## CASE WESTERN RESERVE UNIVERSITY Faculty Senate Meeting of January 31, 2006, 3:30 - 5 p.m. Toepfer Room, Adelbert Hall

## AGENDA

3:30 p.m.	1.	Approval of Minutes of the Meeting of November 21 and December 19, 2005	R. Wright
3:35	2.	President's Announcements	E. Hundert
3:45	3.	Provost's Announcements	J. Anderson
3:55	4.	Chair's Announcements	R. Wright
4:05	5.	Report of the Executive Committee	J. Alexander
4:10	6.	Report of the Budget Committee	P. Gerhart
4:20	7.	Report of the By-Laws Committee	M. Resnick
4:30	8.	Planning for 2006 - 2007	J. Alexander
4:35	9.	Annual Report from the Office of Faculty Diversity	B. McGee
	10.	Other Business	

MOTION to Adjourn

# CASE WESTERN RESERVE UNIVERSITY **Faculty Senate** Meeting of January 31, 2006, 3:30 - 5 p.m. Toepfer Room, Adelbert Hall Minutes

Members Attending		
James Alexander	Katherine Hessler	Diana Morris
John Anderson	Susan Hinze	Spencer Neth
Roberto Ballarini	Edward Hundert	Elizabeth Olson
Nicholas Bonazza	Kathleen Kash	John Orlock
Bo Carlsson	Patrick Kennedy	Martin Resnick
Francis Curd	Carolyn Kercsmar	Alan Rocke
Mark Dunlap	Elisabeth Koll	Robert Salata
Dominique Durand	Uziel Landau	Paul Salipante
Jerry Floersch	Wilbur Leatherberry	Joram Sawady
Timothy Fogarty	Kenneth Ledford	Philip Taylor
Lynne Ford	Edith Lerner	Aloen Townsend
Paul Gerhart	Kenneth Loparo	Kristin Victoroff
Anita Gilliam	David Matthiesen	E. Ronald Wright
Julia Grant	Vincent Monnier	
Others Present		
Julie Amon	Kenneth Kesegich	Dean Patterson
Christine Ash	Tony Kinslow	Joseph Prahl
Paula Baughn	Robin Kramer	Jeffrey Robison

Nabil Bissada Donald Feke C. Cleveland Gilmore Lara Kalafatis

Laura Massie Beth McGee Chris Munoz Gultekin Ozsoyoglu **Timothy Robson** Virginia Saha David Singer

Professor Ronald Wright, Chair of the Faculty Senate, called the meeting to order at 3:35 p.m.

# **Approval of Minutes**

The minutes of the previous Faculty Senate meetings on November 21, and December 19, 2005, were approved as circulated

# **President's Announcements**

Dr. Edward Hundert said that planning for the university budget is taking place on two levels - for the 2006-2007 academic year and as a five-year rolling budget plan. Chris Ash will coordinate with the many constituencies in discussions of how the Senate calendar and schedule can align with other timetables. Several people from the Senate and the administration met on Jan. 18<sup>th</sup> regarding the membership and the charge for the University Budget Committee. They will meet again on Feb. 8<sup>th</sup> and then make their recommendations to him, so that he can be responsive to the Senate's request that Case reconstitute the University Budget Committee.

# **Provost's Announcements**

Provost John Anderson reported on development of the semi-final draft of the Academic Strategic Plan for presentation at the June Board of Trustees meeting. A steering committee with broad representation from all constituencies is helping to write this document, and he promised to hold several town hall meetings for input, along with the special Faculty Senate meeting on March 31<sup>st</sup> at 2 p.m. in the Toepfer Room.

There is a new daily electronic newsletter called Case Daily which is trying to gather all news into one e-mail. There will also be a hard copy monthly publication with a column from the provost and another from the Senate chair; Ken Kesegich and his team will attend each month's Senate meeting and write up reports, to be edited by the chair or the chair-elect and published the following month. There were various comments on how to best communicate and insure that these get read.

#### **Chair's Announcements**

Professor Ron Wright continues to encourage faculty participation in the Wednesday luncheons at the Case Club.

He confirmed that there will be a special meeting of the Senate to give input to the provost's Academic Strategic Plan on Friday, March 31<sup>st</sup> from 2 - 3:30 p.m. in the Toepfer Room with both the provost and the president in attendance

The Nominating Committee is currently working to fill the anticipated vacancies on standing committees for next year. He asked if all would encourage their colleagues to respond to invitations to serve or to nominate themselves for committees or for senator in their school.

