

Transforming the University

**Final Recommendations of the
Task Force on Graduate Reform: Student Support**

Submitted on behalf of the Task Force by:

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Date: February 3, 2006

I. Executive Summary

Mission

To create a strategic plan for identifying, recruiting, retaining, mentoring, advising, and timely graduating world-class graduate and professional students.

Deliverables

- Recommendations regarding best practices for identifying, recruiting, retaining, supporting, mentoring, advising, and timely graduating the very best intellectually curious, motivated graduate and professional students.
- Recommendations regarding ways to improve the infrastructure and culture of graduate and professional education.
- Recommendations regarding how to better integrate graduate student related policies at both the University and the collegiate levels.
- Recommendations regarding how best to convey and develop graduate and professional education at the University as a public, and not solely a private, good.
- Recommendations regarding the improvement of services, quality, efficiency, timeliness, etc., and the streamlining of processes to improve the reach and impact of graduate programs, especially programs for working adults.
- Recommendations regarding the streamlining of administrative processes, including better alignment with Enterprise systems serving undergraduate students.

Task Force Members

Patricia Jones Whyte, Director, Graduate School Diversity Office

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Brenda Child, Former Director of Graduate Studies, American Studies

Karen Buhr, Graduate Student, Natural Resources Science and Management & President of the Graduate and Professional Student Assembly

Gary Balas, Co-Director and Director of Graduate Studies, Control Science and Dynamical Systems, Aerospace Engineering & Mechanics

Amelious Whyte (Staff to the Task Force), Chief of Staff to Vice Provost, Office for Student Affairs.

Major Recommendations

Recommendation 1: To reach the goal of having a top three world-class research institution, substantial new investment in graduate education at the University of Minnesota is required, particularly in the area of graduate student financial support.

Recommendation 2: The University of Minnesota's Graduate and Professional Schools must aggressively identify and implement the best practices in graduate student recruitment, retention, mentoring, advising, and degree completion.

Recommendation 3: The Graduate School should aggressively pursue the goal of timely degree completion for M.A. and Ph.D. students.

Recommendation 4: The Compact of each academic unit must include specific goals and proposed actions for improving graduate and professional education.

Recommendation 5: The University and collegiate units need to track carefully the possible negative effects that the new University budget model may have on graduate education.

Recommendation 6: The Graduate School's criteria and process for making funding decisions should be more precise and explicit, especially with respect to allocating Fellowship nominations and Block Grant funds. We recommend that Block Grants be made for a period of time longer than the current two-year periods.

Recommendation 7: We recommend that the allocation of new student Graduate School Fellowships should be done in a more flexible manner.

Recommendation 8: All University and College administrative units, including the Graduate School, must work to develop deeper understandings of, become more attuned to, and better serve programs with professional and working adult students. We suggest regular assessment (which might include surveys or focus groups) of programs serving this particular student population.

Recommendation 9: Graduate and professional programs must ensure that their students receive educational experiences of the highest quality and must work to improve curriculum, advising, services, and community for their working adult students.

Themes Outside of the Scope of Task Force Inquiry

In addition to producing professors and researchers, the University's graduate programs produce lawyers, doctors, nurses, public administrators, scientists, architects, artists, pharmacists, engineers, therapists, educators, business leaders, and more. Graduate education plays a vital role in training future leaders in almost every sector of public life. However, we spent less time focusing on professional and terminal M.A. programs, such as the Medical School, the Law School, the Humphrey Institute, and the Carlson School of Business, as we did programs under the auspices of the Graduate School. This was due to a lack of sufficiently broad expertise, the distinctive attributes of such programs, and the fact that another Task Force is charged with recommendations for small colleges. As a result, there may be some issues and concerns of such professional and unfunded terminal M.A. students that we have overlooked in this report.

We also began to engage issues of concern to international students, only to find the subject to be too complex for us to engage meaningfully. Because we feel that such issues are important, we provide Appendix M to begin to identify policies of special concern to international students.

II. Introduction

Because graduate education is at the heart of any successful research university, the University of Minnesota can only reach the goal of being one of the top public research universities in the United States by making graduate education one of its very highest priorities.

In the fall of 2003, more than 1.4 million individuals enrolled in graduate institutions across the United States, with nearly a million in public institutions.¹ The University of Minnesota has one of the largest populations of graduate students in the nation: In the fall semester of 2005, over 19,000 students are enrolled in graduate education at the U, about 20% of whom are international students. Students come from all 50 states and 140 countries to study here.² The University also ranks in the top ten in the nation in total advanced degrees granted.³

The Twin Cities and Duluth campuses offer over 160 graduate degree-granting programs and 31 freestanding Minors. In the last National Research Council study of doctorate programs in the United States, only two public universities had more programs included in the study.⁴ Though exact numbers are hard to determine, we believe if one counts all graduate degree-granting programs, the University has as many or more graduate degree programs as any other U.S. university. Though the sheer number of programs has taxed resources and strategic reduction is necessary, such breadth is to be expected given that the University plays a role in the state of Minnesota unlike any other major state university, functioning as the major research institution in the state and providing advanced degrees in law, medicine, public policy, business, education, engineering, humanities, design, and the social and natural sciences.

Furthermore, many graduate programs at the University of Minnesota are ranked among the best in the nation. *Fifty-three different programs are ranked among the top twenty public university graduate or professional programs in the United States, 40 of which rank in the top ten.*⁵

We believe that the Graduate School of the University of Minnesota deserves a good deal of praise for its efficient and effective administration of admissions, student progress, and fellowship programs, as well as its leadership with respect to such issues as “Ethics and Responsible Conduct of Research,” program reviews, and the training of new Directors of Graduate Studies. Despite limited resources, the Graduate School has steadily expanded its range of services, from the creation of the Office of Postdoctoral Affairs to the collection and dissemination of important data concerning graduate programs.

¹ P. Syverseon & H. Brown, *Graduate Enrollment and Degrees: 1986-2003* (Wash., D.C.: Council of Graduate Schools, 2004).

² All data concerning the University of Minnesota graduate programs are from the Graduate School’s database.

³ U.S. Department of Education, National Center for Education Statistics. See: <http://nces.ed.gov/ipeds/pas>.

⁴ National Research Council, *Research-Doctorate Programs in the United States: Continuity and Change* (Washington, D.C.: National Academy of Sciences, 1995), Appendix E.

⁵ We focused primarily on National Research Council rankings, but included rankings published by various disciplinary organizations as well as those by *U.S. News & World Report*. For a complete list of rankings and sources, see Appendix C.

This report begins a needed University-wide conversation about what we, as a community, must do in order to achieve the goal of having one of the very best public research universities in the world. Our doctoral programs are central to this goal because they are integral to the research enterprise. Improving the graduate student experience in all facets is needed including: 1) admissions and recruitment, 2) competitive multiyear funding packages, 3) strong mentoring, guidance, and evaluation, and 4) comprehensive research and teaching training. These improvements must be matched with renewed commitment to graduate education at all levels of the University with policies and infrastructure that support the students and faculty.

The key ingredients for world-class graduate and professional education include an outstanding faculty and a strong infrastructure to attract, retain, educate, and graduate the very best graduate and professional students. Beyond stating such a deceptively simple recipe for success, it is clear to us that there is not a “one size fits all” approach available that would provide a blueprint for all 160+ graduate and professional programs for improving their quality. The key questions that all programs need to answer are 1) How do we get the best students here? 2) How can we best serve them once here? and 3) How do we facilitate successful completion and placement? Thoughtful and creative answers will vary from college to college, program to program, but we are convinced that intellectual and financial investment into such matters is essential if we are to reach our goals. To facilitate future conversations about the future of graduate education at the University of Minnesota, we offer broad, high priority, University-wide policy recommendations (in boldface) along with a series of additional recommended actions (prefaced with an asterisk).

III. Response to Deliverables

Before turning to the issues identified in our Task Force’s official charge, we note at the outset that having world-class *faculty* and world-class *graduate students* are interrelated goals. Attracting, recruiting, and training the best graduate students requires a world-class faculty that are pursuing the most innovative and exciting research and scholarship in their fields. Conversely, to become and maintain a world-class faculty requires the best graduate and professional students. The profound interdependence between the vitality of a university’s research programs and the quality of its graduate/professional students cannot be overestimated. Strengthening this powerful, positive loop at the University of Minnesota needs to be one of our highest priorities if we are to achieve our strategic goals.

The interdependence between faculty research and graduate education can be appreciated from three observations based on the 1995 NRC study. First, for the 40 graduate programs ranked, UC Berkeley had 88% of its graduate programs ranked in the top 10, the University of Michigan 38%, UCLA 25%, the University of Wisconsin 38% and Minnesota only 13% (see Appendix D). The same picture emerges if one considers the percentage of programs in the top 20. Second, there is almost a 1 to 1 correlation between the number of programs in the top 20 and research funding ($R^2 = .93$ for research funding in 2003, see Appendix D). Third, the number of National Academy members is also highly correlated with the percentage of graduate programs in the top 20 ($R^2 = .80$, see Appendix D). To be a top tier research university, we must improve the quality of our research programs.

Charge #1: Recommendations regarding best practices for identifying, recruiting, retaining, supporting, mentoring, advising, and timely graduating the very best intellectually curious, motivated graduate and professional students.

Recommendation 1: To reach the goal of having a top three world-class research institution, substantial new investment in graduate education at the University of Minnesota is required, particularly in the area of graduate student financial support.

In the process of surveying the data available concerning the cost of living in the Twin Cities, Teaching Assistant (TA) and Research Assistant (RA) salaries at the University of Minnesota, and salaries at peer institutions, the Task Force came to several conclusions. The data informing this section are described at length in Appendix D.

First, we conclude that the salaries of many graduate students are not sufficient to cover the cost of living and attending the University of Minnesota. The University made an important step in the right direction through an increase in the minimum TA salaries for 2005-2006. To be truly competitive for the top national and international students, the University should explore ways to cover student fees and all of the health insurance costs, and making sure that the minimum TA and RA salary for 50% appointments covers the costs of attending graduate school.

*The University needs a thoughtful means of determining an ethical and reasonable standard of living for students and a more accurate means of estimating actual cost-of-living expenses. The Task Force urges the Provost and the Dean of the Graduate School to appoint a small working group with appropriate expertise to estimate the cost of living and attending the University of Minnesota.

*The Task Force strongly recommends that the minimum hourly rate of compensation for Graduate Teaching and Research Assistantships be sufficient for a 50% appointment to cover the cost of living, including all fees and health insurance, for attending the University of Minnesota.

Because such a recommendation will be costly, it is important that it not be imposed without due sensitivity to the financial status of the University's colleges. In the process of receiving feedback on our preliminary report, we heard a good deal of concern about the strategic positioning process leading to a number of "unfunded mandates." If it is agreed that investment needs to be made to improve TA/RA stipends, the state legislature and University's central administration must lead the way, and increases in minimum TA/RA rates should be phased in over a reasonable length of time.

Second, it is clear that average TA and RA salaries are not competitive with *top tier* public research universities. For example, the cost of living in Ann Arbor, Michigan is less than the cost of living in the Twin Cities, yet the average TA at the U. of Michigan earns over \$1,700 more per academic year than the average University of Minnesota TA; their average RA salary is \$1,517 higher.

*The Task Force strongly recommends *targeted* investment in outstanding graduate programs graduate programs deemed essential to reaching our strategic goals, and graduate programs on a rising trajectory. Student financial support in outstanding graduate programs must be competitive not only with “peer institutions” but with the top public research universities in the United States.

*Graduate students should be guaranteed multiyear packages necessary to complete their degrees. The multiyear funding strategy should optimize all aspects of a student’s graduate training. The Task Force recommends that the Graduate School, collegiate units, and individual graduate programs explore the idea of “developmentally appropriate” funding packages. Ideally, Ph.D. students should receive, over the course of their career, a combination of TA work (to gain teaching experience), RA support (to have a mentored research experience), and fellowship support (to assist their own work).

Third, we note that the University needs greater investment in fellowships. The percentage of graduate students at Minnesota on fellowships of any type is low compared to our competitors. For example, in the biological sciences 22% of the graduate students at Michigan and UCLA are funded by fellowships and only 9% at Minnesota.⁶ The same picture emerges if one examines the percentage of students supported by fellowships for medical sciences, other life sciences, chemistry, and physics. Importantly, we note that central administration this year has increased fellowship and block grant support to the Graduate School by \$5 million. We applaud such action and would anticipate that it will enhance the success and quality of graduate education at the University; nonetheless, colleges and departments also need to continue efforts to raise funds for fellowship support.

Fourth, we believe that any vision of having a top public research university is incomplete without recognition of the central role that having a diverse student population plays in the research and education missions of the University. Given the importance of enabling underrepresented groups to attain a graduate education, we urge increased funding of the Graduate School’s Diversity of Views and Experiences (DOVE) Fellowship program, although the amount was doubled this year.

Furthermore, some aspiring minority students have not had optimal preparation for graduate school or may lack prerequisites. The process of choosing a graduate school can be complicated by knowing little about academic careers or about a prospective school and its culture.

*The Task Force recommends that the University of Minnesota establish a Post-Baccalaureate Education Program (PREP) as advocated by the National Institutes of Health to improve the transition from undergraduate to graduate school and facilitate students making the best choice.

Fifth, we note that the University of Minnesota employs approximately 2,100 research assistants (RAs) with nearly two-thirds of their funding derived from sponsored grants and contracts. The importance of highly competitive RA packages on recruiting the best graduate students and on faculty research productivity is substantial. The current funding structures are far from optimal

⁶ Based on data from the National Science Foundation and the National Institutes of Health (see Appendix D).

for encouraging faculty to seek grant funding for RAs, particularly in the area of prestigious federal training grants where the University of Minnesota lags behind its competitors by a substantial distance.

