percent sample group of participants, when interviewed five months following the completion of the series, said that, on average, they had introduced or improved at least three administrative practices in their departments based on knowledge gained in the Seminar Series -- thus documenting that transference had occurred.
- An annual 75-80 hour Short Course Series for Academic Administrators which offers 2- to 10-hour individual classes on applied management skills, such as budgeting, planning, performance reviews, and others. Thirty courses have been developed and delivered in this series, attracting approximately 1,200 participants. Periodic post-seminar evaluations have indicated that 85 percent of the participants found the course content "extremely valuable"; 83 percent "the quality of presentation excellent"; 74 percent "learned a great deal"; and 79 percent would "highly recommend the course" to colleagues.
- A 50-hour "Supervisory Training Program" offered quarterly to supervisors of civil service and represented bargaining unit employees which emphasizes key managerial and interpersonal skills. This series has delivered 25 courses to over 600 participants, with about 85 percent having indicated, in post-course evaluations, that they would "highly recommend" the courses to peers.

In addition to these major activities, the ADP also delivers an annual, year-long Academic Leadership Program for selected faculty members, periodic Orientation and Strategic Issues Seminars for Senior Administrators, and occasional Current Issues Seminars on seminal topics for supervisors and/or academic administrators.

Review and Evaluation of Academic Administrators

The University of Minnesota is committed to fostering the success of its administrative staff and enhancing each administrator's effectiveness in a constructive way, encouraging their individual professional development efforts through a formal communication and information mechanism. Performance appraisals are a means to support this commitment and are the integral responsibility of the appropriate responsible administrator. The "Review and Evaluation of Academic Administrators" policy mandates assessment of administrators in a relatively uniform fashion. Responsible administrators are expected to conduct and budget for appropriate performance appraisals and will be held accountable for doing so in their own performance reviews. As directed in the "Review and Evaluation of Academic Administrators" policy, they are to include a brief report on the implementation of appropriate reviews as part of their own annual review process. The responsible authority is encouraged to structure a streamlined and effective process within the framework of the recommended procedures.

There are two major components within the academic administrative performance review process, annual reviews and periodic comprehensive reviews. Annual reviews are conducted each year for the purpose of focusing on overall accomplishments and professional growth for a particular year. Annual reviews may also have a focus that changes from year to year. Gathering of assessment information is done less broadly and may be from a different targeted group of people each year. Annual reviews provide a mechanism by which to manage performance and focus professional development efforts for the coming year. Periodic comprehensive reviews are broad in scope and dimension and build on other results of the annual reviews that have occurred since the last periodic comprehensive review. Assessment information is solicited from a wide spectrum of people who are affected by the individual's performance. Done well, the reviews provide a reliable and valid overall picture of performance including accomplishments, expertise, professional growth, and both a general and specific assessment of effectiveness in carrying out responsibilities. This review is one factor used by administrators in making reappointment decisions.

Currently under development by the Office of Human Resources are "Recommended Procedures for Comprehensive Reviews for Campus and System Offices" for use in the periodic comprehensive reviews of administrators. Periodic comprehensive reviews are conducted for the purposes of:

- Providing a formal systematic and reliable means of accomplishing periodic performance appraisals.
- Improving individual performance to benefit personal, unit and institutional effectiveness.
- Recognizing professional growth and achievements.
- Focusing individual professional development plans.
- Providing information to the responsible administrator who is charged with making personnel decisions including those of compensation and reappointment.
- Providing one mechanism for review and improvement of processes used to achieve individual, unit and institutional goals.
- Fostering responsible leadership and management of all resources.
- Providing one measure of administrative accountability to both internal and external constituents.

CHAPTER XIV

INFRASTRUCTURE¹

This chapter includes overviews of several specific topics, each of which addresses an aspect of the institution that contributes to its effective functioning in each of the four outcome areas of undergraduate education, graduate and professional education, research, and outreach. Other core infrastructure elements, such as University Libraries and the set of student support services were discussed in previous chapters in this self-study report.

Facilities Infrastructure

One essential aspect of institutional infrastructure concerns the functionality and utilization of the facilities on the Twin Cities campus. University 2000 calls for the campuses to be useful for modern educational techniques, physically accessible, environmentally sound, attractive, and safe. Recent studies have demonstrated the serious deterioration of American college and university facilities. The University of Minnesota became an institution of higher education in 1869 and, like many other older institutions, has struggled to update its facilities to meet use and safety standards. Erosion of the University of Minnesota's buildings and its supporting infrastructure undermines every aspect of its ability to function effectively. Conversely, institutions with properly maintained facilities have a competitive advantage in securing research dollars, top faculty, and students (Society for College and University Planning, 1989). The University of Minnesota currently has approximately \$1 billion in deferred renewal, maintenance, and adaptation needs. Massive infusion of resources for repair and renovation are needed.

A fundamental requirement for success in education is a physical environment that is conducive for teaching and learning. Quality classrooms enhance faculty teaching and markedly enhance student learning. Furthermore, classrooms are a significant part of a student's collegiate experience. As previously noted in the summary of Student Evaluation of Teaching, the quality of classrooms on the Twin Cities campus typically is rated quite low. Classrooms represent less than 5 percent of the space on campus, yet students often spend more than 50 percent of their time on campus in classrooms (*Classroom Study*, Ellerbe Becket, Inc. and Comprehensive Facilities Planning, Inc., February 1995). Unfortunately, the University's classrooms need a great deal of work. For example, based on a recent comprehensive survey of classrooms on the Twin Cities campus, the physical and functional condition of two-thirds of the classrooms on the Twin Cities campus has been rated as below standard. That study concluded: "The quality of the University's classrooms is significantly lower than other Big Ten universities. Today they are not capable of supporting the quality of instructional programs that University faculty is able to provide." Improving classroom space and using it more effectively can improve the learning environment, as well as reduce overhead costs for the University.