The ACES group held a meeting on January 26<sup>th</sup> to review their accomplishments, the theme of which was institutionalization. He urged those present to search the web site for information on the program in sciences and engineering.

## **Report of the Executive Committee**

Chair-elect Jay Alexander will give this report each month.

From the January 18<sup>th</sup> meeting, he noted that the announcements were the same as made at this meeting, and that there were no action items coming to the Senate this month. Reports from the Budget and the By-Laws committees will be made later at today's meeting and the Minority Affairs Committee will report at the February Senate meeting. Agenda items on a change in the language of the university's the non-discrimination statement and a half-yearly report from the UUF Executive Committee chair were postponed to the February Executive Committee meeting. A presentation was made by the dean of the School of Dental Medicine for a new combined degree program of D.M.D./M.D. which was referred to the Graduate Studies Committee for a fast-track review as the dean wishes to be on the leading edge in such a degree program offering.

## **Report of the By-Laws Committee**

Chair Martin Resnick reported that this has been an active year with reviews by each school of their by-laws, as stipulated by changes to the Faculty Handbook approved in 2003. Also, the UUF presented changes to their by-laws in membership and reporting authority between the UUF Executive Committee and the UUF Curriculum Committee; now substantive matters will be reported to the Senate, and a report will be made to the provost on the institutional impact of SAGES.

The School of Medicine's by-laws review continues; the School of Engineering has submitted their Standards document on faculty appointments and promotions; and a review to approve the by-laws for the College of Arts and Sciences is next on the schedule. The School of Dental Medicine and the Weatherhead School of Management's by-laws are next on the schedule, and perhaps a re-visiting of the Nursing School's by-laws as various points for clarity have been suggested as the committee has gone through the by-laws of each school.

It is anticipated that next year should include a review of the Faculty Senate's by-laws. The committee will bring forward recommendations as they complete their work.

## **Report of the Budget Committee**

Chair Paul Gerhart reported that the committee had met twice since their last report, once on the impact and various issues of the hospital [affiliation] agreement, and the other time on January 24<sup>th</sup> on development of the University Budget Committee, as was reported by President Hundert in his announcements. The committee's agenda for the rest of this academic year includes

- the use of the fringe benefits pool of funds which is also the purview of the Faculty Compensation Committee but is the responsibility of this Budget Committee as it impacts on schools,

- the schedule of schools' budget reviews for this year,

- the impact of a reduction by several percentage points of NIH renewal grants as departments have to absorb \$1.4 million.

The committee noted a recent decline of sponsored research proposals and grants compared with last year.

In a review of the Vision Investment Program five-year plan for \$181 million to be invested in fiscal years 2004 - 2008 in programs such as SAGES, Centers of Excellence, etc. the committee thought the money was coming from a working capital drawdown; \$134 million did, but there also was added a  $\frac{1}{2}$ % of interest income from endowment. Not all of this is going to one-time-only expenditures; \$14 million is being spent for on-going activities. There was the understanding that dividends from these "investments" would repay the "loan." There have been several faulty assumptions such as a continued growth of research funding, increased tuition revenues in the order of 10%, and an anticipated growth in development income of 10%. While the committee is wondering if there is reason to expect a turnaround in these last two items, they are also looking at what has been accomplished.

The chair believes that 2007 will be a critical year and these questions must be revisited regularly. On his calendar for Budget Committee reporting is to give an update soon, as the staff in the Budget Office gathers information from the schools.

There were questions and a lively discussion on the timeline for repayment of Vision funds, and the acknowledgment by the committee chair that some of the benefits may not be actual cash which can be re-invested. It may be difficult to measure the benefits from the Centers of Excellence, such as TIIME and Fuel Cells, in the short term - the Vice Presidential Debate, SAGES; and whether this large of a first-year class is sustainable.

President Hundert noted that though it is important for the university to have the appropriate cushion of money, we should not go back to the days of building up large reserves again.

The agenda for the next Budget Committee meeting will be a discussion of SAGES and faculty resources. It was suggested that a topic for future discussion by several of the standing committee would be on research and research facilities, and the idea of a "bridge" research fund of about \$10 million. The size of the next class would ideally be at 1050 and Chris Munoz mentioned the web site which allows anyone to track the current status; he reported that the applicant pool is up again and is now at double of what it was several years ago; he also noted

that we need to reduce the give-aways.