The cost of benefits (tuition and health care costs) applied to faculty grants is among the highest of peer public universities.⁷ The net effect is to drain resources away from the faculty research programs and reduce their competitiveness.

*We propose that the graduate student fringe benefit costs paid on external grants be re-evaluated. The goal should be to reward faculty who are successful in obtaining external funding that supports graduate students. One possibility is that the tuition dollars generated by the 24 thesis credits that are paid for by sponsored funds be credited directly back to the faculty member holding the grant or contract.

*The Task Force recommends that the University provide substantial incentives for seeking and obtaining grants that fund graduate students as RAs. The recent announcement from the Graduate School and Provost's Office of \$500, 000 in matching funds for training grants is a large step forward. More specific recommendations on incentives are offered in the Appendix D.

It is reasonably clear that no matter what metrics are used for comparison, the University of Minnesota must invest more in graduate student support if we are to compete successfully with the top public research institutions in the United States.

Recommendation 2: The University of Minnesota's Graduate and Professional Schools must aggressively identify and implement the best practices in graduate student recruitment, retention, mentoring, advising, and degree completion.

To attract the finest graduate and professional students requires the University of Minnesota to put into place the very best practices that begin with identifying the best students and ends with the timely completion of their degrees. While there are many outstanding graduate programs here and the Graduate School is already engaged with various national initiatives concerning recruiting, retention, and degree completion, we are convinced that practices are quite varied and of uneven quality. A good deal of the challenge for the University is to translate University goals into local, program-specific action. Our major recommendations are below, but for a more detailed discussion of this charge, see Appendix E.

*The Task Force recommends that University-wide Working Groups, in coordination with the Graduate School, the Provost's Office, and relevant collegiate Associate Deans, be formed over the next several years to formulate specific proposals for improvement. Such Working Groups should address the three questions stressed in the beginning of this report: 1) How do we get the best students here? 2) How can we best serve them once here? and 3) How do we facilitate successful completion and placement? For example, in 2006-2007 a working group could be charged to focus on "attracting, evaluating, and recruiting the best students" in order to gather

⁷ *Report of the Financing Graduate Education Task Force* (September 13, 2004).

available research, identify best practices, and recommend resource investment for that task.⁸ To be sure, the Graduate School and relevant units already engage in gathering such information, but we suspect that improvement can be made by focusing in greater detail on specific aspects of student admission, progress and degree completion and by encouraging wider “buy in” to the process.

*To assist recruiting and retention efforts, and to assist in internal University decision making concerning targeted investments to outstanding and improving graduate and professional programs, the Task Force recommends that the Graduate School expand its annual online audits of programs to include data about funding levels and comparisons with peer institutions, student awards and scholarly achievements, TA/RA workload, and placement information.

Recommendation 3: The Graduate School should aggressively pursue the goal of timely degree completion for M.A. and Ph.D. students.

While there is no consensus about the question of what ought to count as the timely completion of a Master’s or Ph.D. degree, there is a widely shared belief that the current national rates fall short of what stakeholders should expect. Collecting and evaluating nationwide statistics is a difficult task given the different practices of defining cohorts and measuring progress.⁹ The empirical studies published, however, tend to produce similar numbers. A study of cohorts of students at top-ranked research universities who began degree work between 1967-1976 found completion rates of 65% in the natural sciences, 58% in the social sciences, and 50% in the humanities.¹⁰ The median time to the doctorate degree nationwide was 8.0 years in 2004.¹¹ These results are fairly consistent with a number of other empirical studies report in the Council of Graduate Schools’ publication, *Ph.D. Completion and Attrition*.

In Appendices F and G, we list 8-year completion rates for Ph.D. students and 5-year completion rates for Master’s students at the University of Minnesota. The 8-year completion rate for Ph.D. students in recent years hovers around 50%, with higher rates in the programs in the Biological, Engineering, Physical, and Mathematical Sciences and lower rates in Social Science and Humanities programs. Some disciplinary groups have results comparable with nationwide data, and in some areas completion rates are substantially below national averages. We can and should do better. High rates of attrition are costly to the individual and to the institution. Improving completion rates would be beneficial to graduate students, the University, and the public.

The Council of Graduate Schools identifies six factors that can contribute to improved completion rates: Better screening of candidates, financial support, mentoring, program environment, research mode, and curriculum requirements. Research coming out of the Graduate Education Initiative, funded by the Andrew W. Mellon Foundation, identifies a similar list of key

⁸ It is important to draw upon the best available research material on such policies, especially when some of that research is being done by University of Minnesota scholars. See, for example, N. R. Kuncel, S. A. Hezlett, & D. S. Ones, “A Comprehensive Meta-Analysis of the Predictive Validity of the Graduate Record Examinations,” *Psychological Bulletin*, 127 (2001): 162-181.

⁹ Council of Graduate Schools, *Ph.D. Completion and Attrition: Policy, Numbers, Leadership, and Next Steps* (Washington, D.C., Council of Graduate Schools, 2004), p. 6.

¹⁰ William Bowen & Neil Rudenstine, *In Pursuit of the Ph.D.* (Princeton, NJ: Princeton U. P., 1992).

¹¹ *Doctorate Recipients from United States Universities: Summary Report 2004* (Chicago: NORC, 2005).

factors, including financial support, course and exam requirements, departmental culture, advising, monitoring student progress, and summer support.¹²

During 2003-2005, graduate programs in History and Neuroscience participated in the Carnegie Initiative on the Doctorate, and at the current time, the Graduate School of the University of Minnesota is an affiliate of the Council of Graduate School's Ph.D. Completion Project and is working with 14 graduate programs to identify a set of "best practices" for doctoral completion. This is a promising beginning, but we want to stress that we believe it should be made one of the very highest priorities of the Graduate School. In particular, we would recommend the following:

*The Task Force recommends that the University set a specific target goal of improving the University-wide average 8-year Ph.D. completion rates to at least 60% within 10 years.

*The Task Force recommends that completion data be used as part of graduate program and department reviews and as a factor in fellowship and block grant allocation processes. The evaluation of such data should be sensitive to the differences across the disciplines and differences across the markets that students face.

*The Task Force recommends that colleges and individual programs evaluate their own completion rates and, where rates are particularly troublesome, develop plans of action to improve rate significantly. Programs must be "right-sized" to ensure appropriate faculty-to-student ratios, and TA/RA funding must be structured to facilitate timely completion. Furthermore, it is important that all programs are in compliance with the Graduate School Constitution's requirement for annual written evaluations, since such a practice has been shown to improve completion rates.

Charge #2: Recommendations regarding ways to improve the infrastructure and culture of graduate and professional education.

There needs to be active collaboration among those in positions of leadership and budgetary authority for graduate and professional education at the University to excel. Vision without sufficient resources results in frustration and stagnation, while the expenditure of resources without vision simply perpetuates the status quo. Issues pertaining to graduate and professional education need to be on the table whenever program review and budget decisions are being made. The current approach to reviewing graduate and professional programs should be augmented with annual "program profiles" collected through a web-based instrument and included as a supplement to departments' annual compact documents.¹³ Furthermore, we reiterate one of the key recommendations of the Budget Advisory Committee Working Group on the Graduate School, who urged that the Dean of the Graduate School be an active member of compact discussions with collegiate deans.¹⁴

¹² R. G. Ehrenberg, G. H. Jakubson, J. Groen, E. So, & J. Price, *Inside the Black Box: What Program Characteristics Influence Doctoral Students' Attrition and Graduation Probabilities*. Unpublished paper, November, 2005.

¹³ Edward Schiappa, *Notes toward Improving Program Review* (2000). Available online at: http://www.grad.umn.edu/faculty-staff/governance/Policies/improving_programs.html

¹⁴ *Report of the Budget Advisory Committee Working Group on Graduate Education*, April, 2004.

Because the phrase “infrastructure and culture of graduate and professional education” covers so much ground, we divided our analysis into four areas: administration, research, teaching, and graduate student life. Due to space limitations, we provide here only our recommendations. For a full explanation and rationale for these recommendations, see Appendix H.

Recommendation 4: The Compact of each academic unit must include specific goals and proposed actions for improving graduate and professional education.

Recommendation 5: The University and collegiate units need to track carefully the possible negative effects that the new University budget model may have on graduate education.

*The Task Force recommends that the Compact of each college and department should include specific goals for improving graduate and professional education and details on how those improvements will be achieved. Such goals might include improving completion rates, increasing graduate admissions, improving the “yield” of admitted students who matriculate, placement data, and so forth. The Compacts need to provide incentives for reaching specific goals. The University and Graduate School must invest in programs that are striving to become outstanding; if we are to compete with other top public institutions, improved rankings in many programs across the University will be essential. Programs should be offered guidance and incentives to develop strategies to enhance their quality and overall national rank. Creative projects that significantly enhance graduate education, such as the Graduate Research Partnership Program initiated by the College of Liberal Arts in 2004, should be encouraged and supported.

*A University budget model that is highly tuition-driven and includes charges on space and student count could work against the best interests of graduate education. Small class sizes and collaborative teaching are good practices for graduate education that are becoming increasingly difficult to provide. Collegiate units need to track carefully the possible negative effects that the new University budget model may have on graduate education.

*The Task Force urges that appropriate units carefully consider the level of support for Directors of Graduate Study. The position of DGS is already central to the life of graduate programs, and the responsibilities that come with the position will only grow more onerous in the future. Programs vary in size and complexity, of course, but our sense is that DGSs do not typically receive the level of support that they need to feel valued in their role. To attract and retain outstanding DGSs, appropriate levels of support need to be provided in terms of course release(s), salary augmentation, staff support, and research assistance.

*The Task Force recommends that all programs in which graduate students are producing original research provide financial support to graduate students to present their research at appropriate national conferences.

*The Task Force recommends that all doctoral programs track the placement of their graduates and that placement information be made publicly available.

*The creation of formal research teams has proven to be a successful strategy in various disciplines, both as an education tool and as means of facilitating degree completion. The Task Force recommends that programs in which research teams are not currently the norm consider carefully whether the creation and support of such teams would be beneficial to their program.

*The Task Force recommends that individual graduate programs make sure that all of their graduate students are aware of the range of support services the University provides.

*The University's Office of Human Resources should compare practices across the University to ensure that workloads of graduate teaching and research assistants are fair and equitable.

*The Task Force recommended above that student service fees, health insurance, collegiate, or course-specific fees be built into TA/RA funding packages. If it is not practical to cover all student service fees and costs through TA/RA packages, at the very least the *billing* for such fees should not be due until later in the semester; as matters stand now, students typically must pay such fees before they have ever received their first full paycheck at TAs or RAs.

*The Task Force applauds the Graduate School's efforts to assist students to find affordable housing, particularly graduate and professional students with families. We hope such efforts continue and are expanded to include the issue of affordable childcare.

Charge #3: Recommendations regarding how to better integrate graduate student related policies at both the University and the collegiate levels.

The Graduate School plays the central and important role of quality assurance in postgraduate education across the University and its importance will *increase* as we strive to be one of the top public research universities in the world. It is important to recognize that departments, colleges, *and* the Graduate School share in the responsibility of providing a world-class experience, support, and education for our graduate and professional students. The Graduate School should be commended and supported in their efforts to establish a set of Best Practices. To improve the quality of recruitment and retention efforts even further, we urge the following steps.

Recommendation 6: The Graduate School's criteria and process for making funding decisions should be more precise and explicit, especially with respect to allocating Fellowship nominations and Block Grant funds. We recommend that Block Grants be made for a period of time longer than the current two-year periods.

Recommendation 7: We recommend that the allocation of new student Graduate School Fellowships should be done in a more flexible manner.

*The Task Force recommends that the Graduate School approve a total number of new student Graduate School Fellowship (GSF) candidates for each program eligible. If the number of "acceptable" candidates is in excess of the number of fellowships actually granted to selected and highly competitive programs, those programs should have the ability to offer fellowships to

other acceptable (and approved) candidates if the initial awardees decline a fellowship. Such a change in practice offers programs the flexibility necessary to compete for the very best student applicants, but retains the important central-review function for the Graduate School.

We recognize that such a change would alter the current process of allocating nomination “slots” in a potentially dramatic fashion. We would recommend that the Graduate School begin with a pilot program of this sort with carefully selected, outstanding programs.

*The Task Force recommends that programs be given the ability to vary the stipend amount of GSF awards. Given significant different market conditions, having a “one size fits all” fellowship amount is problematic because it can lead to a stipend too low for highly-priced disciplines, and/or too high for other disciplines. Some programs simply cannot match the fellowship stipend level in subsequent years, and it is problematic to ask students to take a significant income drop after an initial fellowship year. *At the very least, programs should have the option of making fellowships 12-month awards rather than 9-month.*

*Ongoing efforts to review graduate programs to consider mergers or termination must be continued. Though it was not explicitly within our particular list of charges to discuss the size of graduate education, it is clear that the University of Minnesota has spread itself too thin and that current efforts to review graduate programs should continue. At the same time, it should be noted that the review process must make decision criteria explicit and public, and strive to engage relevant stakeholders affected by program closures.

*The Task Force recommends that the Graduate School enhance its efforts to facilitate and support interdisciplinary and intercollegiate efforts. The Graduate School should play a lead role in facilitating development of cross-college and cross-disciplinary collaboration and consider developing a McKnight-like professorship program that is focused on interdisciplinary research.

*The Task Force recommends that administrative obstacles to cross-departmental work be eliminated. Student registration for joint degree programs should be centralized, and a uniform policy for sharing revenues and responsibilities in cross-listed courses should be developed.

