

Minutes*

**Senate Research Committee
Monday, November 21, 2011
2:15 - 4:00
238A Morrill Hall**

- Present: Linda Bearinger (chair), Alvaro Alonso, Melissa Anderson, Breanne Byiers, Arlene Carney, Margaret Catambay, Anna Clark, Paul Cleary, Jerry Cohen, Marc Dunham, Maria Gini, Greg Haugstad, Seung-Ho Joo, Frances Lawrenz, Tucker LeBien, Jennifer Linde, Timothy Mulcahy, Federico Ponce de Leon, LaDora Thompson
- Absent: Robin Dittman, Demoz Gebre, Christopher Nappa, Kola Okuyemi, Thomas Vaughan, Kyla Wahlstrom, Karen Williams, Lynn Zentner
- Guests: Associate Vice President Pamela Webb (Sponsored Projects Administration)
- Other: Emily Lawrence (Office of the President)

[In these minutes: (1) report of the chair; (2) statement on the value of research not externally funded; (3) STAR METRICS; (4) policy on fixed-price contracts]

1. Report of the Chair

Professor Bearinger convened the meeting at 2:15 and began by reminding Committee members that the meetings are to be an acronym-free zone and that people should identify to whom they are referring and their position if, in discussion, they refer to individuals not at the meeting.

Professor Bearinger commented that in a recent conversation she had with one of the Committee members, he speculated that the purpose of the meetings is to generate good minutes. Given that perception, she decided she would provide updates to the Committee on what happens between meetings and "whence cometh agenda items." They come, she related, from Committee members, people who read the minutes (and they do write to her to ask about issues of concern), vice presidents and the Dean of the Graduate School, and other committees.

She is a non-voting member of the Faculty Consultative Committee, which meets every Thursday except when the Board of Regents is meeting, she attends meetings of the Board of Regents when there is a research-related matter on the Board agenda, and she is a member of the Council of Research Associate Deans (CRAD). With respect to the last, she asked if one of the faculty members of the Committee would consider serving as its representative to CRAD because meetings conflict with FCC meetings. She asked Dean Ponce de Leon to talk briefly about CRAD.

Dean Ponce de Leon noted that he has served as chair of CRAD for the last year and a half and will serve until the end of this academic year. CRAD represents the research mission of the University and is comprised of the research associated deans of the colleges plus other directors, faculty members,

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and staff. CRAD is a support group that allows moving forward the research agenda and allows members to learn from each other. They invite representatives from different University sectors to present information about what they do; CRAD recently had President Kaler as a guest to talk about the research enterprise. President Kaler mentioned two important things: At this point only a single initiative is moving forward, Food and Human Health, and he will personally move the University's agenda in Washington, D.C. CRAD also serves as an advisory group to Vice President Mulcahy.

Professor Bearinger reported on issues that FCC has recently discussed and concluded by observing that she serves as a conduit for the issues from this Committee to other groups, and they can bring issues to her.

2. Statement on the Value of Research Not Externally Funded

Professor Bearinger next noted that a volunteer group of Committee members had prepared a statement on the value of research, including that which is not externally funded. That the Committee will adopt a statement is the result of a request from FCC, following on its discussions about productivity measures that were being adopted in Texas and Florida. As they worked on the statement, Vice President Mulcahy suggested the statement should be expanded to speak also about how faculty productivity should be measured.

Professors Clark, Cleary, Cohen, and Gini met last week, after which meeting Professor Cleary drafted a statement and incorporated suggestions, Professor Bearinger reported. The Committee turned its attention to the draft. The Committee did not have a final draft by the end of the meeting and agreed to continue working on it in the following few weeks.

3. STAR METRICS

Professor Bearinger turned now to Vice President Mulcahy for a brief discussion of STAR METRICS (Science and Technology for America's Reinvestment: Measuring the Effect of Research on Innovation, Competitiveness and Science).

Vice President Mulcahy began with the background. About five years ago he was asked to give a talk to the CIC Academic Leadership Program about his predictions for the future of research for the next 5-10 years. His vision, he recalled, was that there will be accountability. He foresaw increasing pressure to demonstrate productivity, a return on investment, accountability, and that universities would need to justify almost everything they do in sponsored research. His prediction was more accurate than he would care to admit, Dr. Mulcahy said, because universities are seeing increasing national pressure to produce a return on investment for the large amount of money they are provided, especially in basic research.