## **Planning for 2006 - 2007**

Chair-elect Jay Alexander stated that "planning, with a five-year horizon" will be the theme of his tenure as Faculty Senate chair. He is willing to speak with school groups of faculty leadership or their senators.

The Annual Report from the Office of Faculty Diversity was postponed to the next Senate meeting due to the lateness of the hour.

The meeting adjourned at 5 p.m.

Lynne E. Ford Secretary of the Faculty Senate

# Agenda Item 5. MOTION to Rescind Actions of the Faculty Senate and the Case Assembly in 1970 on Academic status of ROTC at Case:

## MEMORANDUM

To: E. Ronald Wright, Chair Faculty Senate

From: D.L. Feke, Vice Provost for Undergraduate Education

Date: February 18, 2006

Subject: Recommendation on Transfer Credits for Air Force ROTC courses

At its meeting on January 26, 2006, the UUF Executive Committee endorsed a recommendation that Case undergraduates participating in the Air Force ROTC program should be eligible for up to eight hours of transfer credit for AFROTC courses taught at Kent State University.

In order for to allow such transfer credit, the Faculty Senate would need to rescind actions (taken in 1970) that prohibit Case students from receiving academic credit for ROTC courses. The specific actions taken by the Senate are summarized below.

Thank you for considering revoking the prohibition against academic credit for ROTC courses.

## Faculty Senate Actions on Academic Credit for ROTC Courses

1. At its meeting on May 5, 1970, the Faculty Senate unanimously approved the following resolution:

## "BE IT RESOLVED

That the Faculty Senate express its opposition to the presence of ROTC on this campus as a curricular elective and recommends the dissolution of the Department of Air Force Aerospace Studies.

That the Chairman of the Senate initiate steps to bring about the prompt implementation of this resolution.

That any presence of ROTC related activities on the campus should be limited to the status of extracurricular clubs or other activities, and should bear the same relation to the various parts of the University as other such activities."

2. During the next few months, various committees discussed how to implement (and interpret) this resolution. On September 14, 1970, University President Robert W. Morse issued an official statement on ROTC which described the resolution above and included the following comment:

"A committee of the Case Assembly has been examining the matter of eliminating all degree credit for AFROTC courses and will report to the Case Assembly at its first meeting."

The reference to the Case Assembly (a legislative unit) stems from the fact that the AFROTC program was housed in the Case Institute of Technology portion of the University.

3. At its meeting of September 29, 1970, the following motion was passed by the Case Assembly:

"Degree credit for all courses offered by the AFROTC unit at Case Institute of Technology be eliminated. Those courses in the AFROTC program of study for which a student can receive credit toward his degree shall be limited to courses offered by the various academic departments of the University.

This action is to take effect immediately, except that it shall not affect the present juniors and seniors in the program, in accordance with the President's statement of 14 September, 1970."

# Agenda Item 11. Report of the Research Committee MOTION to Approve Data Custody Policy

# Faculty Handbook, Chapter 3, PART TWO, C.

- 6. University Policy on Custody of Research Data
  - a. Rationale and Purpose of the Guidelines

This policy establishes the assurance that research data are appropriately recorded, archived for a reasonable period of time, and available for review under the appropriate circumstances.

- 1. Research support agencies, journals, clinical care sites, or colleagues in the field may need or be legally entitled to review primary research data well after publication or dissemination of results and will hold the University accountable for the availability of these data.
- 2. Researchers involved in multi-investigator projects have rights to access to data gathered by all members of the group.
- 3. The University may be required to review internally the adequacy and integrity of data if findings of university research are called into question.
- b. Contact person

Vice President for Research and Technology Transfer

## c. Applicability and Definitions

This policy shall apply to all Case Western Reserve University faculty, staff, students, and other persons at Case Western Reserve University involved in the design, conduct, or reporting of research at or under the auspices of Case Western Reserve University or with the use of university resources or facilities. It shall apply to all research projects on which those individuals work, regardless of the source of funding for each project.

Research is defined as "a systematic investigation designed to develop and contribute to generalizable knowledge." Examples of activities that constitute research include any study intended to result in publication or public presentation; any activity resulting in publication or public presentation, even though it involves only review of existing data that were collected with no intent to publish; or any use of an investigational drug or device.