*The Task Force recommends that the University adopt a uniform policy to cover fees and health insurance costs for students who receive substantial and prestigious external scholarships or fellowships. Too often, top students who have earned such awards end up receiving less support than a typical TA position, which in effect penalizes them for winning such awards.

Charge #4: Recommendations regarding how best to convey and develop graduate and professional education at the University as a public, and not solely a private, good.

In 2001, Art Rolnick and Rob Grunewald of the Federal Reserve Bank of Minneapolis published “The University of Minnesota as a Public Good.”¹⁵ They wrote this monograph in response to a working group report from the University of Minnesota’s economic summit held a year earlier.

¹⁵ Available at <http://minneapolisfed.org/pubs/fedgaz/01-11/rolnick.pdf>

Rolnick and Grunewald distinguish a public good from a private good by the principle known as the “nonrival property.” When a good is “public,” one person’s consumption of that good does not subtract from another person’s. Public universities are state-sponsored agents that provide two important public goods: higher education and basic research.

As a provider of undergraduate and graduate education, the University contributes to the local and state economy in three important ways: First, improving the quality of the local workforce through the addition of educated workers; second, workers earn a higher wage premium than uneducated workers; and third, educated workers keep state unemployment rates low. The economic impact of basic research is indirect and difficult to quantify. Rolnick and Grunewald compared data from several large cities in 2000 with and without research-oriented universities and found a 20% higher per-capita income for the former compared to the latter. In other words, an active research university is associated with a stronger local economy than an economy without a research university. By consistently ranking among the top public and private American universities in research and development expenditures the University of Minnesota will become more visible in the popular media polls ranking “best” American Universities. Such accomplishments should increase awareness of the importance of the University to the state.

The University also contributes to the social, cultural, and moral fiber of the broader community. Within a university structure, these contributions typically fall in the area of “service.” Some graduate and many professional programs within the University of Minnesota provide outreach and service that directly benefits the community and is visible, and the U’s efforts through the Council on Public Engagement are very important in this regard (see Appendix I for further discussion). Business and community members who have directly benefited from such services tend to have a positive view of the university. Programs are uneven, however, in their desire to engage directly with the community. For example, programs in allied health, social work, art, ethnic studies, and music disciplines probably have more service-related activities than programs in the basic sciences. Civic engagement is likely valued highly by administration in these programs.

Program directors can be creative in imagining ways to improve service. However, there has to be value in doing so. By consistently increasing service activities across all graduate programs and rewarding these activities internally, the University, its colleges, and individual programs will go a long way to improve public perceptions of graduate programs and graduate students.

*The Task Force supports efforts, ongoing and recommended through the strategic position process, to facilitate the University becoming an international leader in basic research, as the generation of basic research is a public good that leads to economic and social gain.

*The Task Force recommends further investment in graduate education by Central Administration and that Central Administration continue to promote funding for graduate education from the State. Recognizing that graduate education is a public good, it should be treated as such. Because graduate education is uniquely suited to improve the University’s perception as a public good, graduate education should be subsidized to a greater extent than undergraduate education. State investment in graduate education, along with efforts by the

University and private philanthropy, would help to bring the budget process in line with the philosophy that graduate education is a public good and an important contributor to the social, cultural, and moral fiber of the broader community.

*The Task Force encourages greater effort to inform the people of Minnesota about the varied contributions the University makes to the state in its research, teaching, and outreach. We must educate the public about the unique roles and contributions a research University makes to the state. Appendix I provides further thoughts on this issue.

*The Task Force recommends that every graduate program should be encouraged to engage in the education of the public about their discipline. Both faculty and graduate students should participate as stewards of their disciplines. Examples of engagement include public talks, open houses with graduate students/faculty discussing their work and its implications for society, visits to schools and local colleges, etc. The overall goal is to expand public understanding of the role scholarship and research in making sense and improving a complex and challenging world.

*The Task Force encourages an administrative initiative to reward service and civic engagement activities by faculty and students that increase the visibility and relevance of the University's graduate programs to the surrounding community.

Charge #5: Recommendations regarding the improvement of services, quality, efficiency, timeliness, etc., and the streamlining of processes to improve the reach and impact of graduate programs, especially programs for working adults.

The University serves a significant number of working adult students who are employed full time while working toward a graduate or professional degree on a part-time basis (see Appendix J). Some programs are designed specifically for the working adult and some attract working adults without being designed for them in particular. Students in such programs include those enhancing established careers and those who see graduate study as a means to changing their careers.

Working adult students contribute in meaningful ways to graduate and professional programs. They bring a diversity of backgrounds, perspectives and real world experiences that “ground” courses and push faculty to consider how course content relates to real world practices. The real world experience helps faculty define future research. Working adults are important for maintaining our reputation among Minnesota's schools and companies and for forging connections to the community. These students also generate a great deal of tuition revenue for the University, and their presence enhances the transition of the more traditional, full time student into the work force or practitioner communities.

Non-traditional and working adult students face a number of obstacles or barriers in their professional or graduate study. Their attention is divided among work, family, and study demands. Students often feel isolated from the academic community and lack connection with other graduate students and faculty, particularly after their coursework is completed. Non-traditional, working adult students often experience significant delays in progress toward degree

completion because of financial barriers and the competing demands placed on their time. Continuously increasing tuition rates and fees make it difficult for students to remain committed to graduate study. Students who work full time face additional hurdles when their programs require internships and out-of-class group work.

Two major themes emerged from the process of seeking input from various University units: *Perceived tensions* between the University's goal to become a top public research institution and the mission and focus of units that serve working adult graduate and professional students; and a need for better *services* (from the University, the Graduate School and the individual programs). Below are broad recommendations; however, as part of the information gathering process, more detailed recommendations were developed and are presented in Appendix K.

As the University strives to become a world-class public research university, care must be taken to attend to the land-grant mission of the University as it is met through graduate and professional programs that serve the community. Members of the broader University of Minnesota community need to be reassured that their concerns will be addressed as the University moves forward to become one of the top 3 research institutions. Meeting our mission requires an emphasis on research, a balance in resource distribution, and a commitment to the community.

Recommendation 8: All University and College administrative units, including the Graduate School, must work to develop deeper understandings of, become more attuned to, and better serve programs with professional and working adult students. We suggest regular assessment (which might include surveys or focus groups) of programs serving this particular student population.

Working adults have many needs that can be easily met with an increased understanding of their role in the U of M community. By understanding that working adults are deeply committed to their programs, make large sacrifices to pursue their education, and have different needs of their program and the University, improved services can be provided from the Graduate School and other administrative units, including the creation of fellowships designed for working adults, creative communication tools, and a reassessment of policies. For example, the Graduate School currently needs a coding mechanism to accurately identify working-adult students or the programs that serve them. In addition, there needs to be careful consideration related to time-to-degree for working adult students as opposed to full-time students (which is discussed on pp. 7-8 of this report). The recommendation related to establishing “working groups” (p. 7) should also be applied to programs that serve non-traditional and working adult students. Such programs would benefit greatly from a collaborative effort to create specific proposals for improvement.

Recommendation 9: Graduate and professional programs must ensure that their students receive educational experiences of the highest quality and must work to improve curriculum, advising, services, and community for their working adult students.

The quality of graduate education rests largely within graduate and professional programs themselves. Strong mentoring is the cornerstone for any graduate program; advising loads must

be reasonable and faculty should be rewarded for mentoring students well. Communication vehicles and services need to be improved (especially websites), and money saving structures should not interfere with the quality of the curriculum and the graduate or professional experience. There is a particular need to build a strong sense of community for graduate and professional students. Many of the recommendations offered earlier in this report (see pp. 6-9) apply also to programs that serve non-traditional and working adult students. Additional recommendations specifically targeting programs that serve working adult students are provided in Appendix K.

Charge #6: Recommendations regarding the streamlining of administrative processes, including better alignment with Enterprise systems serving undergraduate students.

The Graduate School is a heavy user of the Enterprise systems, from admissions through degree conferral and graduate faculty tracking. The Graduate School already has plans to continue a transition from paper forms to web-based services. We recommend that the Graduate School continue its efforts to create a user-friendly environment that more closely parallels services available to undergraduates, including the move from paper forms to web-based approval procedures, a creation of a One Stop portal for graduate students, and a parallel to the Academic Progress Audit System (see Appendix L).

IV. Recommendations for Prioritizing Deliverables

The Task Force emphatically asserts that becoming a world-class research institution requires world-class graduate and professional students. This report offers nine University-wide policy recommendations to reach our strategic goal of becoming a top public research university. Of these global recommendations, three are assigned the highest priority, although The Task Force wishes to stress the importance and necessity of all ten recommendations.

The first recommendation is that the University must make substantial new investments in graduate education, particularly in the financial support of graduate students. To be truly competitive for the best and the brightest of national and international students, the University must provide highly competitive financial support packages.

The second key recommendation is the University's Graduate and Professional Schools must aggressively identify and implement the best practices in student recruitment, retention, and mentoring. Of particular importance is developing policies and procedures that assure timely degree completion. Recruiting and training the finest graduate and professional students compel all programs to utilize the best practices to maximize every student's education and insure all achieve their full potential.

The third key recommendation is that the Graduate School incorporate greater flexibility in the Graduate Fellowship program, both in policies for awarding fellowships and the size of the awards. Acknowledging that different disciplines have different needs and that a single policy does not optimally meet those needs, flexibility provides a powerful tool to allow programs to recruit the best students.

Finally, the Task Force recommends that the Provost's Office and Graduate School issue a report two years hence that examines the implementation of any policy changes resulting from this report and their impact on collegiate, department, and graduate program units.

V. List of Appendices

A.	Task Force Consultation & Communication	1a
B.	Copy of Task Force Charge Letter	3a
C.	Highly Ranked University of Minnesota Graduate Programs	4a
D.	Student Financial Support Issues	6a
E.	Further Analysis of Recruiting, Retention, Advising, & Mentoring Practices	15a
F.	University of Minnesota Doctoral 8-year Completion Rates	17a
G.	University of Minnesota Masters 5-year Completion Rates	19a
H.	Culture and Infrastructure Issues	20a
I.	Further Thoughts on Contributing to the Public Good	23a
J.	Summary of Program Statistics: Graduate Programs Serving Significant Numbers of Working Adults	26a
K.	Further Recommendations Concerning Working Adults	27a
L.	Streamlining Administrative Processes	31a
M.	International Student Concerns	32a

Appendix A: Task Force Consultations & Communication

1. Graduate School: The Task Force had extensive contact and consultations with the Graduate School, including Dean Gail Dubrow, Brad Bostrom, Myrna Smith, Andrea Scott, Vicki Field, and Karen Starry.

2. College Deans: College Deans were contacted for their input and insights on supporting graduate and professional education, and in particular we asked them to identify highly ranked programs so we can begin our report by emphasizing the tradition of excellence that characterizes graduate education at the University of Minnesota. As noted below (#9) we received a memo with feedback from the Twin Cities Deans Council on our preliminary report.

3. Directors of Graduate Studies: The Task Force solicited DGSs for their input and the input of their constituencies on the deliverables. A special announcement was made at the all-University symposium on the future of graduate education held on October 18th. We received numerous emails from individual DGSs with suggestions.

4. Graduate and Professional Students: The Task Force worked with the leadership of Council of Graduate Students (COGS) and the Graduate and Professional Students Assembly (GAPSA) to identify the concerns and perspectives of our students. The co-chairs attended October meetings of these organizations to share the work of the Task Force and to receive suggestions.

5. Open Meetings: Six “Town Hall” meetings took place; three for graduate and professional students (one each on the St. Paul, Minneapolis, and Duluth campuses), two for faculty (Minneapolis and Duluth), and one with the Advocacy Committee of the University of Minnesota Alumni Association. These were held in coordination with the Task Force on interdisciplinary graduate education.

6. Interested Parties: The Task Force was contacted by the CLA Council of Chairs; by Victor A. Bloomfield, Associate Vice President for Public Engagement, to discuss the role of public engagement in graduate education; and by a “graduate working group” organized to formulate recommendations for improving graduate education in the “New College” (COAFES & CNR). Also, a meeting was held with the Basic Science Council of the Medical School, which represents basic biomedical sciences and associates graduate programs.

7. For the “Working Adults” deliverable, the following consultative process was followed:

An email was sent to the DGS listserv requesting input from programs serving significant numbers of working adult students. We received replies from 12 programs. Informal focus groups with faculty/DGSs/staff and students (separate from faculty/staff focus groups) were held with:

- Curriculum & Instruction (faculty/staff)
- Educational Policy and Administration (faculty/staff)
- Master of Liberal Studies (faculty/staff & students)

- Master of Public Affairs (and other masters program in Humphrey) (faculty/staff & students)
- Nursing (faculty/staff)
- Water Resources Science (faculty/staff & students)
- Social Work (students)

All programs were invited to provide input via email, and in addition to email responses received from some programs above, we also received email input from the following programs:

- Human Resources and Industrial Relations (Carlson School)
- Biological Sciences Masters Studies

Programs that responded to the initial email message but did not schedule focus groups with us or provide input via email:

- Criminology Masters Program (Duluth)
- Software Engineering
- Work and Human Resources Education

We acknowledge that the list above is not complete; that is, there are likely to be other programs within the University that serve non-traditional students. However, there was no clear way to identify them and, therefore, we relied on programs' self-identification and their willingness to participate in this process. That being said, we were impressed by the continuity of concerns and issues that emerged from our conversations with students, faculty and staff in these programs and believe that the information in this report is likely to be representative.

8. With respect to the "public good" deliverable, interviews were held with Nina Archabal, Director of the Minnesota Historical Society and Richard Allendorf, Associate General Counsel for General Mills.

9. During the Public Comment period, the Task Force received a good deal of input from individual graduate and professional students, faculty, and administrators. We also received memoranda from the College of Liberal Arts Council of Chairs and the Twin Cities Deans Council.