The Obama administration received considerable criticism that the ARRA (stimulus) dollars were not a good idea, Dr. Mulcahy related, so the administration was clear that it needed to demonstrate how the ARRA funds would help get the country out of the recession. The focus was on jobs, i.e., the federal government wanted to know how the funds created or preserved jobs—which meant intensive reporting for agencies that received the funds. That requirement, however, whetted Washington's appetite for such accountability; the academy, however, has taken the position that job creation is not the best measure of the return on the investment and has come up with different ways to measure the impact of federal funds. The new strategy is STAR METRICS, a more academically-based model. Forty universities have agreed

to participate in a pilot of STAR METRICS for the stimulus funds, including the University of Minnesota. An economically-based model would allow one to judge the number of jobs created with federal funds; with STAR METRICS, it is possible to use the data to evaluate job creation and other economic models. By all accounts, the stimulus funds were very productive; there are websites that report where the research funds went, the jobs that research supported, including jobs around the state because of orders placed with vendors, and the patents that resulted—fairly simple metrics. Most of the universities in the pilot study, at the first level, have found that after spending a week priming the system to generate data, it is not onerous. Level two provides more reason to peruse the information because it goes more to addressing the impact of the funds, such as the number of students and postdocs supported by the research and where they went. Once the data are provided, the federal government and others can mine it for information.

A group of research vice presidents were openly suspicious how this system would work and questioned the fundamental principles behind it, Dr. Mulcahy said. The AAU vice presidents convened a meeting in Washington with representatives of universities that had gone through level one, representatives of the federal government, and with scholars who are used to doing these kinds of assessments of inputs and outputs. Afterward, everyone involved (with a certain level of caution) realized that (1) the increased accountability will happen, and (2) it is an opportunity to validate academic research. The federal government also stepped back from more onerous requirements.

The long and short of it is that the reporting will happen, and "if universities are not at the table they will be on the menu," Dr. Mulcahy concluded. Congress will be expecting regular reports from NIH, NSF, NEH, and so on about what universities are doing with their federal funds; it behooves the universities to get the system right. What is key for the academy is that it is a sad day in the country when one must provide a rationale for higher education; regardless, the country has reached that point so the institutions have to be in the game.

Professor Bearinger inquired how much ARRA funding the University received. Ms. Webb reported that it received over 300 grants for a total of about \$260 million; Dr. Mulcahy said he did not know if that was the University's "fair share." In terms of statistics about the University vis-à-vis other institutions, Ms. Webb reported, they only know that the rate of "wins" at the University in NIH challenge grants was higher than the national average. Did the PIs know that they had a responsibility to report the impact of the funds, Professor Bearinger inquired? They did, Dr. Mulcahy said; they were made aware of it and they had great cooperation from the faculty. The administration decided, however, that it was an institutional responsibility in order that there would be minimal impact on the PIs. What they were not aware of at the time was that Congress and federal agencies would look at the ARRA outcomes data and then decide to measure benefits in the same way for all federal funding.

Professor Cohen commented that STAR METRICS is biased to high payoffs. Historically, with NSF funding, each \$1 million meant 22 people were hired, and in the 1970s such funding created the biotechnology industry and changed the world. But if institutions had been asked to provide such accountability in the 1970s, the information would not have been impressive. The message they have delivered about payoff is that if there will be a payoff, it will be years down the road and the result of an aggregation of efforts, Dr. Mulcahy responded. As an example, the smartphone has about 500 patented technologies in it. The federal government has backed away from impact and will seek to measure benefits.

Dean LeBien recalled that Congress and the President rolled out ARRA as a job creation strategy; has anyone considered that when the dollars go away, the jobs go away and that there has not been enough economic improvement in the meantime to support the new jobs. How are organizations considering that question? They recognized it as a problem, Dr. Mulcahy said. The University knew these were one-time dollars and that if the economy did not improve (which it was expected to do), the jobs would be at risk. In that the economy did not improve significantly and federal research funding is flat, now the University will have trouble supporting positions that were funded with ARRA dollars unless it finds additional sources of support. Many of the positions were not full-time, he added, and the University will not be able to retain all hired with ARRA dollars.