Research data are defined as the material, originally recorded by or for the investigator, commonly accepted in the scientific community as necessary to validate research findings. Research data include but are not limited to laboratory notebooks, as well as any other records that are necessary for the reconstruction and evaluation of reported results of research and the events and processes leading to those results, regardless of the form or the media on which they are recorded.

The principal investigator (PI) is defined as the person responsible for the research or who is the signatory person for sponsored research. Confidential information is specified in the "Case Western Reserve University Intellectual Property Policy" and the "University Policy on the Involvement of Human Participants in Research." For student research involving human subjects, the faculty member who is serving as the responsible investigator with respect to the human subject research is considered the PI.

d. Rights and responsibilities

Both the University and principal investigator (PI) have responsibilities and rights concerning access to, use of, and maintenance of research data. The PI is responsible for maintenance and retention of research data in accord with this policy. Case Western Reserve University's responsibilities with regard to research data include, but are not limited to:

- 1. Complying with terms of sponsored project agreements;
- 2. Ensuring the appropriate use of animals, human subjects, recombinant DNA, etiological agents, radioactive materials, and the like;
- 3. Protecting the rights of faculty, students, postdoctoral scholars, and staff, including, but not limited to, their rights to access data from research in which they participated;
- 4. Securing intellectual property rights other than copyright;

- 5. Facilitating the investigation of charges, such as scientific misconduct or conflict of interest;
- 6. Responding to legal actions involving the University related to research carried out under its auspices.
- e. Collection and retention of research data

Case Western Reserve University must retain research data in sufficient detail and for an adequate period of time to enable appropriate responses to questions about accuracy, authenticity, primacy, and compliance with laws and regulations governing the conduct of the research.

The PI is the custodian of research data, unless agreed on in writing otherwise, and is responsible for the collection, management, and retention of research data. The PI should adopt an orderly system of data organization and should communicate the chosen system to all members of a research group and to the appropriate administrative personnel, where applicable. Particularly for long-term research projects, the PI should establish and maintain procedures for the protection of essential records.

Research data must be archived for not less than three years after the final close-out or publication, whichever occurs last, with original data retained whenever possible. This should include reasonable and prudent practice for off-site back-up of electronic and hard-copy data. Where applicable, appropriate measures to protect confidential information must be taken. In addition, any of the following circumstances may justify longer periods of retention:

- 1. Data must be kept for as long as may be necessary to protect any intellectual property resulting from the work;
- 2. If any charges regarding the research arise, such as allegations of scientific misconduct or conflict of interest, data must be retained until such charges are fully resolved; and
- 3. If the data involved constitute part of a student's work toward a degree, they must be retained at least until the degree is awarded or it is clear that the student has abandoned the work.

Beyond the period of retention specified here, the destruction of the research record is at the discretion of the PI and his or her department or laboratory.

To enable the University to meet its responsibilities related to custody of research data (as previously described), the PI is obligated, upon appropriate request, to make all data available for review by the University, its officials or bodies, or the external funding agency or journals, or other external regulatory agencies. This obligation continues even after the PI leaves the University.

In group research projects, the PI is obligated to give co-investigators access to the

research data or copies thereof for review and/or use in follow-on research, with proper acknowledgment. Data sharing and custody arrangements by co-investigators or group projects should be determined by the investigators when joining the project and preferably defined in a data use agreement.

Research data will normally be retained in the unit where they are produced. Research data must be retained in such a manner that they are accessible for inspection and copying by authorized representatives of Case Western Reserve University at reasonable times and in a reasonable manner.

f. Transfer in the event a researcher leaves Case Western Reserve University

When individuals involved in research projects who are not PI's at Case Western Reserve University leave the University, they may take copies of research data for projects on which they have worked. The PI must, however, retain original data, at Case Western Reserve University, unless specific permission to do otherwise is granted by the vice president for research and technology transfer. In the case of student research where the student is not the PI, the individual who is the PI may allow the student to take the original data (except for original informed consent documents if the study involves human subjects) when the student leaves the university as long as the student signs a written agreement (also signed by the PI and the vice president for research and technology management or his/her designee) agreeing to accept custodial responsibilities for the data and that Case Western Reserve University will be given access to the data should that become necessary.

If a PI leaves Case Western Reserve University, custody of the data may be transferred as long as there is a written agreement signed by the vice president for research and technology management or his/her designee and either the PI or (in the event the project is moved to another institution) both the PI and the new institution that guarantees:

- 1. acceptance of custodial responsibilities for the data, and
- 2. that Case Western Reserve University be given access to the data should that become necessary.