Appendix B: Copy of Task Force Charge Letter

Graduate Reform: Student Support Report due: December 10, 2005

Mission:

To create a strategic plan for identifying, recruiting, retaining, mentoring, advising, and timely graduating world-class graduate and professional students.

Deliverables:

- Recommendations regarding best practices for identifying, recruiting, retaining, supporting, mentoring, advising, and timely graduating the very best intellectually curious, motivated graduate and professional students.
- Recommendations regarding ways to improve the infrastructure and culture of graduate and professional education.
- Recommendations regarding how to better integrate graduate student related policies at both the University and the collegiate levels.
- Recommendations regarding how best to convey and develop graduate and professional education at the University as a public, and not solely a private, good.
- Recommendations regarding the improvement of services, quality, efficiency, timeliness, etc., and the streamlining of processes to improve the reach and impact of graduate programs, especially programs for working adults.
- Recommendations regarding the streamlining of administrative processes, including better alignment with Enterprise systems serving undergraduate students.

Appendix C: Highly Ranked University of Minnesota Graduate Programs

Program	Source of Ranking ¹
Aerospace Engineering*	National Research Council
Applied Economics*	Gregory M. Perry Study ²
Art History**	National Research Council
Astrophysics*	National Research Council
Audiology*	<i>U.S. News & World Report</i>
Biomedical Engineering*	National Research Council
Business*	<i>U.S. News & World Report</i>
Ceramics*	<i>U.S. News & World Report</i>
Chemical Engineering*	National Research Council
Chemistry**	National Research Council
Civil Engineering*	National Research Council
Classics**	National Research Council
Communication Studies**	National Communication Association
Computer Engineering**	<i>U.S. News & World Report</i>
Counseling & School Personnel Psychology*	<i>U.S. News & World Report</i>
Curriculum & Instruction*	<i>U.S. News & World Report</i>
Developmental Psychology*	<i>U.S. News & World Report</i>
Ecology, Evolution, & Behavior*	National Research Council
Economics*	National Research Council
Educational Psychology*	<i>U.S. News & World Report</i>
Electrical Engineering**	National Research Council
Entomology*	Gourman Report
Family Social Science*	Lundell <i>et al.</i> ³
Forestry* ⁴	Gourman Report
French**	National Research Council
Geography*	National Research Council
German*	National Research Council
History*	National Research Council
Hydrogeology*	<i>U.S. News & World Report</i>
Inorganic Chemistry*	<i>U.S. News & World Report</i>
Law*	<i>U.S. News & World Report</i>
Marriage and Family Therapy*	Amer. Assn. of Marriage & Family Therapy
Material Science**	National Research Council
Mathematics*	National Research Council
Mechanical Engineering*	National Research Council
Medicine-Primary Care (Duluth)*	<i>U.S. News & World Report</i>
Medicine-Primary Care (Twin Cities)*	<i>U.S. News & World Report</i>
Neuroscience**	National Research Council
Nonprofit Management*	<i>U.S. News & World Report</i>

¹ Many programs are highly ranked by more than one source.

² Gregory M. Perry, "Ranking M.S. and Ph.D. Programs in Agricultural Economics—Spring 2004," published online at: <http://arec.oregonstate.edu/Ranking2004.pdf>.

³ Family Social Science has been ranked #1 in three different studies over the years, the most recent of which is C.E. Lundell, R. Bagley, W.R. Burr, J. Hawley, P. Brooke, R. Sheridan, D. Nelson, *Faculty Perceptions About Family Science Graduate Programs*. (November, 1992). Paper presented at the meeting of the National Council on Family Relations, Orlando, FL.

⁴ Forestry is part of the Natural Resources Science Management program.

Pharmacy*	<i>U.S. News & World Report</i>
Pharmacology*	National Research Council
Philosophy**	National Research Council
Physics**	National Research Council
Political Science*	National Research Council
Psychology*	National Research Council
Public Affairs*	<i>U.S. News & World Report</i>
Public Health Nursing*	<i>U.S. News & World Report</i>
School Psychology*	<i>U.S. News & World Report</i>
Sociology**	National Research Council
Special Education*	<i>U.S. News & World Report</i>
Speech-Language Pathology**	<i>U.S. News & World Report</i>
Statistics*	National Research Council
Vocational Education*	<i>U.S. News & World Report</i>

*In Top Ten of public research universities.

**In Top Twenty of public research universities.

Appendix D: Student Financial Support Issues

Due to space limitations of the main report, much of the specific rationale for the Task Force recommendations must be provided here as an appendix. To make the relationships between the rationale and the recommendations clear, we repeat the recommendations below.

Interdependence between research and graduate education: The 1995 NRC ranking examined 40 graduate programs across a large number of schools. This data allows a comparison of the University of Minnesota with other major public research universities. The first point is that our top competitors have a much higher percentage of graduate programs ranked in the top 10 or 20, as shown in Figure 1.⁵

Ranking of 40 Graduate Programs (1995 NRC)

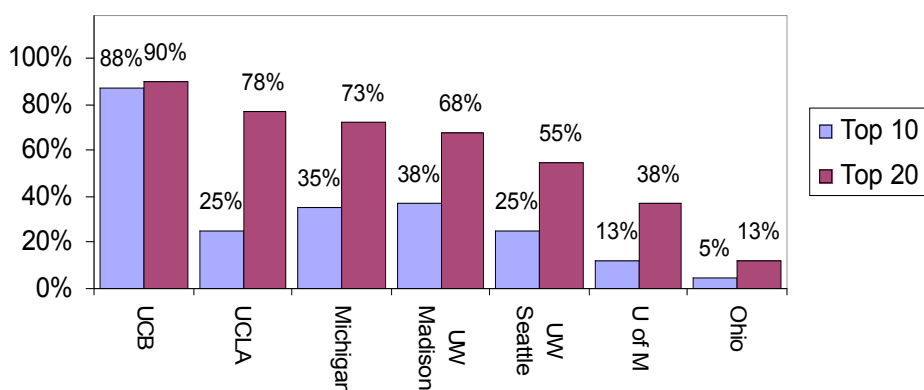
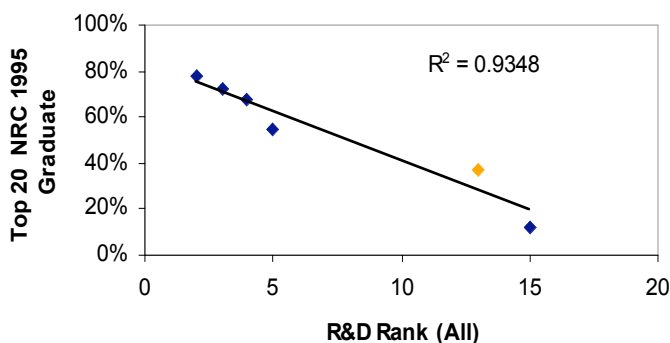


Figure 1: The percentage of programs among the 40 NRC-ranked programs that rank in the top 10 and the top 20, respectively.

The second point is that research funding and the quality of graduate programs are strongly correlated. Figure 2 shows the relation between total research and development funding (2003 data from the NSF) and the percentage of graduate programs ranked in the top 20 (NRC). The plot is based on 6 of the 7 schools shown in Figure 2. UC Berkeley was excluded because it does not have a medical school. The University of Minnesota is the orange dot.



⁵ All figures and a good deal of the analysis in this section were provided by Professor Claudia Neuhauser, Department of Ecology, Evolution, and Behavior.

Figure 2: Funding versus quality of graduate programs.

The third point is the striking correlation between the quality of a faculty and the quality of the programs. Figure 3 plots the percentage of programs in the top 20 versus the number of National Academy members. Minnesota is the orange dot.

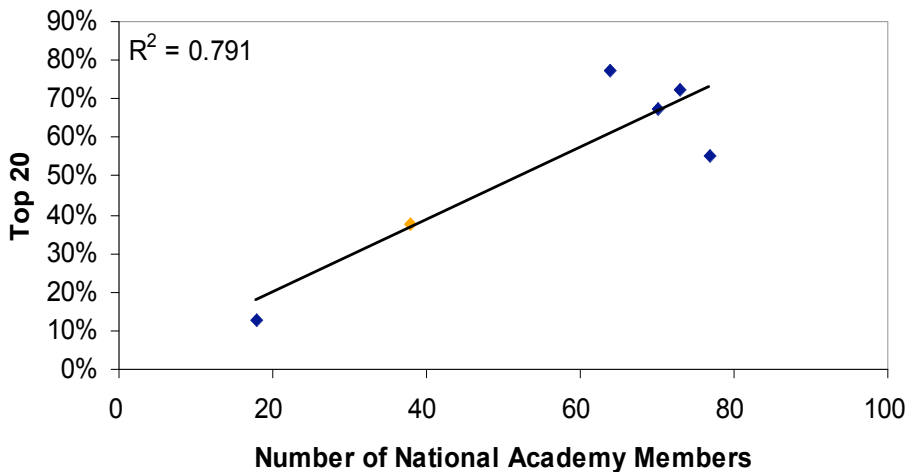


Figure 3: Correlation between Number of National Academy Members and the percentage of programs that are ranked in the top 20.

The evidence is unequivocal that to be a top tier research university, we must improve the quality of our research programs.

The following figures provide comparative data on selected areas of funding in the sciences. This data was collected and provided by Professor Claudia Neuhauser. In the Medical Sciences (Figure 4), we do not do well in the category of fellowships. This could be because of lack of internal fellowships or lack of competitiveness at the national level. The percentage of graduate students in the medical sciences funded on training grants in 2003 is comparable to other institutions.

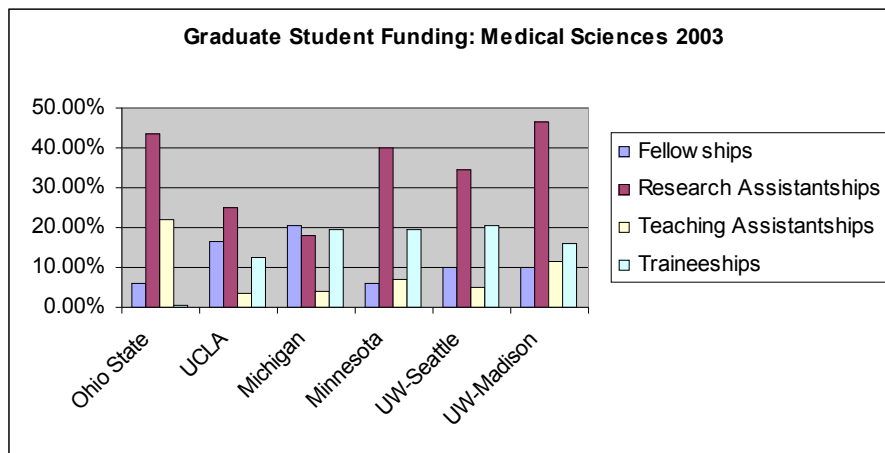


Figure 4: Funding sources for graduate students in the Medical Sciences

It should be noted, however, that the total award amount for training grants to the University of Minnesota is quite a bit lower than higher ranked institutions (see Figure 5 for 2003 NIH data on training grants).

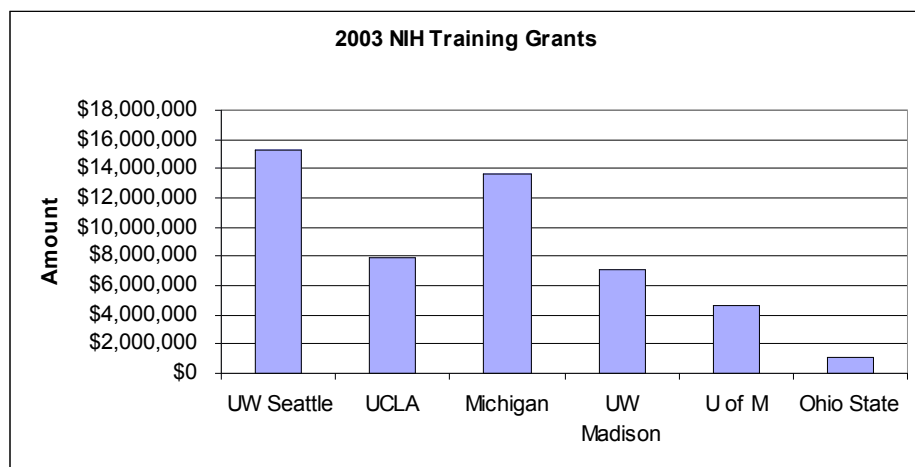


Figure 5: Funding for NIH training grants for selected institutions in 2003.

Figure 6 has the funding sources for graduate students in the biological sciences. A large proportion of students is supported on research assistantships, and we do not do well in the categories “Fellowships” and “Traineeships.” Increasing the number of fellowships and traineeships in the life sciences must become a priority if we want to reduce the number of students supported on research assistantships.