Professor Bearinger inquired how the benefits of what is measured can be made known. Dr. Mulcahy said he did not harbor a great deal of hope on that score; he has been saying the same thing since he was a young scientist: Universities do not do a good job of telling their stories. Presenting truth to politicians seems to be a waste of time because they are not interested, Professor Cleary commented.

Professor Linde said that NIH has restructured the format for new proposals and now places more emphasis on impact. She said they have started to worry that if NIH looks at the number of students hired and the jobs they get, will that mean the model will be that one requires a certain number of a students and jobs to receive funding? Just because you are paranoid does not mean people are not out to get you, Dr. Mulcahy commented. However, he said that what Professor Linde fears is not likely, but things are moving in that direction. The academy is trying to inform decision makers so that they avoid using such measures.

Minnesota is a Research 1 university and does pretty well, Professor Cohen said; it is the Research 3 and 4 institutions where people become unemployed. The demographics will favor more money flowing to the Research 1 universities.

NIH also has a series of questions and wants ideas about how to have the most impact with its resource pool, Dr. Mulcahy said. The average age of first-time NIH award recipients is 42 years. It will be a smaller pie that they will need to distribute, and the top 40 research universities receive 60% of the NIH budget. Is the implication that NIH should give these institutions more or that it should spread out the money? Or that it should limit the number of grants that any one person can have? They are also talking about reducing the size of grants. What if they say they will not pay more than 20% of a faculty member's salary? Those are the questions that are being asked, Dr. Mulcahy said, and what the research landscape looks like.

How can the Committee be of the greatest help in dealing with these questions, Professor Bearinger asked?

The greatest help would be for the Committee to craft responses to the questions and to relay any information it learns, Dr. Mulcahy said. When the Committee returns in spring semester, he will want to continue the discussion about STAR METRICS and seek guidance from the Committee. How would people want to be judged? How would they want their research defended? In order to tell the University's story, they need to know this. Professor Bearinger suggested that if the Senate Research Committee developed a statement or story about measuring research impact, such as the statement on the value of research not externally funded that is in draft from at this time, perhaps the committee could work with University Relations to get the story into an editorial, for example. Something from the Senate Research

Committee would likely be more influential than another statement from an administrator or University Relations, Dr. Mulcahy commented. He commended the idea of preparing a statement.

Dr. Mulcahy said he would have more information about STAR METRICS after mid-December. Professor Bearinger thanked Dr. Mulcahy for his report.

4. Policy on Fixed-Price Contracts

Professor Bearinger turned to Associate Vice President Webb for an additional update on the changes to the policy on fixed-price contracts.

Ms. Webb said they have finished drafting the document. In response to the suggestion from Professor Cohen at the last meeting, they have changed from 30 to 60 days the notification to a PI about a contract end date. They received a few comments from CRAD and the deans. One faculty member suggested that if there is a balance, the PI should be able to retain it and continue to do research (i.e., when the original work is done, and more cheaply than expected, the PI should be able to ask the sponsor to continue the work with the balance, and if it is approved, they would consider it an amendment that would extend the end date). They have developed a set of FAQs as a result of the discussion at the last meeting of the Committee. In the discussion about trying to reach people who do not close contracts, her view is that if people are not aware a contract is ending, SPA needs to do a better job. They need to make people aware. She agreed with Professor Bearinger that some college grant-management offices may not know about the policy and said they can also build the information into classes for department research administrators. Faculty members obtain grants because they are good at research, not necessarily because they are good at managing research grants, Professor Bearinger observed, so prompts could be helpful.

Professor Cleary said that when dollars are tight and people worry they may not get a grant, they try to save money. Why not treat residual dollars in a manner similar to royalties? That is, one-third to the department to use only for research. He said he was concerned about the restrictions in the policy. Ms. Webb said she understood the point, but the contract is supposed to cost what the PI expects the research to cost. They want to provide flexibility up to a 25% excess, but this is not supposed to be a free-for-all. As budgets get tighter, they are seeing more charges to the wrong accounts, and they have to be sure they do not create a cost structure that encourages people to do the wrong thing. If there is a large balance, the PI can ask the sponsor to continue the research; if it is less than 25% of the contract, the money goes to the department and can be used for research.

Professor Bearinger thanked Ms. Webb for the update, wished everyone a pleasant Thanksgiving, and adjourned the meeting at 3:50.

-- Gary Engstrand

University of Minnesota