Approved by the Board of Trustees 5/18/93. Amended by the Faculty Senate Research Committee on November 17, 2000, and amended after consultation with the Executive Committee on December 7, 2000. Approved by the Faculty Senate December 14, 2000 and the Board of Trustees on June 13, 2001.

# Agenda Item 12. Report from the UUF Executive Committee Chair

# **Introduction**

This is the first report of the University Undergraduate Faculty Executive Committee (UUFXC) under the new UUF bylaws. Changes in the new bylaws include

• The UUFXC now has responsibility to report the activities of the UUF Curriculum Committee (UUFCC), and decide if the UUFCC decisions should go directly to the Faculty Senate, or the general meeting of the UUF, or rejected. (The requirement to report a summary of the UUFCC activities remains the same.)

• The UUFXC now has responsibility to provide evaluation of SAGES.

# **Summary of UUF Committee Activities**

Executive Committee: Chair, Larry Parker

The XC

• is engaged as a committee of the whole for this year to provide an evaluation of SAGES (attachments provided). The committee is in the process of selecting a subcommittee to evaluate SAGES in future years. Received monthly updates from Peter Whiting on SAGES.

• examined issues related to Air Force ROTC transfer credits, and has recommended related action by the Faculty Senate.

• provided guidance to each UUF committee, providing both tactical and strategic recommendations.

• examined the issue of class size, and accepted an admission goal of about 1050 freshmen.

• assigned discussion of the topic of composition of the freshman class and examination of the Arts & Science Group report to the Undergraduate Admissions Committee.

• assigned the issue of late admission of transfer students to the admissions committee.

• informally recommended that the undergraduate faculty consider utilizing the Undergraduate Student Government's proposal for mid-term evaluations.

• is continuing discussions of service learning.

# Academic Computing: Chair, Richard Boland

Academic Computing

• met several times to review results of a survey done in Spring 2005 on student and faculty dissatisfaction with computer labs and facilities.

• is planning an open forum this spring on academic computing topics.

• is considering an examination of use of technology in SAGES seminars.

# Academic Standing: Acting Chair, Julie Amon

Academic Standing

 $\bullet$  met to review status of students for academic probation, loss of scholarships, separation from the university, etc.

• determined that retention of freshman is about 98% as of the end of the first (Fall 2005) semester.

**Curriculum Committee**: Chair – initially John Blackwell; then acting Chair Sandy Piderit; now Gary Chottiner.

Summary is provided at the end of the report.

# Student Life, Services and Environment: Chair, Christine Cano.

Will have its first meeting in Spring 2006.

# Undergraduate Admissions: Chair, Jerrold Scott

Undergraduate Admissions

• assisted the admissions administration with freshman admissions.

• presented a program on standards and preparation for admission for children of Case faculty and staff.

• began study of the composition of future freshman classes.

# **Summary of Curriculum Committee Activities**

September 1

- proposal from Bioethics to drop cross-listings from BETH 271 due to financial considerations of tuition revenues following students – solution accepted to limit registration under Religion and Philosophy to majors and require others interested to register as BETH

- new course proposal MPHP 306
- approval of changes to Biochemistry program to accommodate SAGES
- approval of WSOM university seminar

## October 6

additional proposed changes to Biochemistry B.A., B.S. and minor program
various course action form approvals from Case School of Engineering (EECS 370, 399L and M, and USSO 228), and WSOM (USSO 232, ORBH 370 and ECON 120 (discussion on giving credit for "guidance" course)

- modifications to the minor in Childhood Studies and the major in Public Health Studies. Also, began discussion on the charge from the XC to each standing committee to define strategic priorities for this year.

