

MEMO

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Report of the Senate Research Advisory Committee (RAC)

The Senate Research Advisory Committee consists of the following members:

- Dr. Alain Bensoussan,
- Dr. Santosh R. D'Mello,
- Dr. Gregg R Dieckmann,
- Dr. Yuri Gartstein,
- Dr. Bruce E. Gnade,
- Dr. Juan E. Gonzalez,
- Dr. Roderick A. Heelis,
- Dr. Dennis M. Kratz,
- Dr. Dean D. Terry,
- Dr. Bhavani M. Thuraisingham, and
- Dr. Emily A. Tobey
- Dean Dennis Kratz.

Ex officio members consist of Dean John Ferraris, Dean Robert Helms, and Dean Bert Moore. The responsible University official for the committee is V.P. Da Hsuan Feng. The committee met three times during the academic year; one of these meetings included President Daniel.

The RAC recognizes that raising the research profile of a University is a daunting task and requires the collective effort of the faculty, students, and administration. The RAC thinks that UTD has made considerable strides in the last few years, and is definitely moving in the right direction. A number of issues were discussed and brain-stormed during these meetings, and a number of ways to address these issues were discussed. These are outlined below.

Cultivating a Pervasive Culture of Research

The RAC recognizes the need to cultivate a pervasive culture of research at UTD. This implies that every one adopts high standards for all aspects of research:

- a. Ensuring that our scholarship is of the highest level and when it comes to “publishing” faculty member should aspire to “publish” their scholarly work in the most prestigious venues.
- b. Those faculty members whose research depends on external funds are constantly striving to write grant proposals and secure extramural funding.
- c. The graduate students we produce (especially doctoral) are of the highest quality. Departments strive to make sure that our grad students get well-placed in their first jobs.

The RAC felt that at the moment this culture is certainly not pervasive. There are wide disparities. For example, 90% of the funding is secured by 10% of the faculty (the RAC would like to note that, while funding is not the most critical thing for research, it is an important indicator of the research health of a University).

To cultivate a pervasive culture of research the RAC thinks that the following steps may be helpful:

- (i) Developing an effective plan for mentoring of junior faculty members, especially, Assistant Professors. The progress of Assistant Professors should be closely monitored to see that they are sufficiently encouraged and that there are no impediments in their paths. The RAC notes that the Faculty Senate has a mentoring program, however, it is not clear how effective this program is.
- (ii) The mentoring should be extended to include Associate Professors (and perhaps Professors) whose careers have stalled. UTD should do its utmost to avoid the “terminal associate professor” syndrome. UTD, in conjunction with Department Heads, should set up a program to identify tenured faculty members whose careers are stalled and help them restart it. Mentoring activities by senior faculty members should be reported in the annual report, and should be appropriately rewarded during the faculty member’s annual review.
- (iii) Scale up UTD's research efforts (next point).

Scaling up of UTD's Research Enterprise

Scale of most metrics that measure research output at UTD is still small. A lot of it is due to the small size of UTD. UTD must scale up everything that is related to research to be noticed as a research University.

- The number of Ph.D.s that we graduate has to be considerably ratcheted up. This can be achieved by increasing the number of tenure-track faculty members, as noted in UTD's strategic plan. Simultaneously, an aggressive Ph.D. student recruitment plan should also be drawn up and implemented. It seems that student recruitment efforts are being carried out quite well at the School and Department level; perhaps these efforts should be tracked at the central level, to find and fix any existing gaps and to ensure that they succeed.

- Considerable effort should be made to increase the number of research faculty (non tenure-track) positions at UTD. Research faculty members not only help in increasing the research output of the University, they also help in raising research funds and in supervising graduate students, which in turn increases Ph.D. production.
- As we all know, Federal research dollars have been increasingly scarce not only due to less investment by the Government but also due to increased competition. Acceptance rates at NSF, for example, are as low as 10%. Assuming that success rate for UTD proposals will be similar to this 10% rate, to ensure an increase in UTD's extramural funding, we need to increase the number of proposals submitted. The number of proposals submitted (and funded) by UTD has been increasing, however, this number must go higher for UTD to gain research prominence. Most of the time the initiative to submit a proposal comes from faculty members, however, it might help to set up a program at the central level in which funding opportunities are identified and for each such opportunity identified, a suitable (team of) faculty member(s) is also identified. The (team of) faculty member(s) identified then applies for that funding (with appropriate support from UTD).
- Another way to increase the funding level at UTD is to increase the success rate for proposals. This can be achieved by having proposals reviewed by UTD peers before submission. Some programs at UTD "red team" their proposals at considerable expense. However, given that we don't have too much money to spend on "red teaming," UTD could set up a voluntary program at the central level where for each proposal for which the PI requests a review, UTD faculty peers are asked to read the proposal and provide feedback. Once again the service that the faculty peers provide can be listed in the annual report, so that faculty members receive proper credit from the Heads and Deans during their annual evaluation.
- Finally, UTD can set up a seed-funding program, where small amount of initial funding is given to PIs to strengthen a proposal which is eventually submitted for external funding.

Increasing Faculty Productivity

We should also expend effort in increasing the productivity of our faculty members who are most active. At the central level this can be done by providing grant-writing support (hiring grant writers), better support in research administration (faculty members feel that administration of accounts takes tremendous time, primarily because they receive too much information from the accounting office about their grant expenditures that is hard to follow), and developing a safety net mechanism for funding support (to help PIs when they are in between funding). At the moment lot of these issues are left to schools.

Inter-disciplinary Research and Teaching

The RAC recognizes that solution of many of today's problems requires an inter-disciplinary approach. Thus, UTD's focus should continue to be promoting inter-

disciplinary research. This is, however, definitely one area where UTD has made great strides in the last few years. This effort should continue with the same vigor. Effort should also be made to encourage students to attend colloquia held in other departments.

Fellowship Money for Graduate Students

UTD needs to find ways to increase the pool of fellowship money. Perhaps more named student fellowships should be established. The level of effort to secure this money should be the same as that for setting up faculty chairs.

Other Issues:

Policy on Centers and Institutes: UTD should have a clear policy that define a research center vs a research institute. The expectation and obligation of each kind of set-up should be delineated along with the support that UTD will provide to them.

Indirect Cost Distribution: UTD adopted an indirect cost distribution policy in 2004-2005 academic year, which has not been implemented yet due to financial difficulties faced by UTD. It will be good to implement this policy as soon as it becomes feasible to do so.

Industrial Funding: UTD has a unique location, namely, right in the middle of a technology corridor. Efforts should be made to develop more collaborations for industrial research with local and national companies. While industry is not as significant a source of funding as the Government, the potential to raise funds from the industry is not insignificant. Thus, efforts should be made to increase industrial funding level. This of course needs a clear IP policy that is acceptable to both UTD and the industry.

Research Administration: The various administrative units that are related to research administration (ORASP, Grant Accounting, Economic Development) seem to be scattered under several administrators. The current organization perhaps works very well, however, UTD may wish to take a critical look and ensure that indeed this is the best way to organize the various units involved in research administration.