A revolution in instructional delivery, technology and classroom design is under way for higher education. It will directly impact the institution's competitive position relative to

¹<http://www.opa.pres.umn.edu/specproj/accred/infrastr.html>

student market share and faculty recruitment and retention. Students and faculty will directly benefit from the new learning and teaching environment. The University's Twin Cities campus *Classroom Study*, one of the first outcomes of University 2000, was conducted to: (a) evaluate physical characteristics and instructional equipment for all current classrooms; (b) identify classroom utilization standards and measure current utilization rates; and (c) recommend an action plan for classroom renewal and management.

The study results revealed that:

- University classrooms fall short of accepted quality standards for a world-class institution. Approximately two-thirds of the classrooms are below accepted standards for functionality and physical condition.
- University classrooms are generally underutilized. Overall classroom utilization in fall quarter 1994 averaged 19.7 hours per week compared to the national standard of 32. Classroom scheduling has been handled manually. By computerizing class scheduling and maximizing space usage, the University could reduce classroom space by an estimated 160,000 square feet, with a potential annual operating cost savings of nearly \$2 million.
- University classrooms are technologically inadequate and poorly funded. Approximately 25 percent of the classrooms lack the simplest presentation equipment.

The University must be able to offer its students and instructors quality-designed classrooms. A quality-designed classroom is a place where a student is able to see and hear the instructor and all audio-visual material without strain, and an environment in which the chosen instructional and learning methods of the instructor and students are fully supported.

To assist the University in its re-engineering process, the study identified a mix of contemporary classroom designs by size and function which the University will use to determine the composition of classroom inventory.

A five-year comprehensive renewal and funding plan has been developed that includes a \$20 million legislative request, of which \$6 million for the first two years is included in the 1996 request. Plan implementation has begun with a one-time \$175,000 investment in computerized classroom scheduling and will soon include a classroom equipment and service hotline. Annual operating investments of \$500,000 to maintain furniture, fixtures and equipment and \$100,000 for technology upgrades will be needed to keep the University competitive in the higher education marketplace.

Measurable plans already are in place to begin classroom and management improvements.

- Sizing the inventory. The number and type of classrooms will be sized to match University 2000 academic priorities.
- From a month to 58 seconds. Classroom scheduling is currently a manual operation that takes months to complete. With the purchase of recommended software and computer equipment, scheduling will take less than a minute.
- Space utilization. Scheduling will ensure that classrooms are used 32 hours per week and that 65 percent of the seats are occupied.

- Accountability. A single point of accountability has been established for classroom management.
- Instructional equipment service. One service number will be established to handle requests for equipment and maintenance. A hotline number has been staffed to respond to emergency needs.

Not only are major systems in University facilities in need of rehabilitation, but a large number of University buildings do not meet current safety and accessibility standards. Although 1994 code standards are not strictly enforced unless a building is renovated, bringing these buildings up to code improves the environment for faculty, students and staff, while meeting safety and accessibility regulations set by the state and federal governments.

One of the institutional-level critical measures, Facilities Infrastructure, has the following three components, each of which is described below.

- Deferred Renewal: This measure refers to the total 1994 cost of the systematic replacement of major building systems (heating, air conditioning, plumbing, electrical, windows, roofs, etc.) that are beyond their useful life, as a means of extending the life of the building (Society for College and University Planning, 1989).
- Classroom Space: The measure for classrooms is the percent of total classrooms meeting a specified functional and physical standard. The analysis was based on a total of 422 classrooms (including 260 centrally scheduled and 162 departmentally managed classrooms). The physical condition of the classroom is based on the following aspects: Access, Sight Lines, Acoustical and Mechanical, Lighting, Electrical, Teaching Surfaces, Windows, Technology, and Seating.
- Code Compliance: The measure for code compliance is the number of buildings meeting safety and accessibility code standards. State and national guidelines (Minnesota State Building Code, American National Standard for Buildings and Facilities, and American Disabilities Act) dictate the level at which a building is considered safe and accessible. The Office of Health and Safety has surveyed all the buildings on campus to determine the requirements necessary to bring each one up to code (for safety and accessibility). The buildings are categorized into five levels: serious deficiencies, major deficiencies, moderate deficiencies, minor deficiencies, and no significant deficiencies. Costs have been estimated for updating each building to meet safety and accessibility code standards.

Existing special reports and information available through Facilities Management were used to establish baseline figures for 1994. Proposed performance goals for the year 2000 were prepared in close consultation with Facilities Management. The Board of Regents approved in July 1995 a general goal to improve the quality, functionality, and safety of the University's physical infrastructure and assets, especially those central to classroom instruction; and specific institutional performance goals to: (a) reduce the level of deferred renewal from \$923 million (32 percent of total asset value) in the 1994 baseline year to \$750 million (25 percent of total asset value) in the year 2000; (b) increase the percentage of classrooms meeting quality standards to 100 percent in the year 2000; and (c) decrease by 50 percent the number of buildings that do not meet specified safety and accessibility code standards by the year 2000.

Currently, the total deferred renewal costs are \$923 million, or 32 percent of the total asset value. The performance goal is to reduce that amount to \$750 million, or 25 percent of total asset value.

The overall goal for classrooms is to have 100 percent of the University's general purpose classrooms utilized/occupied in accordance with adopted national standards, and brought to a quality standard (or re-engineered) by the year 2000. Relative to utilization, the goal is to have all used classrooms move toward the national standard of 32 hours per week (currently we are at 20 hours a week or 68.5 percent of the goal) with a 65 percent desk occupancy, that quality improvements in accordance with baseline standards are made to 20 percent of the general purpose classrooms per year, and that engineering is accomplished so as to keep pace with changes in teaching modality and technology.