## November 3

- approvals of a variety of course action forms: Biochemestry, BIOC 393 SAGES senior capstone; CAS, University seminars USSY 227, 228, 229 and USNA 217; Nursing, USSO 220, 231 and NURS 201; School of Law, USSY 226; WSOM, ECON 386; CSE ECHE 395 and USNA 213

- approval of College of Arts and Science new major in Cognitive Science. NOTE: Approved by consent agenda of the Faculty Senate in December

- continued discussion on defining strategic priorities and on SAGES oversight

## December 1

- USSO 215 from CAS, and final approval for new public health course MPHP 303

- more discussion on strategic priorities

## January 12

- affirmed the UUFCC would only explicitly consider actions that might affect more than one school in the university

- approved USSY 270, USSO 216 and UCAP 395

- contact department chairs directly for SAGES oversight

Prepared and Submitted by Larry Parker Chair, UUFXC

# UUFXC OVERSIGHT OF SAGES ACADEMIC YEAR 2005 – 2006

## Proposal for the UUFXC, November 10, 2005

A major responsibility for the UUFXC is to provide oversight of SAGES for the undergraduate faculty and provide an oversight report to that faculty near the end of each academic year. This is the first year in which this requirement is in full effect.

**1.** The UUFXC will request an overview of SAGES from each of the following groups, from the perspective of each respective group, to be provided to the UUFXC by the March 23, 2005 meeting.

• SAGES administration (Dr. Whiting)

• All UUF committees, to include the views of relevant participant groups in that committee. (For example, the Committee on Admissions should include the view of the Admissions Office; the Committee on Student Life, Services and Environment should include the views of the Career Center, etc. The Admissions Office and Career Center, among other groups, may provide individual reports if the relevant UUF committee believes that is appropriate.)

• The constituent schools involved in undergraduate education. This would be led by the representative(s) of that school on the UUFXC. (For example, Larry Parker would be responsible for the report from the Weatherhead School of Management.)

- Undergraduate Student Government
- SAGES Advisory Board
- Office of the Provost (Budget, Space, Faculty hiring, etc.)
- Office of Undergraduate Studies
- SOURCE

The requested general form of the report would be

Positive effects of SAGES

Major Concerns about SAGES

Suggestions for improvement

Very specific questions in the context of the above general format should be developed that are most relevant to the responsibilities and interests of the reporting groups or committees.

**2.** The UUFXC will compile the reports and develop a summary report. The compilation and the summary will be provided to the UUF at the spring meeting of the UUF. A report will also be provided to the University Senate, as required in the By Laws of the UUF.

**3.** The UUFXC will also consider developing an Ad Hoc committee with a very broad constituency in the future for study and reporting of SAGES.

# ./. from the SAGES Phase II Task Force Report of March 15, 2004

We stress that the Director of SAGES will have authority over and be responsible for the implementation and operation of SAGES. The assessment of impact is a separate function. What is needed is a role normally played by a visiting committee. In this case the impact of SAGES will be monitored by an "internal visiting committee".

When considering the impact of SAGES on the University, some of the questions that need to be asked are:

- 1. How will the student population change? This includes the total number of applications, but also includes student demographics such as distribution between majors, geographic origin, socioeconomic status, ethnicity and gender.
- 2. Who teaches SAGES? It is desirable that the teaching faculty be distributed among the various colleges and schools and faculty ranks. Moreover, neither the untenured faculty, nor any other identifiable subgroup of faculty, should be forced to assume a disproportionate load. Unwavering commitment from all of the schools in the University is expected. The staffing must be tracked so that deviations from expectations are quickly identified and addressed.
- 3. What resources are devoted to SAGES upon implementation? Although SAGES is derived from pedagogical desires of faculty and is designed to achieve academic goals, it is staff intensive and, therefore, expensive. Fiscal models project enhanced revenues that will be more than enough to offset increased expenses, but the revenues and costs must be monitored to insure that SAGES does not threaten the financial health of the schools or University.
- 4. What is the effect of SAGES on institutional reputation? The profile not only of the University but also the individual schools and colleges will be affected by SAGES. Citations in college guides, popular press, and rankings need to be tracked and analyzed to determine how the program affects how we are perceived by prospective students, their parents, our peers in the academic world, and the public at large.
- 5. What is the effect on morale? SAGES offers the possibility for raising the level of student and faculty engagement in scholarship in a manner that results in vastly improved intellectual and personal satisfaction. Measures of student engagement and measures of morale need to be made to determine the nature (positive or negative) and intensity of the change on morale. It is important, also, to determine the range of responses, i.e., whether different identifiable subgroups are experiencing different consequences.

6. What is the effect on the rest of the undergraduate curriculum? A successful program will extend the SAGES style into other parts of the university. Evidence that can demonstrate such a trend needs to be tabulated.

The above represents only some of the ways SAGES will have impact, but it serves to indicate the required breadth of continued study of SAGES efficacy. The question is how to make such measurement and how to disseminate the information.