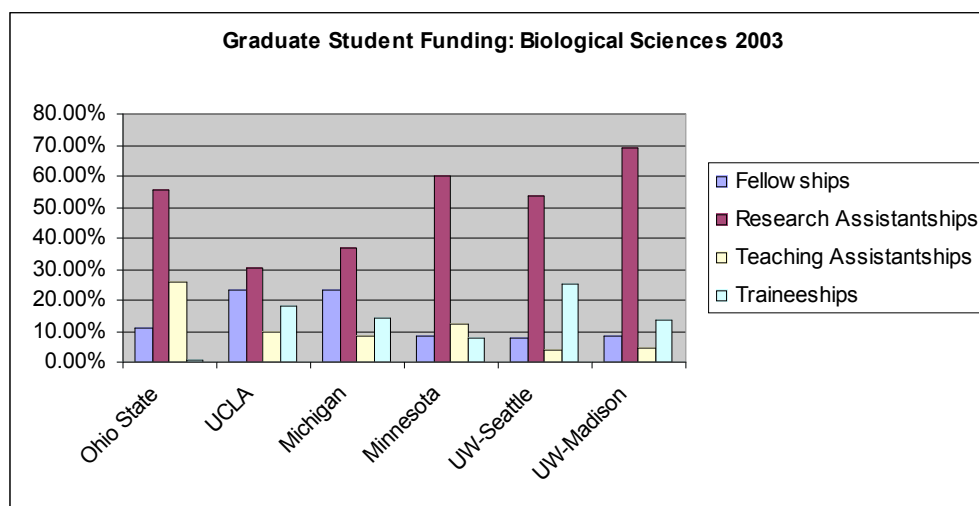


Figure 6: Funding sources for graduate students in the Biological Sciences

Figure 7 has the funding sources for graduate students in physics. The University of Minnesota funds relatively more graduate students on teaching assistantships than the other institutions and relies less on research assistantships. Note the relative lack of fellowships at Minnesota.

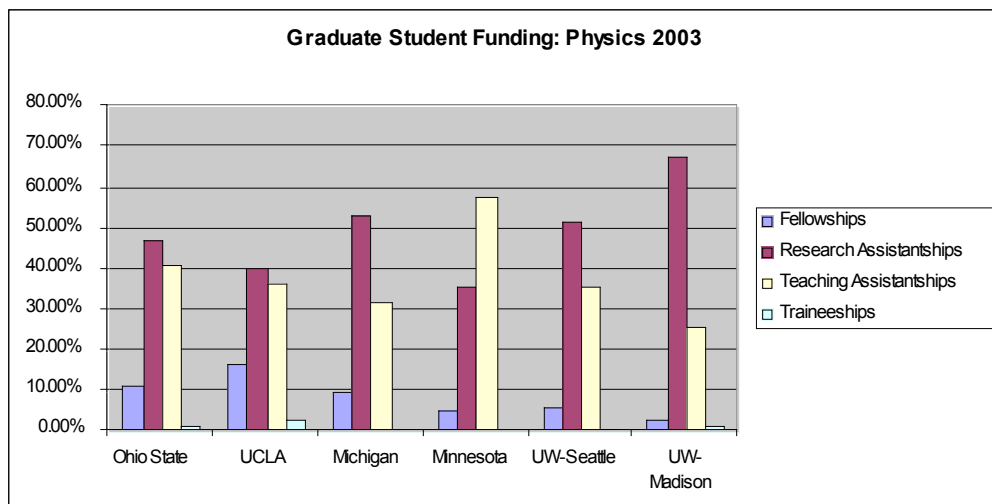


Figure 7: Funding sources for graduate students in Physics

Figure 8 has the funding sources for students in chemistry. The picture is similar to the funding situation in physics.

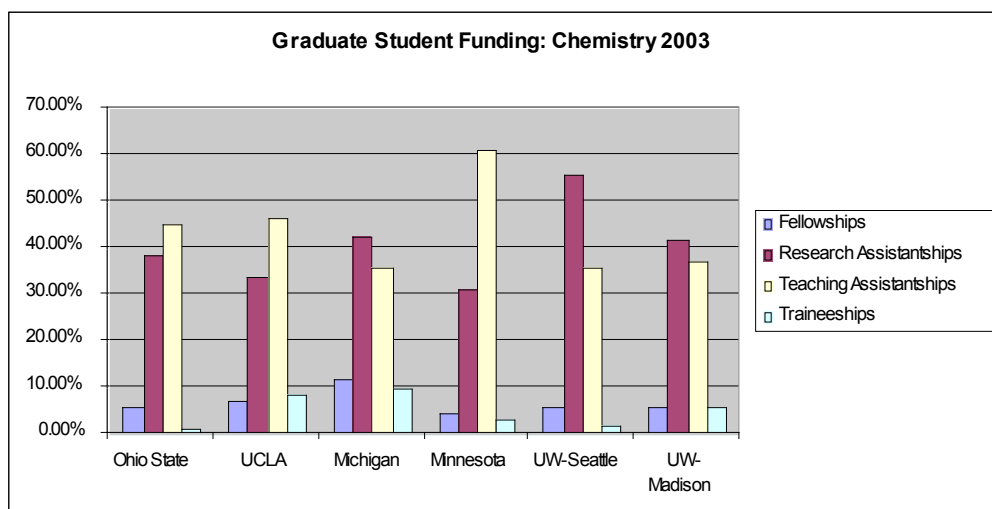


Figure 8: Funding sources for graduate students in Chemistry

TA/RA Support: There does not appear to be a consistent and official estimate for the cost of living and attending graduate school for a school year. The closest figure one might consider official is the annual cost of living determined by the Graduate School for international students for visa documentation purposes. For the 2005-2006 school year this figure is \$14,420 for 12 months, which can be prorated for 9 months to \$10,815. Add to this the estimated cost to students of books, fees, and the 5% insurance co-pay (\$1,272) and the minimum cost of attending graduate school (for the typical MA or PhD student) is \$12,087. However, the minimum TA salary for a standard 50% position is now \$11,895. While the *average* University of Minnesota TA salary in 2004-2005, according to data reported in the most recent AAU Institutions Data Exchange, was \$12,366, the most common salary (mode) was \$10,803. Such figures indicate that by the University's own calculations many graduate students are not

meeting the minimal cost of attending Graduate School with a TA-ship.⁶ One statewide study suggested that living in the metro area for a year cost single adults \$24,889 in 2002, a figure considerably higher than Graduate School estimates.⁷ Clearly, TA salaries are not covering real costs, and the gap is even wider if one factors in summer expenses that typically are not covered in TA offers. Research Assistants fare better in this regard, with an average salary of \$13,549 for the 9-month school year, but still fall short of meeting many students' needs.

According to data collected and analyzed by the Office of Institutional Research and Reporting, about 16% of doctoral students took out loans, in FY05 alone averaging almost \$12,000 per student. Such loans represent slightly more than 11% of their income. At the Master's level (not including professional programs), in the same year 41% of students took out an average of \$13,500 in loans per student, representing 57% of their income. Of course, the University is not obligated to meet all the financial needs of every student in every program, but the magnitude of these numbers gives added credibility to our surmise that TA/RA salaries are not covering many students' cost of living.⁸

The University made an important step in the right direction through an increase in the minimum TA salaries for 2005-2006. To be truly competitive for the top national and international students, the University should explore ways to cover student fees and all of the health insurance costs, and making sure that the minimum TA and RA salary for 50% appointments covers the costs of attending graduate school.

*The University needs a thoughtful means of determining an ethical and reasonable standard of living for students and a more accurate means of estimating actual cost-of-living expenses. The Task Force urges the Provost and the Dean of the Graduate School to appoint a small working group with appropriate expertise to estimate the cost of living and attending the University of Minnesota.

*The Task Force strongly recommends that the minimum hourly rate of compensation for Graduate Teaching and Research Assistantships be sufficient for a 50% appointment to cover the cost of living, including all fees and health insurance, for attending the University of Minnesota.

Because such a recommendation will be costly, it is important that it not be imposed without due sensitivity to the financial status of the University's colleges. In the process of receiving feedback on our preliminary report, we heard a good deal of concern about the strategic positioning process leading to a number of "unfunded mandates." If it is agreed that investment needs to be made to improve TA/RA stipends, the state legislature and University's central administration must lead the way, and increases in minimum TA/RA rates should be phased in over a reasonable length of time.

If one uses as a guide the 2004 University of Florida's *The Top American Research University* report, the top eight public research universities in the United States are the University of

⁶ One program survey documented an average "income deficit" for students of \$1,495 annually: Applied Plant Sciences Graduate Student Alliance, Graduate Student Expense Committee report. December 2003.

⁷ *The Cost of Living in Minnesota* (St. Paul, MN: Jobs Now Coalition, 2003), p. 10.

⁸ Peter Zetterberg, "FY 22005 Financial Aid and Salary Earnings for Graduate and First Professional Students" (November, 2005).

California-Berkeley, the University of California-Los Angeles, the University of Michigan, the University of North Carolina, the University of Wisconsin, the University of Florida, the University of Illinois-Urbana/Champaign, and the University of Minnesota.⁹ TA salary data is available for all of these institutions except for the University of North Carolina in the most recent AAU Institutions Data Exchange. Not including Minnesota, the average 50% TA salary for the remaining six institutions is \$14,055, compared to Minnesota's \$12,366. In this group of top public research universities, only the University of Wisconsin reported a lower average than Minnesota (\$12,161). Even adjusting for cost of living differences, this gap is substantial. The cost of living in Ann Arbor, Michigan is less than the cost of living in the Twin Cities, yet the average TA at the University of Michigan earns over \$1,700 more than the average TA at Minnesota. Comparison of average RA salaries show a similar disparity.

The average RA salary for the universities identified above is \$14,893.50, compared to the University of Minnesota average salary of \$13,549. Indeed, the University of Minnesota average RA salary is almost \$1,000 less than the *lowest* university surveyed above (Wisconsin), and \$1,344.50 below the average of the six universities examined. Again, we note that the cost of living in Ann Arbor, Michigan, is less than it is in the Twin Cities, yet their average RA salary is \$1,517 higher.

*The Task Force strongly recommends *targeted* investment in outstanding graduate programs graduate programs deemed essential to reaching our strategic goals, and graduate programs on a rising trajectory. Student financial support in outstanding graduate programs must be competitive not only with "peer institutions" but with the top public research universities in the United States.

*Graduate students should be guaranteed multiyear packages necessary to complete their degrees. The multiyear funding strategy should optimize all aspects of a student's graduate training. The Task Force recommends that the Graduate School, collegiate units, and individual graduate programs explore the idea of "developmentally appropriate" funding packages. Ideally, Ph.D. students should receive, over the course of their career, a combination of TA work (to gain teaching experience), RA support (to have a mentored research experience), and fellowship support (to assist their own work).

Fellowship Support: The primary University-wide form of Fellowship support for new graduate students is the Graduate School Fellowship program. While the Graduate School has been responsive to requests from programs to raise the fellowship stipend over the years, the total amount of funds budgeted for University-wide fellowship support has not kept pace, which has resulted in fewer fellowship offers. The total budget for fellowships administered by the Graduate School has increased roughly by one-third in the past 15 years; during that same period, the cost *per* fellowship has more than doubled. As a result, the total number of fellowships has fallen from a high of 329 in 1992-1993 to 190 in 2005-2006.

In a "Summary of Responses from Students who Declined the University of Minnesota Graduate School Fellowships 2005-2006," it is reported that of the 80 who declined a fellowship office,

⁹ John V. Lombardi, Elizabeth D. Capaldi, Kristy R. Reeves, & Denise S. Gater, *The Top American Research Universities* (Gainesville, FL: The Lombardi Program on Measuring University Performance, 2004), p. 52. The University of Minnesota has ranked in the top 8 public universities in this study in all 5 years of its publication.

slightly more than half (45) accepted offers that provide more financial support. The University needs to offer more fellowships, and more multi-year fellowship packages in particular, if it is to meet the goal of being one of the top public research universities in the United States.

The percentage of graduate students at Minnesota on fellowships of any type is low compared to our competitors. For example, in the biological sciences 22% of the graduate students at Michigan and UCLA are funded by fellowships and only 9% at Minnesota (see Appendix D). Importantly, we note that central administration this year has increased fellowship and block grant support to the Graduate School by \$5 million. We applaud such action and would anticipate that it will enhance the success and quality of graduate education at the University; nonetheless, colleges and departments also need to continue efforts to raise funds for fellowship support.

Support for Diversity: We believe that any vision of having a top public research university would be incomplete without recognition of the central role that a diverse student population plays in the research and education missions of the University. In the area of graduate student support, such recognition translates into a specific commitment to increasing the funding of DOVE fellowships. “DOVE” stands for “Diversity of Views and Experiences,” a name that emphasizes both the range of eligibility characteristics (notably including socioeconomic class) and the value to a graduate program and to the University generally of a more diverse student body. In moving beyond considerations of equity and access, the DOVE program aims to recruit and support the students the University needs if its research and graduate education are to reflect increasing global inter-connectedness and changing U.S. demographics, benefit from a broader range of innovative ideas and critical perspectives, and engage with diverse communities.

One of the challenges in graduate education is recruiting and retaining minorities. This is a particularly difficult problem in the sciences in which the number of qualified applications across the nation remains low. Some aspiring students have not had the optimal preparation for graduate school or may lack essential prerequisites. For many minority students the leap to graduate school is filled with too many unknowns. The process of choosing a graduate school can be complicated by knowing little about academic careers or about a prospective school and its culture.

*To improve the transition from undergraduate to graduate school and facilitate students making the correct choice, the Task Force recommends that the University establish a Post-Baccalaureate Education Program (PREP) as being advocated by the National Institutes of Health.

In the PREP program model, minority students with recent baccalaureate degrees and an interest in graduate school are brought to the University to work and study with a faculty member in the field of their interest. Each PREP scholar has a training plan for a period of one to two years that includes working as an apprentice with a faculty mentor, student development, and educational activities. PREP scholars are paid the equivalent of an RA during this transition period between undergraduate and graduate school. Participation in a PREP program allows the scholar to explore whether graduate school is the correct choice, to supplement their education, and to develop the skills needed to compete and succeed in graduate school. Although existing PREP programs are primarily in the biomedical sciences, the model could easily be extended to other

disciplines, both in the arts and sciences. The overall goal is to develop a cohort of minority students at the University of Minnesota who will become leading academic scientists and scholars in the future.