Currently, 116 buildings have serious/major safety code deficiencies, and 58 have accessibility deficiencies. The performance goal is to decrease by 50 percent the number of buildings that do not meet specified safety and accessibility standards by the year 2000.

Substantial amounts of additional resources will be required to address the deferred renewal problem. The Classroom Study recommended investing approximately \$100,000 one-time costs and \$500,000 annually for five years to improve the physical condition of classrooms and upgrade technological functions for the Twin Cities campus. The overall estimated cost to upgrade classrooms is approximately \$20 million. The estimated costs for meeting all code standards is approximately \$100 million.

Finance and Operations Organization

A core element of the institution's infrastructure is its finance and operations units that support the missions of teaching and learning, research and discovery, and outreach and public service. The June 1995 strategic plan *Planning the Finance and Operations Enterprise: Providing Service and Stewardship for the University* outlined a customer-based integration as the foundation for the enterprise. The guiding purpose of the enterprise is "to provide support as well as lead in management reform efforts to accomplish the objectives of a world-renowned research university." The seven core finance and operations functions (Figure 26 indicates the organizational structure) are as follows:

- Financial budgeting and controls²
- Treasurer
- Managing information technology for administrative purposes³
- Facilities management
- Human resources management
- Regulatory, such as risk, health, and safety management⁴
- Procurement and contract management⁵

²<http://budoff.umn.edu/>
<http://www.fpd.finop.umn.edu/3/FINhome.html>

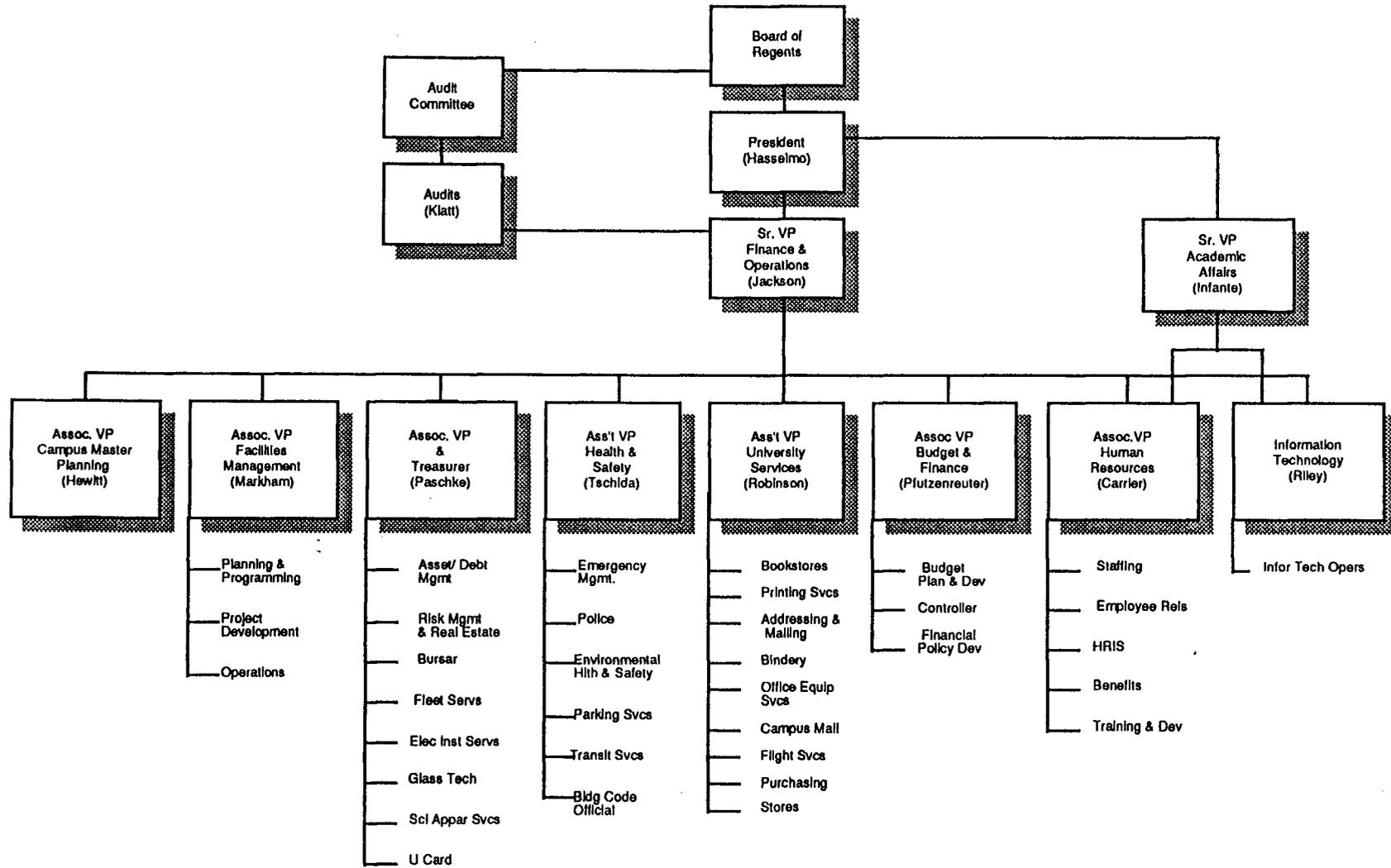
³ <http://notes.ais.umn.edu/>
<http://www.umn.edu/telecomm/telecom.html>

⁴ <http://www.tc.umn.edu/nlhome/m435/freed004/html>
<http://www.umn.edu/umpolice>
<http://134.84.147.74/>
<http://www.tc.umn.edu/nlhome/g127/escort>

⁵ <http://www.bookstore.micro.umn.edu/>

Figure 26

Organizational Structure for Finance and Operations



Finance and Operations has an annual budget of about \$320 million, and 4,400 employees (1,850 of them students) that translates into over 2,700 FTE's. The enterprise consists of approximately 45 separate and distinct operations or major management units, each requiring its own complete planning and accountability efforts, its own unique areas of professional and technical expertise, and with its own kinds of challenges. Within some of the 45 entities there are several other relatively independent programs with their own comprehensive set of plans and accountabilities.

An overview of the magnitude and scope of the enterprise suggests an organizational support structure that is fundamental to the institution's ability to achieve its mission into the next century. The following list of transactions occur during a typical year:

- Provides an environmental design for managing hazardous and radioactive elements in 2,500 laboratories with 400 permitted radioactive material users.
- Parks 5,631,000 cars in 19,264 parking spaces.
- Provides 24 hours each day, 7 days per week, police security for up to 70-80 thousand people and 300 buildings.
- Gives campus and commuter bus service to 3.4 million riders.
- Manages the fleet of 865 vehicles and 353 leased vehicles.
- Manages four major technical shops, 1 electronics, 1 glass, and 2 mechanical.
- Delivers telecommunication services to 31,000 faculty and staff and 4,500 residential students.
- Provides administrative information services for a base of 3,725 department customers and indirectly serves 138,000 logons each month.
- Manages \$3.0 billion in invested assets and U of M bonds.
- Provides 94,000 customer consultations by human resource service teams.
- Provides housing for 4,500 students in eight on-campus residences, for families in 824 off-campus cooperative units, for faculty in 48 units, for additional students in 48 off-campus rental units, and for the University President at Eastcliff.
- Manages retail food outlets in 11 buildings, using 600 vending machines and mobile cars, providing 1,240,000 retail food customer transactions.
- Is responsible for the University's 24 million gross square feet of facilities (19 million of them in the Twin Cities, which is comparable to all the office space in downtown Minneapolis), which totals \$3.0 billion in facility assets, and on which \$100 million are spent annually in new construction and renovation.
- Sells \$10.4 million worth of books and 6,352 computer units.
- Processes 13,500 copyright requests.
- Produces 98 million copycenter impressions.
- Binds 60,000 documents.

- Negotiates \$51 million of University-wide contract purchases at an average discount of 26 percent.
- Processes and delivers to mail stops 520,000 pounds of campus mail.
- Addresses and mails 11,200,000 pieces of mail, totaling \$1,638,000 in postage, processed at a \$66,000 savings to the University.
- Processes 135,000 University Store orders.
- Flies 760 University passengers 84,000 miles on 219 trips.
- Provides the financial infrastructure for the entire University system.
- Responds to 10,000 requests for campus escort.
- Collects \$188 million in tuition and fees from approximately 40,000 students.
- Collects \$7.89 million in federal and University trust loan funds, which revolve back to be loaned to current students.
- Provides a wide variety of Human Resource services to more than 27,000 employees, supervisors, managers, and administrators.

Other chapters in this self-study report highlighted selected activities and programs recently developed to address concerns about user friendliness and the efficiency and effectiveness of particular services. The following are additional significant recent advances and accomplishments that have touched virtually all parts of the institution's operation:

- Developed of a budget process for the entire University that takes into account revenues and expenditures from all fund sources.
- Led the development and implementation of a capital budgeting process that establishes priorities for capital investment consistent with University priorities, integrates the capital and operating budgets, invests all funds strategically, maximizes the utilization of existing facilities, and advances the Campus Master Plan.
- Quantified stewardship needs in the areas of deferred renewal, maintenance, and custodial standards as the basis for development of a financing strategy for facilities.
- Established a project manager role and structure for managing capital projects.
- Constructed Integrated Waste Management Facility, winner of 1995 "Seven Wonders of Engineering" award.
- Implemented state-of-the-art safety and lighting measures for parking facilities.
- Installed Code Blue emergency phones on the Twin Cities Campus.
- Created the Police Bike Patrol.
- Increased bike parking on campus by 15 percent, and obtained a grant to construct a Transitway bike path.

- Created an electronic policy manual that groups human resources policies into a single reference manual on Gopher.
- Prepared a white paper on major human resources issues as background for the complete evaluation of human resource policies and procedures.
- Eliminated the need for annual preparation and entry of thousands of personnel action forms.
- Created a plan for a career development program for AFSCME and Civil Service employees.
- Greatly improved service delivery and turnaround time on equipment installation orders.
- Implemented CAFE product for off-line users.
- Implemented STARS system for electronic credit of financial aid for tuition, fees, and housing expenses.
- Achieved long-term investment returns ranking in the top 15% of universities and colleges nationwide.
- Achieved among the lowest debt service costs for any tax-exempt issuer in the country.
- Generated multimillion dollar annual reduction in workers' compensation costs through more effective management.
- Converted University vehicle fleet from ownership to leasing to capture significant financial benefit.
- Initiated the Real Estate Advisory Committee for advice and oversight of sales of surplus property.
- Implemented the multiple purpose universal "U Card" to improve access to campus services and user friendliness of the campuses.
- Developed a new risk assessment methodology for identifying and measuring risk within the University, and ensuring that the highest areas of risk are addressed first.
- Initiated significant investments in staff development to meet higher performance standards in the areas of federal and regulatory agency requirements, industry standards, trends, and best practices, and proficiency in the use of technological tools for internal productivity.
- Achieved full residence halls.
- Added healthy choice meal options and low fat vending choices.
- Developed service teams and task forces to improve delivery of food and housing services.
- Increased spending with Target Group Businesses in the areas of housing and food services.