The University of Minnesota employs approximately 2100 research assistants (RAs) with nearly two-thirds of their funding derived from sponsored grants and contracts. The importance of highly competitive RA packages on recruiting the best graduate students and on faculty research productivity is substantial. In many disciplines, for example the biological, engineering, and physical sciences, it is the norm that students are funded as RAs throughout most of their tenure in graduate school. The research work of the RA is essential to the faculty member for obtaining and maintaining external grant support. Not only do the graduate students perform much of the field and laboratory work, their research productivity underpins the renewal of the grant or new proposals. Increasingly both junior and senior faculty members require talented students supported by stable RA funding to maintain and grow their research programs.

RA Budget Support: As noted above the average 12-month salary for RAs at the University of Minnesota was one of the lowest among the leading public research universities. Our graduate programs must be able to offer the most attractive RA packages to achieve the goals of strategic positioning and to compete with the likes of the University of California at Berkeley and the University of Michigan. These packages should include not only competitive stipends but multi-year contracts. The use of RAs should be greatly expanded in fields outside of the sciences. Support on RAs would free students from teaching responsibilities, allowing them time to concentrate on their thesis projects and aiding the timely completion of their degrees.

We believe the cost of benefits (tuition and health care costs) applied to faculty grants is among the highest of peer public universities.¹⁰ The net effect is to drain resources away from the faculty research programs and reducing their competitiveness. We propose that the graduate student fringe benefit costs paid on external grants be re-evaluated. The Task Force acknowledges the size and complexity of this issue, yet contends that the impact on our research competitiveness warrants a re-examination of how these costs to grants. The goal should be to reward faculty who are successful in obtaining external funding that supports graduate students.

One of the most prestigious and valued sources of support for funding graduate students is federal training grants. These grants provide significant dollars and success in obtaining these grants is a recognized measure of the quality of a graduate program. Training grant funds allow students to devote full time to their studies and research, allow for interdisciplinary research and free-up faculty research dollars. The largest numbers of training grants are in the biological and biomedical sciences. But the University must improve its competitiveness for these grants. The National Institutes of General Medicine Sciences (NIGMS) funds more training grants than any other federal granting agency. Our competitors are much more successful in obtaining these grants. For example, in 2004 the University of Wisconsin had 128 funded training positions from NIGMS, the University of Michigan had 116 and the University of California at Berkeley had 102. The University of Minnesota had only 32 NIGMS funded training positions. The disparity is also evident in total NIH training grant funding. For example in 2004 Michigan received \$20.4M, Wisconsin \$15.2M, UCLA \$14.7M, and Minnesota \$9.8M. Note that UC Berkley is not

¹⁰ *Report of the Financing Graduate Education Task Force* (September 13, 2004).

included in this list because they lack a medical school and medical schools are the recipients of most NIH training grants.

The reasons for this disparity in training grant funding are not easily ascertained but we offer two thoughts. First, there has not been a “culture” of aggressively seeking training grants at Minnesota, particularly among the basic biological sciences. Second, the quality, depth and geographic diversity of our applicant pools have not been adequate to be competitive. This reinforces the need to increase the quality of our graduate programs and the level of investment.

*We propose that the graduate student fringe benefit costs paid on external grants be re-evaluated. The goal should be to reward faculty who are successful in obtaining external funding that supports graduate students. One possibility is that the tuition dollars generated by the 24 thesis credits that are paid for by sponsored funds be credited directly back to the faculty member holding the grant or contract.

*The Task Force recommends that the University provide substantial incentives for seeking and obtaining grants that fund graduate students as RAs. The recent announcement from the Graduate School and Provost’s Office of \$500, 000 in matching funds for training grants is a large step forward.

The incentives should include additional staffing to help faculty generate these proposals and central systems to gather and record information in the form required by training grants. Most importantly the University should develop a policy of matching funds for training grant that includes dollars for 1) unpaid tuition costs, fees, and health insurance, 2) administrative support, and 3) a one-to-two match of funded training positions. The matching funds should also include incentives for the principal investigator, for example reduction in teaching load, research support and/or salary increments, to recognize the considerable effort and time required compete for and administer training grants.

Similarly the University needs to support and reward graduate students that obtain external fellowships and grants that support their stipends. The University should develop a uniform policy that provides tuition waivers, health insurance costs and fees as needed for success in obtaining nationally competitive fellowships and scholarships.

Admittedly, a number of variables, such as the value of benefit packages and differences in cost of living, make institution-to-institution comparisons difficult and, in some cases, misleading. It is reasonably clear that no matter what metrics are used for comparison, the University of Minnesota must invest more in graduate student support if we are to compete successfully with the top public research institutions in the United States. The bottom line is that we cannot be satisfied with funding graduate students at a level comparable to the top 25 public research universities if our goal is to be one of the top three.

Appendix E: Further Analysis of Recruiting, Retention, Advising, & Mentoring Practices

The first step in building world-class graduate/professional programs is recruitment. In today's competitive environment this demands that each program use all means available to identify and attract potential applicants. Realizing that the approaches will vary across disciplines, the Task Force offers the following general guidelines. Program advertisement should include effective posters, brochures, Web sites, and CD viewer as well as the use of mailing lists. The use of recruiters that visit undergraduate institutions and attend graduate/professional school fairs and conferences have become commonplace. The target audience for advertisements should be national and, if possible, international. Summer research programs for undergraduates with aspirations to attend graduate school should be utilized. Promising applicants must be courted and contacted early in the application process. Campus visits are integral to a successful recruitment as well as evaluation of prospective students. All of the above should incorporate efforts directed at recruiting a diverse student population. Widespread faculty participation at all stages is critical.

To be a top three public research university in the United States, recruiting the top graduate and professional students is essential. These students are relied upon to perform research that brings grants and acclaim to the university. In addition, graduate students play a vital role in instructing undergraduate education: Arguably, the quality of much of our undergraduate education depends upon the quality of graduate student instructors. The best research and best instruction are provided by the best students. It is not enough just to have the best students; they need to be nurtured in an environment where they can succeed in their given fields.

Retaining the top students in the world requires the best support packages in the world. A student who sees other universities offering better support to their graduate students is more likely to feel undervalued by their department. Overwork and unusually high teaching loads as well as a weak support system around them prohibit students from performing at their highest ability level. Significant effort needs to be taken to ensure all students enrolled in graduate and professional programs receive advising and mentoring that enables them to have the very best environment in which to work, learn and contribute to the university.

There are many types of advising and mentoring styles and no one style will work for all student and faculty relationships. The Graduate School, working with each of the colleges should accumulate information on best practices of retaining, advising and mentoring of students. These best practices should include establishing and meeting milestones, annual or biannual evaluations of performance, strict time-to-degree goals, exposure to one's field at the national/international level and strong mentoring. Above all students need dedicated time to work on their dissertation research. This information should be made readily available to all faculty through a webpage featuring the "Best Practices in Graduate Education."

From talking with graduate students it is obvious that the level of advising and mentoring varies dramatically across campus. Particularly in the social sciences students may go months between talking with their advisor. This can lead to students feeling isolated and unimportant. Mentoring is more than talking with students about their research. Even brief conversations with students

about their day or interests outside of coursework are beneficial to the student psyche. Showing interest in the student as a person can go a long way in giving a sense of belonging.

One survey showed that students who complete degrees feel advisors were more interested in them than students who did not complete their degrees. Another survey shows this feeling is even more prevalent in women. One hundred percent of women in the sciences surveyed who considered themselves as being mentored completed their degrees while only sixty percent of women who considered themselves as unmentored completed degrees.¹¹ A working group should be put together to assess current students' level of satisfaction with the advising and mentoring they are already receiving to identify areas where specific effort is needed to improve student/advisor relationships. Faculty input is crucial at this stage to determine if additional resources are required to meet this need. These efforts must not be one time studies but an ongoing dialogue between faculty mentors and students to constantly improve the environment for, and retain, graduate and professional students.

*The Task Force recommends that University-wide Working Groups, in coordination with the Graduate School, the Provost's Office, and relevant collegiate Associate Deans, be formed over the next several years to formulate specific proposals for improvement. For example, in 2006-2007 a working group could be charged to focus on "evaluating applicants" in order to gather available research, identify best practices, and recommend resource investment for that task.¹² To be sure, the Graduate School and relevant units already engage in gathering such information, but we suspect that improvement can be made by focusing in greater detail on specific aspects of student admission and progress and by encouraging wider "buy in" to the process.

*To assist recruiting and retention efforts, and to assist in internal University decision making concerning targeted investments to outstanding and improving graduate and professional programs, the Task Force recommends that the Graduate School expand its annual online audits of programs to include data about funding levels and comparisons with peer institutions, student awards and scholarly achievements, TA/RA workload, and placement information.

Working Adult Students: We would also take this opportunity to stress the importance of advising and mentoring of working adult graduate and professional students. The quality of graduate education rests largely within graduate and professional programs themselves. Strong mentoring is the cornerstone for any graduate program; advising loads must be reasonable and faculty should be rewarded for mentoring all students well. Communication vehicles and services need to be improved (especially websites), and money saving structures should not interfere with the quality of the curriculum and the graduate or professional experience. There is a particular need to build a strong sense of community for working adult graduate and professional students. Concrete recommendations are provided in Appendix K.

¹¹ Council of Graduate Schools, *Ph.D. Completion and Attrition: Policy, Numbers, Leadership, and Next Steps* (Washington, D.C., Council of Graduate Schools, 2004), pp.13-15.

¹² It is important to draw upon the best available research material on such policies, especially when some of that research is being done by U of M scholars. See, for example, N. R. Kuncel, S. A. Hezlett, & D. S. Ones, "A Comprehensive Meta-Analysis of the Predictive Validity of the Graduate Record Examinations," *Psychological Bulletin*, 127 (2001): 162-181.

Appendix F: University of Minnesota Doctoral 8-year Completion Rates Cohorts Beginning 1987-88 through 1996-97

Cohort	Bio	Ed/Psych	EPMS	Health	LLA	SocSci	All Grad School
87-88							
Inactive	18%	29%	18%	29%	32%	25%	24%
Left w/Ma	13%	7%	14%	19%	11%	9%	11%
Active	1%	10%	3%	2%	10%	5%	5%
ABD	10%	12%	8%	10%	19%	15%	12%
Completed	58%	42%	57%	41%	29%	46%	48%
88-89							
Inactive	23%	34%	17%	37%	29%	17%	24%
Left w/Ma	9%	3%	14%	4%	9%	14%	10%
Active	2%	9%	4%	4%	6%	9%	6%
ABD	5%	12%	7%	20%	27%	18%	13%
Completed	61%	42%	58%	35%	27%	43%	48%
89-90							
Inactive	23%	36%	24%	29%	16%	21%	25%
Left w/Ma	9%	8%	17%	4%	19%	9%	12%
Active	1%	6%	2%	2%	7%	9%	4%
ABD	9%	14%	6%	2%	31%	15%	13%
Completed	58%	38%	51%	63%	27%	45%	46%
90-91							
Inactive	18%	32%	21%	28%	24%	20%	23%
Left w/Ma	12%	9%	13%	7%	17%	10%	12%
Active	1%	4%	1%	1%	4%	5%	3%
ABD	6%	11%	5%	13%	16%	20%	11%
Completed	64%	44%	60%	51%	38%	45%	52%
91-92							
Inactive	22%	34%	18%	26%	31%	24%	26%
Left w/Ma	8%	10%	19%	10%	12%	11%	13%
Active	0%	4%	2%	3%	4%	5%	3%
ABD	8%	12%	7%	16%	20%	19%	12%
Completed	61%	40%	54%	44%	33%	42%	48%
92-93							
Inactive	21%	28%	21%	25%	24%	24%	23%
Left w/Ma	11%	8%	18%	10%	14%	13%	13%
Active	2%	7%	1%	5%	3%	3%	3%
ABD	6%	11%	4%	8%	16%	10%	8%
Completed	61%	46%	56%	53%	43%	51%	52%
93-94							
Inactive	30%	28%	19%	23%	26%	32%	26%
Left w/Ma	8%	5%	15%	8%	22%	11%	11%
Active	1%	3%	3%	6%	3%	6%	3%
ABD	7%	12%	3%	11%	14%	11%	9%
Completed	54%	53%	60%	52%	35%	39%	51%

94-95

Inactive	25%	33%	22%	26%	31%	27%	27%
Left w/Ma	8%	6%	15%	7%	7%	13%	10%
Active	1%	4%	2%	8%	4%	6%	4%
ABD	6%	12%	6%	7%	19%	14%	10%
Completed	60%	45%	56%	51%	39%	40%	49%

95-96

Inactive	22%	28%	13%	30%	27%	28%	23%
Left w/Ma	12%	7%	17%	4%	10%	8%	11%
Active	0%	5%	2%	7%	4%	3%	3%
ABD	7%	12%	6%	15%	22%	15%	11%
Completed	60%	47%	62%	43%	37%	47%	52%

96-97

Inactive	23%	23%	15%	29%	19%	19%	20%
Left w/Ma	11%	6%	19%	7%	12%	6%	11%
Active	1%	6%	1%	10%	4%	8%	4%
ABD	7%	12%	7%	9%	23%	20%	12%
Completed	58%	53%	59%	45%	42%	47%	53%

Bio = Biological Science

Ed/Psych = Education & Psychology

EPMS = Engineering, Physical, & Mathematical Sciences

Health = Health Sciences

LLA = Language, Literature, & Arts

SocSci = Social Sciences

Source: University of Minnesota Graduate School Database

**Appendix G: University of Minnesota Masters 5-year Completion Rates
Cohorts Beginning 1990-91 through 1999-2000**

Cohort	Bio	Ed/Psych	EPMS	Health	LLA	SocSci	All Grad School
90-91	66%	49%	54%	59%	47%	67%	60%
91-92	69%	57%	58%	55%	50%	66%	61%
92-93	60%	53%	61%	57%	48%	64%	60%
93-94	61%	65%	65%	61%	63%	58%	61%
94-95	59%	66%	63%	73%	54%	51%	58%
95-96	64%	73%	67%	72%	61%	40%	55%
96-97	65%	71%	68%	69%	54%	69%	66%
97-98	64%	69%	66%	69%	54%	70%	66%
98-99	66%	78%	71%	71%	61%	72%	70%
99-00	58%	75%	71%	76%	58%	68%	69%

Bio = Biological Science

Ed/Psych = Education & Psychology

EPMS = Engineering, Physical, & Mathematical Sciences

Health = Health Sciences

LLA = Language, Literature, & Arts

SocSci = Social Sciences

Source: University of Minnesota Graduate School Database

Appendix H: Culture & Infrastructure Issues

Due to space limitations of the main report, much of the specific rationale for the Task Force recommendations must be provided here as an appendix. To make the relationships between the rationale and the recommendations clear, we repeat the recommendations below.