- Enhanced customer services in various areas including the sale of course packets, the sponsorship of "Grad Fest" one stop graduation services, and partnerships with Microgroup and Engineering Services to provide integrated computer sales and services.
- Sponsored a University-wide Copyright Permissions Center.
- Turned around Printing Services from a significant loss to near break even in one year.
- Reduced waste through increased use of recycled products in University Stores and Purchasing.
- Negotiated large order contracts to reduce procurement costs.
- Increased volume of mail receiving postal discounts through presorting.
- Negotiated a three-year agreement for the University Libraries bookbinding.

Campus Facility Changes

The majority of the University's capital investments during the past decade, has been used to upgrade existing facilities in an effort to respond to more rigorous program standards, and to provide space adequate to meet program needs. This is manifest in the large number of remodelings and additions which have occurred. In some cases, existing facilities could not be updated to the level of functional performance needed and, consequently, new "state of the art" facilities were needed. A case in point is the new Basic Sciences and Biomedical Engineering building, which will provide world class laboratories, offering significant flexibility in their assignment for research. Distribution networks and infrastructure requirements dictated building a new Electrical Engineering/Computer Science building rather than remodeling an existing facility. The need to update outdated recreational facilities also led to the construction of new buildings. Code requirements for meeting site land standards as well as the need to increase seating capacity resulted in the construction of a new Hockey Arena.

Several facilities were built to house programs that simply had not been appropriately accommodated in the space they previously occupied or had not been accommodated at all. One is the new Frederick Weisman Art Museum, which provides museum class exhibition space that replaced small classroom type space scattered throughout another building. Another is the Mann Performance Hall, which provides a 1,600 seat auditorium more appropriate to the Music School's needs than the 5,000 seat Northrop Auditorium, or the use of other campus auditorium facilities designed for drama.

On March 1, 1993, the University Recreation Center opened its doors to the University community, and has had a significant impact on the campus. In less than eight days, over 16,000 students, staff, faculty, and friends of the University entered the facility to exercise or visit. This facility was designed to be a center for students, faculty and staff in the pursuit of their sport and leisure activities while on campus. The building, which connects Cooke Hall and the Aquatics Center, offers 16 handball/racquetball courts; five squash courts; two fitness centers with, aerobic and weight lifting equipment; two full gyms for open recreation basketball, volleyball and badminton; new locker rooms with sauna and steamrooms; lounge spaces; a pro shop; and a health food delicatessen. Although no empirical data are available to attribute the new facility with an increased sense of community on campus, it is reasonable to speculate that such an effect has occurred.

The \$41 million athletic facilities improvement program, undertaken in 1990 as a self-help investment in strong athletic programs without any tax support, has provided some of the finest sports facilities in the Big Ten, including a remodeled Williams Arena, a new Mariucci Arena, and a superbly designed Sports Pavilion, primarily for Women's Intercollegiate Athletics, and the improvement of football practice facilities.

There have been new building types introduced to deal with advancements in technologies. Examples include a center to house super computers, special facilities for high-resolution microscopy, and a new building for magnetic resonance research. Also included in this category is a state-of-the-art "class 10 or better clean room," built as a part of the new Electronic Engineering and Computer Science building.

A number of projects have been influenced by mandates of federal or state legislation. In upgrading athletic facilities, new space was created for a Women's Sports Pavilion in response to gender equity issues. Both state codes and federal legislation have had the effect of more capital assets devoted to improving handicapped access.

Partly in response to growth, but also in response to a heightened interest on the part of students to live on campus, additional housing has been provided. Recently policy shifts encouraging freshmen to live on-campus will require more student housing built on campus.

A number of new parking facilities have been constructed on the Minneapolis campus. Part of this has been in response to the significant amounts of surface parking that have been lost to the development of new building projects. To replace this lost parking has required the construction of several new parking ramps. Other new parking structures have been built to increase visitor parking capacity, and thereby make the University more user friendly. One parking ramp for about 550 cars has been replaced as a result of old age and another, accommodating about 1,700 parking spaces, is scheduled to be replaced in the next two years.

The Intercampus Transitway is an outgrowth of planning for transportation adopted in the 1976 Minneapolis Campus Long Range Development Plan. It is based on the concept of remote receptor parking served by transit bringing students, faculty, and staff into campus via transit. As it serves both the Minneapolis and St. Paul campuses, it also links them together providing a transportation system that connects the two campuses. Included in this project is the addition of almost 2,000 new surface parking spaces adjacent to the Minneapolis East Bank campus, and land that can provide an additional 500 parking spaces between the two campuses.