Administrative Culture: We begin by stressing that the administrative responsibility for and commitment to improving graduate and professional education must come from all levels--central administration, colleges, departments, graduate programs, faculty, and students. All levels will need to be energized to develop and implement the best practices to raise the profile of graduate and professional education. For example, it is not solely the responsibility of the Graduate School to fund graduate programs and graduate students. A new partnership of central administration, Graduate School, colleges, and departments is needed to adequately fund our graduate programs and students.

*The Task Force recommends that the Compact of each college and department should include specific goals for improving graduate and professional education and details on how those improvements will be achieved. Such goals might include improving completion rates, increasing graduate admissions, improving the “yield” of admitted students who matriculate, placement data, and so forth. The Compacts need to provide incentives for reaching specific goals. The University and Graduate School must invest in programs that are striving to become outstanding; if we are to compete with other top public institutions, improved rankings in many programs across the University will be essential. Programs should be offered guidance and incentives to develop strategies to enhance their quality and overall national rank. Creative projects that significantly enhance graduate education, such as the Graduate Research Partnership Program initiated by the College of Liberal Arts in 2004, should be encouraged and supported.

The second aspect of the administrative culture is resource allocation. The allocation of resources must be focused on achieving and sustaining excellence. This will require the recognition that different graduate and professional programs may have fundamentally different needs. For example, the funding and administration requirements for an interdisciplinary graduate program may be quite different than those of a traditional graduate discipline. Achieving excellence will require recognition of those differences and allocating resources accordingly.

There needs to be active collaboration among those in positions of leadership and budgetary authority for graduate and professional education at the University to excel. Vision without sufficient resources results in frustration and stagnation, while the expenditure of resources without vision simply perpetuates the status quo. Issues pertaining to graduate and professional education need to be on the table whenever program review and budget decisions are being made. The current approach to reviewing graduate and professional programs should be augmented with annual "program profiles" collected through a web-based instrument and included as a supplement to departments' annual compact documents.¹³ Furthermore, we reiterate one of the key recommendations of the Budget Advisory Committee Working Group on

¹³ Edward Schiappa, *Notes toward Improving Program Review* (2000). Available online at: http://www.grad.umn.edu/faculty-staff/governance/Policies/improving_programs.html

the Graduate School, who urged that the Dean of the Graduate School be an active member of compact discussions with collegiate deans.¹⁴

*A University budget model that is highly tuition-driven and includes charges on space and student count could work against the best interests of graduate education. Small class sizes and collaborative teaching are good practices for graduate education that are becoming increasingly difficult to provide. Collegiate units need to track carefully the possible negative effects that the new University budget model may have on graduate education.

*The Task Force urges that appropriate units carefully consider the level of support for Directors of Graduate Study. The position of DGS is already central to the life of graduate programs, and the responsibilities that come with the position will only grow more onerous in the future. Programs vary in size and complexity, of course, but our sense is that DGSs do not typically receive the level of support that they need to feel valued in their role. To attract and retain outstanding DGSs, appropriate levels of support need to be provided in terms of course release(s), salary augmentation, staff support, and research assistance.

Research Culture: Research lies at the heart of graduate education in all Ph.D.-granting graduate programs. Because the research conducted in graduate programs is so varied, we hesitate to make sweeping recommendations in this area other than to state the obvious imperative that graduate research is crucial and should be supported. However, we do offer two specific suggestions for action at the collegiate and program level:

*The Task Force recommends that all programs in which graduate students are producing original research provide financial support to graduate students to present their research at appropriate national conferences. Given the importance of fostering a research culture in graduate programs, colleges and departments should consider redirecting resources to support conference participation. For example, the cost of one fellowship could typically support up to 20 or 30 students at \$500 or \$750 per person to defray travel costs.

*The Task Force recommends that all doctoral programs track the placement of their graduates and that placement information be made publicly available.

*The creation of formal research teams has proven to be a successful strategy in various disciplines, both as an education tool and as means of facilitating degree completion. Programs in which research teams are not currently the norm should consider carefully whether the creation and support of such teams would be beneficial to their program.

Teaching Culture: The University provides a number of excellent programs aimed at supporting graduate students as teachers, most notably the Center for Teaching and Learning Services (CTLs). The Preparing Future Faculty program, administered by CTLs, provides a teaching and learning forum for graduate students and post-doctoral fellows at the University of Minnesota. Program participants discuss learning theory and strategies, develop teaching and assessment skills, create classroom and job search materials, and work with faculty from regional institutions. For graduate students teaching courses involving writing, the Center for Writing

¹⁴ Report of the Budget Advisory Committee Working Group on Graduate Education, April, 2004.

offers numerous workshops and discipline-specific writing consultants. Support for graduate students who teach can be found in almost any area that graduate students would need, including the Student Conflict Resolution Center, University Counseling and Consulting Services, Disability Services, and the Office of Student Academic Integrity. We are not aware of any particular needs at the University level that are not being met; however, anecdotal evidence suggests that some programs underutilize the available programs. Furthermore, the Task Force found some inequity in terms of teaching loads that deserves further scrutiny.¹⁵

*The Task Force recommends that individual graduate programs make sure that all of their graduate students are aware of the range of support services the University provides.

*The University's Office of Human Resources should compare practices across the University to ensure that workloads of graduate teaching and research assistants are fair and equitable.

Graduate Student Life: Though the University as a whole bears an important responsibility to creating and maintaining an infrastructure designed to support graduate and professional education, ultimately the primary "culture" experienced by students is local. That is to say, individual graduate and professional programs carry the primary responsibility for fostering a professional and collegial climate in which all graduate and professional students admitted can flourish. Given the tremendous diversity of programs here at the U, it is not practical for us to address all aspects of graduate student life. However, we would identify two areas where actions by central administrative units could enhance student life throughout the University:

*Compensation: Most TAs and RAs are required to pay hefty student service fees, sometimes on top of collegiate or course-specific fees. Wherever possible, such fees should be built into TA/RA packages, otherwise they simply decrease the ability of the assistantship to meet the cost of living. For that reason, further increases in the cost of health insurance, though they represent a tremendous financial burden on the University as a whole, should not be passed on to students in TA/RA roles. If it is not practical to cover all student service fees through TA/RA packages, at the very least the billing for such fees should not be due until later in the semester; as matters stand now, students typically must pay such fees before they have ever received their first full paycheck at TAs or RAs.

*Affordable housing and childcare: In recent years, the Graduate School has increased efforts to assist graduate students find affordable housing, particularly those graduate and professional students with families. We applaud such efforts and hope that they continue and expanded to include the issue of affordable childcare.

¹⁵ As one example: Graduate TAs in the Rhetoric Department teach 3 courses per year at a 50% appointment, while programs in English and Communication requires TAs to teach 2 courses per year at a 50% appointment.

Appendix I: Further Thoughts on Contributing to the Public Good

The University of Minnesota is arguably the most important public institution in the state, not only significant to economic life but to the quality of life generally in Minnesota. It is no longer enough for students to achieve a B.A. degree in order for the state to thrive, making graduate education more important than ever before. However, the University of Minnesota falls short because it is not able to communicate that message to the public. The public sees the university as remote and does not understand how faculty go about their research, and such perceptions are too often shared by public officials and legislators.

1. The University of Minnesota must be able to communicate stories about the value of their research. There has been a failure of communication in recent decades. Past Minnesota governors helped communicate the importance of the university to the public.
2. Fifty years ago, the public viewed the University of Minnesota as a “public good.” The university should investigate this problem from a historical perspective. What worked in the past, and why has communication changed?
3. The university should consider a greater role for distinguished alumni in communicating to the public. Today, distinguished alumni are underutilized in advertising the important work of the University of Minnesota.
4. In order for the University of Minnesota to move ahead in its graduate programs, it has to be attentive to the increasing diversity of Minnesota. Graduate programs need to “square up” with the undergraduate populations that are increasingly diverse.
5. The university needs to convey the message that providing an opportunity for education is in itself a public good, beyond “hard” accomplishments such as “vaccines, patents, trophies, and papers.”

The above comments are not intended to minimize the importance of the many ways the University of Minnesota already reaches out to the larger community. In 2000, a University-wide Council on Public Engagement (COPE) was charged with strengthening our public mission across the full range of University activities, and to make practical proposals for institutionalizing public engagement as a continuing priority. In the fall of 2005, the Office of Public Engagement was created. Under the leadership of Associate Vice President Victor Bloomfield, the Office works to enhance the University of Minnesota’s activities and stature as a publicly engaged research university. The Office provides University-wide leadership to catalyze, facilitate, advocate, coordinate, connect, communicate, and align engaged initiatives across units and with external constituencies.

Engagement is defined as the partnership of university knowledge and resources with those of the public and private sectors to enrich scholarship, research, and creative activity; enhance curriculum, teaching and learning; prepare educated, engaged citizens; strengthen democratic values and civic responsibility; address critical societal issues; and contribute to the public good.

Task Force member Brenda Child provides an example of the sort of initiative supported by COPE: “I received a civic engagement grant in 2005 (as a member of the Department of American Indian Studies) for a project that involved a partnership between the University of Minnesota and the Minnesota Historical Society. The grant allowed me to hire a graduate student

research assistant this past summer (half of his salary was paid through the grant, half through MHS) to consult with members of American Indian communities in Minnesota. We asked them to consider the renovation of the Fort Snelling Historic site, and the possibility of establishing there a center for Dakota and Ojibwe language preservation. The result has been a new collaboration between the University of Minnesota and the Minnesota Historical Society regarding the issue of indigenous language.”

Efforts supported by COPE do not exhaust the U’s efforts at public engagement, of course. The University of Minnesota Law School and units within the Academic Health Center support a variety of clinics aimed at providing low-cost services to community members. For decades, the University of Minnesota Extension Service delivers quality, relevant educational programs and information to Minnesota citizens and communities. Faculty and fellows of the Hubert H. Humphrey Institute of Public Affairs conduct research on public policy issues and engage in outreach efforts that have regional, national, and international significance. The more one surveys the tremendous range of activities at the University, the more one notes two commonalities: They all contribute, directly or indirectly, to the public good, and they almost all involve graduate and professional student education.

Three further examples of university programs that benefit the community are illustrated below:

The Department of Neuroscience provides outreach education via training and support of middle school teachers through a series of on-campus institutes followed by staff visits to participants' schools. The BRAIN to Middle Schools project (sponsored by a National Institutes of Health Science Education Partnership Award), builds upon an early project, Brainscience on the Move (supported by the Howard Hughes Medical Institute). This is a collaborative effort among the Department of Neuroscience, the Science Museum of Minnesota and middle school teachers. The project goals are to develop and implement in-depth, multi-year, inquiry-based curriculum materials and teacher training programs supported by a mentoring network, to promote enhanced understanding and application of neuroscience and its health-related issues into middle school science curriculum. During the school year, participating teachers are supported for three years with an extensive array of classroom activities and school outreach resources including a large-scale assembly program, interactive exhibit stations, and a Brain Resource Trunk. Last year more than 5,000 students participated in the project.

The Minnesota Population Center is an interdisciplinary cooperative of faculty and research associates at the University of Minnesota that develops and disseminates demographic data throughout the United States and world.¹⁶ The MPC employs 62 researchers, most of them graduate students doing population-related dissertation research. The center is the main provider of federal data to Minnesota policymakers and non-governmental organizations. The center is also a clearinghouse for media inquiries on population issues, and provides information for national and regional newspapers and television news programs. In order to make the data collected at the center more accessible to the public, MPC is developing a Digital Library Collection for Exploring United States Demographic and Social Change that will be used in schools, by the general public, in libraries, and by the media.

¹⁶ For details, see: <http://www.pop.umn.edu/index.shtml>.

The MacArthur Interdisciplinary Program on Global Change, Sustainability and Justice is a scholarly community of graduate students and faculty who share a commitment to interdisciplinary research and study of “the developing world and its peoples.”¹⁷ The MacArthur Program provides fellowships, in cooperation with academic departments, to graduate students at the University of Minnesota for up to four years of study. MacArthur scholars interact with policymakers, activists, and researchers from the United States and abroad while pursuing graduate programs and conducting their own research on “challenges facing the Global South and minority communities in North America.”

We stress that these are only three examples of programs that benefit the community and that many more programs could be highlighted.

¹⁷ For details, see: <http://www.icgc.umn.edu>.

Appendix J: Summary of Program Statistics
Graduate Programs Serving Significant Numbers of Working Adults

Program	Total Number of Students by degree	Approximate Numbers/ Percentages of Working Adults	Information regarding age, gender, diversity of students
Curriculum & Instruction	PhD—159 MA—29 MEd (prof. Studies)—637 (184 enrolled, F 05) MEd (initial license)—2,312 (492 enrolled, F 05)	PhD—63% MA—83% MEd—80-85% (estimate) Med—initial licensure—100% full time students during the licensure portion; they finish the M.Ed. as working adults	Women—73% Students of color—11% International—10% Age: 21-25—3% 26-30—24% 31-35—21% 36-45—29% over 45—23%
Educational Policy and Administration	PhD—223 EdD—177 MA—125	Numbers of working adults vary by track, but estimated percentage of working adults across programs—60%	Women—60% International—14% Students of color—11% Age: 21-25—6% 26-30—20%; nearly equal distribution across three other ranges, 31-35, 36-40, over 45
Master of Biological Sciences	MS—58	43 working adult (based on part-time enrollment) 15 enrolled for 6 or more credits	
Master of Liberal Studies	MA—225	“just a handful” are full time; vast majority are working adult students	Most between the ages of 30-40 60% women
Humphrey Center Programs	Master’s programs—504 MPP (Public Policy) MS (Sci, Tech & Environ Policy) MURP (Urban & Regional Policy) MPA (Pub. Affairs)	Approximately 23% are working adult (part-time students), across all programs; however, MPA is a mid-career program that draws exclusively working adults	More women (% not provided) Students of color—13% International—6%
Water Resource Sciences	75-80 total 40% PhD 60% MS (of those 30% Plan B and 70 % Plan A)	Approximately 15-20 are working adults (most in Plan B program)	
Nursing	PhD—56 MS—266 Post-baccalaureate certificate—77	Most are working adult students; of post-bacs are encouraged not to work but at least half do	Across all programs 90% women, .01% Asian; .04% American Indian; .02% Black; .02% Hispanic
Human Resources and Industrial Relations	MA—190	Approximately 70 are working adults; 120 full time day students; in PhD program all are full time (required)	Average age when begin program is 29; 75% of working adult students are women; 8% are students of color

Appendix K: Further Recommendations Concerning Working Adults

Perceived tensions between the land-grant mission and being one of the top three research institutions in the world

- Care must be taken with this new agenda in place that professional and working adult students do not feel like “second class citizens.” The new agenda has the potential to damage the symbiosis between schools’ and companies’ connections with University programs and the service and outreach that these units in the University provide.
- The new budgetary model has the potential to significantly damage professional and graduate programs if programs are now going to be “taxed” for services (such as those rendered by the libraries or the Graduate School). This Task Force and the programs that provided input to us vehemently oppose such a model.
- Some programs are under constant pressure to increase enrollments to generate tuition revenue but then struggle with large numbers of students when resources do not increase proportionately. This affects the quality of education provided to the students.
- More flexible indicators of success are needed given that working adult students tend not to conform neatly to the current indicators, for example, prestige placement of graduates.
- More flexible “yard sticks” for tenure are also suggested so that faculty can work to their strengths. This will increase the quality of both research and advising.
- Students need to be assured that viable programs will not disappear as the University moves toward its established goal.

Service Recommendations specifically for the Graduate School

- If the university wants to serve working adult students, there needs to be a reliable way to identify them. A new coding system that goes beyond Full and Part time status (based on 6 credits) needs to be established.
- Some fellowships and scholarships should be established to meet the needs of working adults (e.g., summer or shorter term fellowships.) Health benefits should be provided to students who win outside scholarships or fellowships and chose to bring them to the U. A database of potential opportunities should be maintained by the Graduate School and the individual programs.
- It may be time for the Graduate School to revisit the policies currently in place and ensure that policies are designed to encourage timely degree completion, and, more importantly, to ensure that the benchmarks correspond well to the competencies students need. At the same time, given the tremendous variety in programs administered through the Graduate School, it is imperative that policies be created in such a way so as not to penalize any program.
- The Graduate School should provide more guidance for good advising/mentoring expectations.
- The Graduate School should have an advocate for working adult students who helps students to navigate the University and Graduate School.

Improvement of Services and Program Quality (Curriculum and Advising)

The following services are crucial to the success of working adult students:

- Much more can be done to make information more accessible especially to the working adult student who has limited time for finding information. All units must invest time to improve websites, and the University must provide the necessary resources to facilitate such

improvements including creating a system that accepts electronic signatures in order to be able to process forms without coming to campus.

- Information should be readily accessible, highlighted and reinforced for students. Since working adult students are not on campus during working hours, creative ways need to be established to communicate timelines and advising information. This may include having flexible office hours for advisors and services. Having a one-stop shop of policies (in bulleted, easy-to-access text) would help to streamline inconsistent messages.
- Students need more structured information about completion when they are not full-time students. Using graduation ceremonies, clear timelines, and significant events as celebrated milestones help keep students on track and focused on graduation. Programs must be accessible yet also demand steady progress (particularly with PhD students), having meaningful checkpoints along the way, especially during the preliminary examination and dissertation stages when students are most isolated.
- Communication vehicles should be reserved for crucial information. Students read e-mails that provide critical information on a regular basis and discard ones that don't. The use of the portal or other electronic bulletin boards should be critical to the students' success if they are to be used.
- Creative advising was mentioned by multiple students. Some suggestions were using core classes as a vehicle for advising, flexible hours for appointments, e-mail advising, and web site advising.
- Good advising needs to be rewarded (if research is the only thing that REALLY counts in merit increases, faculty will not spend the time it take to do good advising).
- Units should consider developing courses to alleviate individual advising loads help (e.g. dissertation seminars).
- Registration policies need to be revised with the interest of students in mind. The "pay-up front" policy for non-degree seeking students is particularly harmful. Late fees are assessed too early and the deadline for registration should be delayed. Grad 999 and classes come with penalties and paperwork for the students. If these policies are not streamlined, students may choose other institutions.
- Classes should be offered at a variety of times and should not rely on one vehicle for meeting student needs. Classes should be offered in blocks and in more traditional lectures, in the early and late evening, and on Mondays or Fridays and weekends.
- Increased summer and online offerings and advising would make it easier for many students to complete their degree in a timely manner. (The University should consider implementing a formal 3-semester (or trimester) system. Such implementation should occur at the College level rather than at the level of individual departments since there are implications related to governance.)
- All programs must ensure the provision of opportunities for strictly graduate-level instruction. Classes should not include different levels of students within the same classroom (i.e. a 3000 level course should not be co-offered with a 5000 level course.) If such offerings are unavoidable, they should be minimized to ensure quality experiences for all graduate and professional students.
- Encouraging the use of papers as a measure of information acquisition as opposed to tests is better for working adult students because papers provide flexibility in completion time and do not require rote memorization after a long day at work.

Model practices that are already in place in some programs:

Programs and students reported the following activities that support graduate and professional study. Programs should be encouraged to emulate these activities.

- Many programs (e.g., Nursing) have outstanding success in developing excellent online coursework experience for students.
- Intro seminar and final project courses—intro requiring students to identify project idea at the beginning of the program and final project course to provide support for completing the final project and degree (MLS).
- In some programs, students take a research practicum and work with faculty instructors on their research.
- Some programs offer a first year seminar for PhD students as an intentional introduction to qualities and mindset of scholar (intro to library, IRB, ethics/responsible conduct of research) (EdPA).
- Many programs schedule core courses on a frequent enough basis to ensure all students can take them easily.

Community It is not enough to put people together and then expect that community will emerge. Structures to foster a sense of belonging and a sense of interdependence, and incentives to faculty and students must be created.

- Cohort models should be used when possible to build community within programs (though most working adult students do not support a cohort model, as they believe it would compromise program flexibility).
- An interdisciplinary focus should be encouraged whenever possible in order to build community across campus.
- Residence halls for graduate and professional students would encourage community to be built on campus.
- Classes should be designed to be participatory.
- Special events and classes should be scheduled at a diversity of times and designed to be convenient to working adult students (alternating daytime events with evenings and weekends.) And unstructured time should be encouraged (for example, many programs have informal “coffee hours” for the students to get together and share ideas).
- 2 week study abroad courses are rewarding for the students and faculty and help to build community.
- Student-led initiatives and participation in student government should be encouraged within the programs.
- A working adult version of the commuter lounge could provide communication, community, and resources valuable to working adult students. A combination of the parent help center, the commuter lounge, and a working adult commuter lounge could provide a one-stop suite of services.

Practices in place that facilitate community:

Programs and students reported the following activities that foster community. Programs should be encouraged to emulate these activities.

- Seminars where students and faculty share their work (scheduled at a time when working students can attend)

- Intentional efforts to keep alumni involved (e.g. they come back to share project ideas in seminars with current students)
- Book clubs and associations organized by and facilitated by students
- Mentor/mentee program (novice students hooked up with veterans)
- Public events and gatherings
- Quarterly newsletters (which also go to alumni)

Appendix L: Streamlining Administrative Processes

The Graduate School contracts with a vendor named ApplyYourself for a web-based application tracking system, and it is already integrated with the University's Peoplesoft information system. The Graduate School is a heavy user of the Enterprise systems, from admissions through degree conferral and graduate faculty tracking. Also, we note that undergraduate admissions uses an outside vendor as well (Royall), and they integrate with the Enterprise systems the same way that ApplyYourself does.

When a graduate student interacts with the Graduate School, more often than not there is a paper form involved that is fairly labor intensive (fill out form, take around for 4 different signatures, submit to a staff person at the Graduate School who reviews for errors, fix errors, repeat, and so on). One step toward the streamlining of administrative processes that the Graduate School should pursue is to move more completely from paper forms to web-based approval procedures. Such electronic forms would streamline processes for students, faculty, and staff.

A case can be made that if the University wants the student "One Stop" web services to be a One Stop for all students, services for graduate and professional students should be made available there, rather than making grad students search for some things on the One Stop website, some on the Graduate School website, and some on departmental or program websites. The MyU portal might be an alternate place to locate such items.

Undergraduates at the University can use (via One Stop) a system called the Academic Progress Audit System (or APAS) to monitor their progress toward the degree. Graduate and professional students have not yet been able to use this system, primarily because it would require someone to enter all coursework on every student's degree program form and adapt to the many different requirements across graduate programs. A web-based degree program form would make it possible to use something similar to APAS for some kind of graduate and professional student degree progress report.

Appendix M: International Student Concerns

As a result of discussions in the Town Hall open meetings held by the Task Force, we became aware that there are issues of concern for international graduate and professional students that are distinct for that portion of our student population. About 20% of the University of Minnesota's graduate and professional students are international students. International students come from 140 countries to study here.¹⁸ Nationwide, about 75% of graduate students in large, public research universities are U.S. citizens or permanent residents; however, since 2001 there has been a steady decrease in the number of international graduate students matriculating at U.S. institutions.¹⁹

Time constraints prevented us from researching these issues to the extent we felt necessary to make concrete recommendations, but we want to take this opportunity to note that these are important issues that need to be considered carefully in the future. Such issues include:

- 1) What can the University do to reduce the barriers resulting from post-9/11 policy changes that are, apparently, discouraging international students from coming to the University of Minnesota?
- 2) Stakeholders with whom we consulted suggested that English language training and support for all international students on campus is not well understood and lacks coordination. Since graduate students are by far the largest population of international students on campus, this is truly a graduate student issue. Since the Minnesota English Center was closed in 2004, there is one person in ISSS who tests incoming students who arrived under a number of exception categories, and courses offered in CLA for students who need more training are significantly underutilized.

An ad hoc committee of former Graduate School Dean Vic Bloomfield (now Dean Gail Dubrow), Craig Swan, Linda Ellinger, Kay Thomas, and Andrea Scott have started meeting about this problem. In August a proposal for the Provost was drafted with several options to address the problem, but we are unsure about the status of the draft or the proposed options. We believe the International University strategic positioning task force is looking into this issue from the total international student perspective, but clearly there is a critical need for a timely implementation of a solution for English language training and support for graduate students.

- 3) The gap between the level of TA and RA salaries and the amount of resources an international student must have to receive a visa represents a challenge. Increasing the salaries of assistantships would certainly serve all graduate students well, but in some cases a low-paying assistantship prevents a student from being able to get a visa so they can attend. Each year a minimum cost of living figure is set for international students by a student/grad faculty/staff committee. That amount is added to the ever-increasing fees assistants are still required to pay. The student must then show s/he has resources to cover the cost of attendance. If an assistantship is less than the total and the student has no other means of support, the University cannot issue

¹⁸ All data concerning the University of Minnesota graduate programs are from the Graduate School's database.

¹⁹ Peter D. Syverson & Heath A. Brown, *Graduate Enrollment and Degrees: 1986-2003* (Washington, D.C.: Council of Graduate Schools, 2004); Heath Brown and Peter D. Syverson, *Findings from U.S. Graduate Schools on International Graduate Student Admission Trends* (Washington, D.C.: Council of Graduate Schools, 2004).

an I-20 so the student can apply for a visa. Domestic students are in the country and have more options like being able to work off campus open to them, if an assistantship does not cover their cost of attendance.

4) International students in our open meetings complained of several policies. The first two are beyond the University's direct control; namely, the different tax rates imposed on international students and immigration policies that prevent family members from seeking employment. The third concern expressed was the fact that international students are typically charged fees from which they receive no apparent benefit, and in some instances are unable to find out even the purpose of particular fees.

5) If our recommendation concerning the creation of a One Stop website for graduate students is adopted, we recommend that attention be paid to providing links to sites of particular value to international students.

6) The Council of Graduate Students (COGS) and the Graduate and Professional Student Assembly (GAPSA) are valuable resources for information concerning the problems facing all graduate students, including international students. We encourage the Graduate School and Central Administration to continue to engage COGS and GAPSA in productive conversations about policies and practices facing international students.²⁰

²⁰ For the 2004 and 2005 Open Letters from COGS to Central Administration, see: www.cogs.umn.edu/openletters/index.html.