Following is a list of building projects on the Twin Cities campus that have been completed or can be expected to be under construction in the 10-year period from 1986 to 1996:

West Bank Campus

- Archives Building
- Carlson School of Management

East Bank Campus

- Electrical Engineering/Computer Science Building
- Remodeling of Williams Arena for Basketball and Women's Sports Pavilion
- New Hockey Arena
- University Recreation Center/Aquatic Center

- Appleby Hall Remodeling and Addition
- Church Street Garage
- Smith Hall Remodeling
- Magnetic Resonance Research Facility
- University Hospital
- Super Computer Center
- Basic Sciences Research Building
- Lyons Lab
- Integrated Waste Management Facility
- Day Care Facility
- Fourth Street Parking Ramp and Tunnel to Health Sciences Complex
- Washington Avenue Replacement Ramp and Offices
- Weisman Art Museum
- Dwan Variety Club Cardiovascular Research Center Addition
- Inter-campus Transitway and Transit Parking Lots
- Ted Mann Concert Hall
- Shops Building Remodeling Project
- Folwell Hall Remodeling
- Health Sciences Parking Ramp and Tunnel to Hospital
- Amundson Hall Remodeling
- Eastcliff President's House Remodeling
- General Purpose Classroom Remodeling
- Shepherd Lab High Resolution Microscopy Addition
- Tate Physics Remodeling
- Printing and Graphic Addition
- Millard Hall Remodeling
- Wilson Library Remodeling
- Lind Hall Academic Center Project
- Basketball Facility Addition to Bierman Athletic Building
- Coffman Union Ground Floor Food Services Upgrades
- S.A.F.H.L. Wind Tunnel Turbine Enclosure

St. Paul Campus

- Ecology Building
- Veterinary Diagnostic Lab
- Agronomy Greenhouse Classroom
- Gabbert Raptor Center
- Large Animal Shelter
- Natural Resource Administration Building
- Swine Research Facility
- Animal Waste Treatment Center
- Horticulture Field Operations Building
- Cattle Feeding Sheds
- Chemical Storage Facility
- Dairy Cattle Teaching and Research
- St. Paul Gym Remodeling
- M.A.L.G. Building
- Animal Science Physiology Building

Major Handicap Access Projects

- Murphy Hall Elevator
- Westbrook Entrance and Elevator
- Northrop Plaza Access Ramps

- Eddy Hall Entrance and Elevator
- Peik Hall Entrance
- Physics Entrance and Tunnel to Murphy

Buildings Decommissioned

- Botany
- Zoology
- Temporary North of Appleby Hall
- Temporary North and South Civil Engineering
- 2 Oak Street Warehouse
- 1924 Fifth Street Storage Building
- Inventory Warehouse
- Police Building
- Experimental Engineering Building
- North Hall
- Memorial Stadium
- Palmer Classroom Building

Buildings Sold or Vacated for Sale

- 1929 University Avenue
- MacPhail Music Center

If the beginning of the 10-year period were 1985, the following buildings would be added to the above list of Twin Cities campus buildings.

- Humphrey Center
- Ferguson Hall Music Building
- Borlaug Hall
- Football Complex
- West Bank Parking Ramp
- Telecommunications

More detailed information about campus facilities issues, long-term campus master planning, and parking and transportation issues can be found in the following reports:

- Landscape Development Projects -- January 1990
- Campus Master Plan, Issues and Agenda, B.L.G.
- Campus Master Plan, Issues and Agenda, Master Planning Advisory Committee Response
- University of Minnesota, Twin Cities Campus, Draft Final Report -- 1995
- Long Range Parking Study, University of Minnesota, Twin Cities -- 1985
- Creating a Sense of Place on an Urban Campus -- Looking at Present -- Looking Toward the Future, UMTC, MPO -- 1994
- Landscape Development Projects: Entrances/Edges Implementation Plan -- 1990
- Parking & Transportation access to the University of Minnesota -- June, 1992
- U of M Support Groups Facility Study, Dober & Assoc. -- 1987
- Options for the Master Plan, Twin Cities Campus, University of Minnesota -- 1995
- Rosemount Property, Direction #2 -- Special Mission -- 1994

Additional documents on physical facilities issues are available in the Planning Office library.

Internal Control and Audit Procedures

During the last three years, the University of Minnesota has increased its attention to the enhancement of internal controls and the promulgation of an ethical framework to guide the actions of its employees. In lieu of developing its own code of ethics the University of Minnesota expects to use the 1993 Code of Ethics developed by NACUBO (National Association of College and University Business Officers), in part as a response to recommendations of the national Committee of Sponsoring Institutions.

A January 1996 presentation by Coopers and Lybrand to the Audit Committee of the Board of Regents recommended the further development of internal control systems to address the complexity and diversity of the institution's activities. Training Services-Internal Controls in the Department of Audits is currently conducting training sessions that outline the fiscal responsibilities for fiscal monitors, project managers, document preparers, and academic/administrative heads.

The Department of Audits is using an integrated framework in addressing internal control issues. The framework includes the following seven components:

- Internal Control Integrated Framework
(control environment, risk assessment, control activities, information and communication, and monitoring)
- Control Environment
(institutional control consciousness -- integrity and ethical values, competency of personnel, leadership philosophy, assignment of responsibility and authority -- and discipline and structure)
- Control Environment Integrity and Ethics
(clear communication of ethical values, demonstration by example, code of conduct, and handling of violations)
- Risk Assessment
(risk identification; assessment of potential impact; practices to manage risk; planning for change; mission statement and strategic plans; operational, financial, and compliance risks; and risk factors -- funding, regulatory requirements, technology, new personnel and programs, morale)
- Control Activities
(policies and procedures, actions to contain identified risks, and activities such as: approvals, reconciliation, verifications, reviews of operating performance, segregation of duties, and physical controls)
- Information and Communication
(Quality of communication, timeliness of information, and communication channels)

Training Services has developed a *Reference Guide for Fiscal Responsibilities* that clarifies job expectations in each of several categories (e.g., budgeting and planning) and that outlines typical responsibilities for each of the four categories of employees. Materials specific to each of the four groups includes a self-assessment tool that enables individuals to describe their skill level in aspects of fiscal management.

The Department of Audits has classified the institution's units and programs into units that are audited periodically (every three years, every four years, every five years, and every ten years) based on four risk assessment categories based on the following 17 different risk factors for academic units, and 15 factors for support units. Factors were divided into quantitative and qualitative categories, and all 231 auditable units within the University were rated on each risk factor.

Quantitative Factors

- Dollars processed or controlled by the unit (support)
- Carry forward balances (academic and support)
- Revenues (academic)
- Non-sponsored expenditures (academic)
- Sponsored expenditures (academic)

Qualitative Factors

- Overall control environment
- Organization structure and stability
- Key leadership turnover
- Informational reliance
- Operational reliance
- Centralized control reliance
- Information technology used
- Homogeneity of the unit's activities
- Errors and omissions impact
- Regulatory impacts/concerns
- Internal or external fraud
- Tone of external reports
- Time since last audit

The planned audit cycle for units in each risk level category is as follows:

<u>Level</u>	<u>Units in Group</u>	<u>Audit Cycle (years)</u>	<u>Audit Plan FY96</u>
• Level I Highest Risk	16	3	5
• Level II Above Average Risk	47	4	13
• Level III Average Risk	99	6	16
• Level IV Low Risk	60	10	5
• Totals	231		39

In their document *The University of Minnesota, Report to Management for the Year Ended June 30, 1995*, Coopers & Lybrand described current conditions in the following four key areas: finalize, document and test internal control procedures for CUFS; establish effective procedures for accounting for billed and unbilled receivables for sponsored research; define the roles and responsibilities of central accounting; and revise the design and administration of Administrative Information Systems security.

Information Technology

This important institutional infrastructure operation is discussed here, since it has many aspects that can be discussed within the context of the user-friendliness strategic area, although the discussion also clearly relates to the four outcome areas. Information technology is strategically important for improving access to the learning and research resources of the University as well as providing a modern tool and skill sets for students. The University is engaged in exciting information technology investments to improve not only teaching and learning but also support services for students. Some of the recent development include the following:

- Beginning fall 1992, all eligible students, faculty, and staff received an electronic mail (e-mail) and Internet address⁶; combining the best features of telephone, paper mail, and fax, e-mail has enhanced instruction, improved communication, and provided new ways to access University services.
- Online registration allows students to register for classes from the comfort of their own computer, or use one of more than 800 found in free public labs⁷ on the Twin Cities campus. In addition, at least one lab on each of the University's four campuses provides full access for the disabled through adaptive technologies.
- Fee statements and transcripts⁸ are also available electronically: the fee statement is sent by electronic mail, and transcripts can be requested by filling out an online form using Gopher, a type of software developed at the University.
- Instructional technology is providing enhanced teaching, distance learning, and mentoring opportunities. For example, courses are taught totally via the Internet, with student-instructor and student-student interaction as a key element supported via e-mail and other tools. Desktop videoconferencing systems are used to provide remote access to instruction and mentor high school students in language arts, biology, design, and other courses.
- The University Libraries⁹ holding and online information resources and databases are accessible through the Internet. Staff have exhibited leadership in the application of new computer technology to improve information services, and have also won six highly competitive grants to apply new information technology to distance education, bio-technology, government statistics, cartography, public affairs and management, and inter-institutional cooperation.

Other information technologically-related changes since 1986 include the following:

- Established facilities like the Supercomputer Center and Institute¹⁰, the Geometry Center¹¹, and the Digital Media Center¹².

⁶<http://www.micro.umn.edu/email-internet.html>

⁷ <http://www.micro.umn.edu/lab-hrs.html>

⁸ <http://www.umn.edu/registrar/TRANSCPT.HTM>

⁹ <http://www.lib.umn.edu/>

¹⁰<http://www.msi.umn.edu/>

¹¹<http://www.geom.umn.edu/>

¹²<http://www-dmc.tc.umn.edu/>

- Collaborations with other universities, particularly within the CIC (e.g., the CIC Virtual Library, CIC Task Force on Learning Technologies projects in such areas as political science, pre-college math, continuing education).
- CICNet¹³ founded, with the University as a member.
- Compressed video connections installed for distance education delivery to all campuses and Rochester Center.
- More public computing facilities opened on the Twin Cities campus and student computing fee dropped.

Two recent publications (*Internet Handbook*¹⁴ and *One-Stop Computing Information Handbook*¹⁵) illustrate how Distributed Computing Services is providing guidance to faculty, staff, and students to help them more easily access and use information.

Beginning in the summer of 1995, the two senior vice presidents began to examine various options that would allow for the integration of computing and telecommunications components of information technology at the University. In September 1995, a plan to consolidate and merge units on the Twin Cities campus in the area of information technology began to be implemented as part of the President's efforts to redesign and reengineer many administrative processes and systems to better support the objectives of University 2000. Coordination of the information technology units within the University will enable the campus to meet many of the pressing needs to support the institution's education and research mission. It allowed the institution to move quickly, but thoughtfully, to redesign processes and systems in such areas as human resources, grants administration, financial and study systems, and a variety of business units. The consolidation brought together the three separate units of Telecommunication Services, Administrative Information Technology, and Computing and Information Technologies on the Twin Cities campus. These organizations merged and became the Office of Information Technology, effective October 16, 1995.

To facilitate the merging and restructuring of the three present organizations, and to oversee the integration of their major components, an Acting Director of the Office of Information Technology, was filled, on a temporary basis, by a senior member of the faculty whose specific task has been to facilitate the first steps of the merger. The Acting Director also assumed responsibility to develop an effective mechanism for academic and business system planning and assumed responsibility for system planning on an institution-wide basis. A national search for a Chief Information Officer (CIO) to provide permanent leadership to the integrated Office of Information Technology is expected to be completed by July 1, 1996.

With the establishment of the Office of Information Technology, a review of the organization and redesign of the operations and activities of the units involved has taken place. This process was conducted with full consultation with the University governance system, the staff of the units, and the University community. The discussions included line administrative officers, deans, provosts, the Senate Consultative Committee, the Senate Committee on Computing and Information, and the Senate Research Committee, as well as consultation with the Board of Regents.

¹³ <http://www.cic.net>

¹⁴ http://www.micro.umn.edu/internet_book/statement_page

¹⁵ <http://www.micro.umn.edu>

As part of the consultative process, an Information Technology Process Redesign Advisory committee was formed with the charge:

“To advise the Acting Director of Information Technology on the reorganization and redesign of operations and activities of centrally supported computing, network, and telecommunication organizations. The Committee should in its advisory capacity, help identify the infrastructure (policies, roles and responsibilities, standards, equipment, network, training, customer service, application development) appropriate to meet the current and future information requirements of the University.”

In an October 1995 memorandum, the Senior Vice President for Academic Affairs suggested the following phases in the redesign efforts:

Phase 1: In the operating components of the newly merged organization on the Twin Cities campus, identify the critical components of the organization for delivery of customer service, delivery of information technology capabilities and access, and development of new capabilities in information technology. Recommend an appropriate organizational structure, and an appropriately-sized staff to deliver or develop these services.

Phase 2: Identify units both within and outside the merged organization within the Twin Cities campus responsible for developing and providing access to information technology such as digital media, network-mediated outreach, and high performance computing/networking. Recommend a set of roles and responsibilities initiatives, and organizational restructuring, if appropriate, to relate, manage, and support these activities, and an appropriately-sized staff to sustain further development of these capabilities.

Phase 3: Identify roles and responsibilities and organizational mechanisms to rationalize the relationship between the Twin Cities computing organizations and those of other campuses, the Committee on Institutional Cooperation (CIC) and state and national organizations and initiatives.

Interdisciplinary Design Project

Two University of Minnesota departments in the Office of the Provost for Professional Studies, the Department of Architecture and the Department of Rhetoric, have been selected to participate in the fifth annual Apple Design Project. Students will answer the questions “How might computational and communications technology support community?” Apple will feature students’ projects in magazines such as *Design Quarterly*, *I.D. Magazine*, and *Interaction* magazine. The project is an opportunity for faculty and students to work in an interdisciplinary environment to solve real-world problems, and will serve as an example of how University faculty can use a “co-learning model with society” in order to educate undergraduate and graduate and professional school students. Specifically, the goals are to:

- Teach user centered design techniques
- Give students experience in working as part of an interdisciplinary team
- Give students experience in the realities of design as practiced in industry
- Encourage students to develop and evaluate their designs by working with the intended users
- Encourage schools to sponsor courses which draw students from multiple disciplines

The student design groups will select a specific group of users and develop a prototype technology that will help the users solve a problem in their environment. The 1996 Design Project Brief states:

“We invite you [students] to reflect on the possibilities and problems of community, and the ways in which computational and communications technologies might support community. The definition of community is deliberately broad: a group of people, large enough to prohibit everyone from knowing everyone else well, who share some common interests or concerns which lead them to communicate and perhaps act in concert. Over time true communities develop common traits such as histories, traditions, and values, and methods for recruiting new members, establishing norms of behavior, and other aspects of self-regulation.”

The interdisciplinary design project is one of several campus opportunities that are building a stronger sense of community on the Twin Cities campus.

CHAPTER XV

STATEMENT OF AFFILIATION STATUS

The Twin Cities campus of the University of Minnesota requests approval for continuing accreditation by the North Central Association of Colleges and Schools with the noted changes in the Statement of Affiliation Status.

WORKSHEET FOR STATEMENT OF AFFILIATION STATUS

INSTITUTION: UNIVERSITY OF MINNESOTA-TWIN CITIES
202 Morrill Hall, 100 Church Street SE
Minneapolis, MN 55455

TYPE OF REVIEW: Continued Accreditation

DATE OF THIS REVIEW: May 13-15, 1996

COMMISSION ACTION:

STATUS: *Accredited (1913- .)*

Institution *Recommended Wording:* No change

Team *Recommended Wording:*

HIGHEST DEGREE AWARDED:

Doctor's.

Institution *Recommended Wording:* No change

Team *Recommended Wording:*

MOST RECENT ACTION:

August 22, 1986.

TO BE CHANGED BY THE COMMISSION OFFICE

STIPULATIONS ON AFFILIATION STATUS:

International offerings are limited to courses at the Jose Ortega y Gasset Foundation in Toledo, Spain.

Institution

Recommended Wording: International offerings are limited to courses at the following locations: Graz, Austria; Freiburg, Germany; Tianjin, China; Hargzhou, China; Copenhagen, Denmark; Montpellier, France; Nantes, France; St. Petersburg, Russia; Cuernavaca, Mexico; Merida, Venezuela; Toledo, Spain; Madrid, Spain; Nottingham, England; London, England; Ecuador; India; Kenya; and Senegal

Team

Recommended Wording: _____

NEW DEGREE SITES:

Prior Commission approval required.

Institution

Recommended Wording: No change

Team

Recommended Wording: _____

PROGRESS REPORTS REQUIRED:

None.

Team

Recommended Wording: _____

MONITORING REPORTS REQUIRED:

None.

Team

Recommended Wording: _____

CONTINGENCY REPORTS REQUIRED:

None.

Team

Recommended Wording: _____

**OTHER VISITS
REQUIRED:**

None.

Team

Recommended Wording:

**LAST COMPREHENSIVE
EVALUATION:**

1985-86.

TO BE CHANGED BY THE COMMISSION OFFICE

**NEXT COMPREHENSIVE
EVALUATION:**

1995-96.

Team

Recommended Wording:
