

President's Weekend 2.0 (9/27/91)

Introduction

I am very pleased to welcome you to this President's Weekend.

You have come to campus at a very exciting time

---and not just because of the game tomorrow

though it certainly does have the adrenalin flowing...

But you will also find intense excitement and ferment

across our campus these days--

we are changing, debating, renewing our mission.

In particular, Michigan --indeed much of higher education--

is once again focusing their attention

on the nature and the quality of undergraduate

education.

Why?

Perhaps all the recent critics from left, right and center

have struck home.

Just listen to some of the titles:

"The Moral Collapse of the University"

"Tenured Radicals"

"Profscam"

and, of course

"The Clowing of the American Mind"

Or hear a few choice quotes:

"Undergraduate education has been accused of winding down

toward mediocrity with a curriculum described as chaotic, a disaster area, or rotten to the core."

"The language of the academy is revealing.

Professors peak of teaching loads and research opportunities, never the reverse."

"The professors--working steadily and systematically--have destroyed the university as a center of learning and have desolated higher education, which no longer

is higher or much of an education."

Pretty strong stuff!

Responding to the Criticism

Some might prefer to respond to these critics
with a self righteous dismissal
of any who would question our purposes and
privileges.

And of course, there is much with which to disagree,
especially the attacks of extremists
who not only question how well we do our job
but even the very legitimacy of
the pursuit of learning itself.

But it would be a mistake to dismiss critics.

Instead, we should listen because they are reminding
us

of things we need to hear.

By questioning our commitment to
fundamental academic values,
to the education of students,
they are giving us an opportunity
for important reflection and debate
at a critical turning point
when we know that we have to do more
to prepare our students for leadership in a new
century.

And, let's face it.

There is a core of truth in the criticism.

In the past several decades the balance between
teaching and research undoubtedly has shifted.

Part of the reason is the professionalization of the
faculty

and the dominance of the disciplines
in determining faculty rewards.

So, too, the highly competitive faculty marketplace

of the past twenty years
has increased the scholarly standards
for appointment, tenure, and advancement.

This climate help to tip the scales away from teaching,
especially in allowing quantitative measures
of research productivity to overtake
more balanced judgments of overall professional
quality
including teaching.

In addition, responding to many constituent needs
and demands, universities broadened their roles
far beyond teaching and research,
to encompass far-reaching service missions
such as health care, economic development,
and social welfare.

Inevitably, this eroded the attention and resources
devoted to the core mission of teaching .

So, too, our increasingly diverse society
makes it difficult to reach a consensus
about what should be taught and who should teach
it.

This compounded the increasing specialization
of the faculty to undermine liberal arts core.

The enormous expansion of higher education
in the 1960s and 1970s undoubtedly
also overloaded the resources of many institutions.

The erosion in the quality of primary and secondary
education

forced higher education to provide remedial
instruction

--again at the expense of their core curriculum.

While these and other factors may have distorted
the focus on teaching in recent years,
let me assure you that there is no cause for alarm.

Despite the hysteria of many critics,
I don't think we need a total overhaul of
universities.

Caveat 1: The "Value Added" by an Undergraduate Education

The fact is that there is plenty of evidence
that we are doing a pretty good job
of educating our students
especially in our top research universities.

For example, if research seriously compromised
teaching,

we would expect to see broad evidence
of student discontent and failure.

But the evidence suggests the opposite.

The NSF DPRA studied matched sets of SAT and
Graduate Record Exam scores for over 53,000
students

whose 1987 GRE score could be matched by the
Educational Testing Service with their SAT score.

They sought to determine the impact of institutional
type

on the value added as measured by the difference
between GRE and SAT scores, normalizing out
other

effects such as gender, race, and UG major.

The results may surprise you:

i) The most prominent research institutions had the
highest average education quality rating
...higher, in fact, than even the most prominent
liberal arts colleges.

ii) The quality index was proportional to
...the amount of sponsored research per
faculty
...the size of the institution

...the scholarly quality of the faculty

Further, despite the fact that SAT scores have been declining

for the past 20 years, the GRE scores over this same

period for research universities have been increasing,

suggesting that these institutions are taking a somewhat

lower quality "input" and producing an even higher quality

"output".

This analysis also does not conclude that the quality of teaching is better at research universities, only that the total educational experience, including peers, intellectual environment, and role models, appears to produce baccalaureate graduates of equal or better quality than those from institutions where education is heavily stressed.

Caveat 2: Student Success

Another measure is to look at the later career achievements of students.

Here I would note that Michigan has led the nation for many years in the number of undergraduates going on to

...law school

...medical school

...advanced studies in engineering

Caveat 3: The diversity in American higher education

Higher education is comprised of over 3,500 institutions,

ranging from 2-year to 4-year to comprehensive universities to the so-called AAU research universities,

the 55 leading universities that are members of the Association of American Universities.

When the public suggests that all universities should be

primarily teaching institutions, they are ignoring the fact that the vast majority are already of this type.

Instead, they seem to want to convert those few research universities like Michigan and Harvard and

Berkeley into such institutions.

We must question, however, that if the Michigans and Harvards and Berkeleys are really doing things so poorly, then why does everyone want their children to

attend these institutions, and why do employers always

want to hire our graduates.

Caveat 4: The Response of the Marketplace

The evidence from the marketplace also says

we are doing something right because research universities continues to be the top choice for students, parents, and employers .

An analysis of studies of UG student attitudes towards their institution by type over past 30 years conducted by the University of California found that those in research universities had by far the greatest satisfaction levels.

Caveat 5: The importance of the research university

The final caveat here has to do with the importance of these

few research institutions in our society. Frequently those

who criticize research universities for teaching tend

to dismiss the importance of research without a word about the importance of this activity to our society. This fact is important, since over the past century America has chosen to assign to a selected few universities the principal role for the basic research necessary to sustain the strength and prosperity of this nation and the quality of life that we provide to its citizens.

Our great research universities have done an astonishing job of transferring their knowledge of science and technology to society at large, and done so, I might add, with a fair amount of class, compassion, integrity, and humility.

Many of the most progressive social reforms in this century also have originated in research universities.

Beyond question, the scientific research done under the sheltering arms of research universities has improved, prolonged, enriched, protected, and comforted human life.

The University College

The critics are vocal about what's wrong . How do we explain what's right about education at research universities? The best explanation for our educational success is the way we achieve an optimal blend of quality, breadth, and scale. We do a great many things,

to involve and benefit a great many people,
and to attempt to do everything very well.

The critical mass of talent,
range of knowledge, infrastructure
create extraordinary opportunities for
undergraduates
programs to exploit the creative tension
between teaching and research
--to capitalize on the incredible energy,
resources and excitement
that comes from faculty working
on the cutting edge of knowledge.

The commitment to research
means students learn more than just facts
---really, students who are attracted
to these institutions
and able to get in---
can learn facts and content pretty much on their
own.

Further, since the knowledge base doubles
every few years in many fields,
an undergraduate education must be viewed
as only the stepping stone to a process
of life-long learning.

Hence, of most lasting value
are the broadly applicable skills
and wide-ranging perspectives characteristic
of a liberal education.

The research university is able to exposes students
to the world's leading scholars,
people who are struggling every day
with creating new knowledge
as well as re- interpreting and transmitting

the accumulated wisdom of the past.

The important thing for students

is to learn methods and principles of inquiry--
methods of critical analysis and thought--
and, this research universities do well.

In addition, as a public research university committed
to public service, our students learn values of
good citizenship and public service that add
an important dimension to undergraduate
education..

To be sure, education in these research institutions
can be frustrating--even overwhelming-- at times.

It is by no means right for everyone.

But we are convinced that our students

will be well prepared for future leadership
thanks to what they learn here.

If indeed a college education is a time
of challenge, exploration, and discovery,
of curiosity and intellectual growth,
of learning about oneself,
then the research university environment
may provide the optimum combination
of learning opportunities.

Another very important advantage

of the large research universities
is the exceptional quality, size and diversity
of the student body.

Our students learn more outside of the classroom than
in it

and more from one another than from the faculty.

It's tough. It's competitive.

But it is also just plain wonderful

to bring together such a mass

of sheer talent and creativity
and watch the intellectual sparks fly.

People feel the energy the minute they set foot on campus.

Mission and scale of universities support
a rich array of intellectual experiences and resources
--conferences, lectures, performances,
museums, libraries,
computer infrastructure, facilities.

Also an extraordinary range of social and athletic activities,
and opportunities for study abroad, work/study,
internships, public service.

Campuses of research universities offer
the intellectual riches of the world in microcosm.

But here education must be an active,
not a passive process. Opportunities are not
presented
to students on a silver platter.

Students must seek them out, learn to make tough choices .

This may be hard at times, but perhaps it's one of
our greatest strengths because
our students develop through this experience
a high degree of self reliance and initiative
that will serve them well long after they leave us.

Room for Improvement

Now I don't want to leave you with the impression
that a undergraduate education
at Michigan or other top research universities
is so good that it leaves no room for
improvement.

Of course not.

We know there are problems, gaps,
plenty of room for us to get better.
Most importantly, we know that
we must consider what our students need to know
and be able to do in a highly diverse, competitive,
global and knowledge based society that is our
future.

We must meet

the challenge of change

The new century ahead will call for

knowledge, skills, and experience

very different from those needed by yesterday's

America--homogeneous, domestic, industrial,
hierarchical.

It is the educational needs of our students

that is driving our reexamination of undergraduate
education.

But our efforts to achieve revitalization and renewal
of undergraduate education

are based on the premise

that we should capitalize on our unique strengths
as a research university

and use them as the foundation on which
to build improvements.

A Michigan Education

This is the task of the most exciting effort

on our campus these days is the work
of the Committee on the Undergraduate
Experience.

Faculty, students and administrators have been
working

two years to develop a series of proposals

that will place Michigan at the forefront of national
efforts to renew of undergraduate education.

As the Committee's report points out,
the recipe for a great undergraduate education
is surprisingly simple:

- i) ambitious and inspired students
- ii) working with expert and dedicated faculty
- iii) in a setting, curricular and physical
that brings out the best in both.

The University excels in many of these characteristics:

- ...a student body of first quality, motivated
and dedicated to a complete educational
experience,
- ...a faculty world-renown as scholars and
teachers in their disciplines
- ...a setting that is complex in both its
physical layout and its intellectual diversity.

But something is missing:

To this end, LS&A has invested the efforts of over
30 faculty, 15 students, and numerous
administrators
and staff to develop a comprehensive strategy to
develop a unique Michigan approach to
undergraduate
education...the "Committee on the Undergraduate
Experience".

Among their first group of recommendations are the
following

1. Rewards for pedagogical achievement:
To reward those units distinguished by excellence
in teaching with additional resources that can be
used
both to enhance the salaries of faculty
and to improve still further undergraduate
education.
2. Enhanced evaluation of teaching:

Strong mechanisms for assessing the quality of teaching, including augmented student evaluations including graduate students and selected alumni, peer assessment, creation of teams of expert teachers to serve as a resource for teaching; the creating of teaching portfolios by faculty, and a program to assess student learning.

3. Unit incentives for the undergraduate effort:

A more formal and complete evaluation of the performance of units in regard to undergraduate education and an augmented set of unit incentives for evidence of unit excellence.

4. New preconcentration courses:

Development of new courses, that are freed from the usual stepping-stone prerequisite courses and aim to provide a general education. Each year a number of faculty would be assigned to the development and implementation of roughly 100 such courses for first- and second-year students.

5. A Michigan Education:

New liberal arts requirements: The creation of courses expressly designed for students not planning to concentrate in a particular discipline. New core requirements, including courses in writing, foreign languages, quantitative reasoning, physical sciences, life

sciences, literature, thought and meaning, social analysis,

historical inquiry, and world culture and arts.

6. A new requirement for quantitative reasoning.

The old worry over why Johnny can't read has been joined

by a more recent worry over why Johnny and Joan can't

quantify.

7. Reach-out counseling:

Greater linkage of academic programs to student life.

8. A permanent stir:

An expanded administrative concern.

Will need a reorganization of LS&A to accomplish this,

with more concentration on the first two years.

The Gateway Campus:

As students enter the University for their UG experience,

they are immediately thrown into the complexity of

a large and decentralized learning environment.

They do not pass through a self-contained physical environment or program that introduces them

to the resources of the University and to the potential

they have to explore the world of ideas and knowledge.

Hence, a key priority of the upcoming capital campaign

will be a new campus... ..the Gateway Campus...

aimed at enhancing the quality of the first two years

of the undergraduate experience.

The Gateway Campus offers an opportunity
to create an undergraduate faculty
that spans the disciplinary units that will teach in it.

The Center for Undergraduate Education,
to be housed in the Gateway Campus,
is meant to break the barriers separating the
disciplines
and to encourage courses and interaction
among students and faculty that will contribute
to a student's general education
not to disciplinary specialization.

The buildings that house this function
will not only enable such courses in classroom
facilities,
they will also emphasize the totality
of the educational experience,
utilizing classrooms surrounding by study areas,
work spaces, and varied programs and services
that are both attractive to and needed by younger
students.

A unique feature of the Gateway Campus
will be its objective of introducing students
at the earliest opportunity to the University's
rich resources of cultural and physical collections.

To this end, we intend to integrate
the present Kelsey Museum of Archaeology
and the Museum of Art into a structure
that will be the center of the Gateway Campus,
thereby exposing students to important collections
of cultural artifacts and works of art.

These resources, coupled with the collections
of the adjacent Museum of Natural History,
will provide an intellectual gateway
symbolizing for entering

students the wholeness of knowledge .
Further, this unique integration
of our principal exhibit museums with the focal
point
of undergraduate education will provide unusual
resources
to the University and the broader community
by virtue of the accessible location and design.

As a cornerstone of the Campaign,
the Gateway Campus is not only a set of structures
and programs, but it will become a vital
passageway
inviting both students and community members
to experience and benefit from the resources
of a great teaching and research university.

Some Personal Observations

As I see it, the CUE effort--
and similar efforts underway at peer institutions--
are really aimed at a basic ground up renewal
of undergraduate education
in the modern research university.

From this perspective,
we are really engaged in a decade long process.

The important thing, therefore,
is to keep the process going forward.

Just as with the Michigan Mandate,
I believe that the PROCESS should be our focus now
(with somewhat less concern
about just which particular sequence
of actions we choose).

With the appropriate process in place--
which also involves the having right people--
it is amazing how rapidly things get done.

Hence, let me suggest several "process-stimulation" ideas:

Nothing gets a faculty more involved than

a debate about curriculum.

Hence, an excellent way to draw broad elements of the faculty--both in LS&A and in other schools with undergraduate programs--into the fray is to begin by proposing some real blockbuster actions

for consideration (e.g., a dramatic reduction in "pyramiding" courses, requiring all concentrations

to move to a 25/25/50 model in which concentration

requirements (and prerequisites) can only occupy 50%

of the program, core requirements 25%, and the remaining 25% for the "liberal education", a requirement that all students demonstrate mastery (not just take courses) in key areas such as

quantitative reasoning (probably through calculus),

foreign languages, a specific science

(at least to upper-class standing), and so on).

While the reports are focused on LS&A, it is

terribly important to move at a certain point to make

the discussion University-wide-- not only from the perspective of serving students from all UG programs, but from that of asking faculty from all S&C to teach in CUE. Just imagine the impact of Francis Collins or Lynn Conway on first term freshmen! I believe that most faculty would really get a kick out of a direct involvement

--and would probably do so, with appropriate encouragement, even on a volunteer basis!

(In my dark past I actually volunteered myself to teach freshman courses occasionally as an overload and found it to be a real blast!)

And, although I risk sounding like a science/technocrat,

I become more convinced with each passing day that

in 20 or 30 years our undergraduates are going to look back and curse us for allowing them to enter

the brave, new world of the 21st Century totally illiterate in science, mathematics, and quantitative reasoning. Like it or not, this knowledge

is becoming the coin of the realm in all advanced societies, and those that can comprehend and apply it will

lead... and the rest will follow. Sorry to be so outspoken

about this, but it is clear that most other nations have

recognized this and are rapidly restructuring their higher

education systems accordingly. America seems increasingly alone in focusing only on "half" of a college

education. While taking one course each from the physical, life, and mathematical sciences is a step forward, it is still far from where we are going to have to

end up. I always like to remind folks that over a century

ago, Harvard required all undergraduates to take
25% of
their coursework in science and mathematics!
(And, of
course this was not only before the industrial
revolution,
but over a century before "the age of knowledge"
that our
students will face.)

Conclusion

Well, I have probably gone on too long.
Put it down to my enthusiasm and excitement
about what we are doing, where we are going.
Emerson said in an address at Harvard
almost exactly 150 years ago
"Colleges have their indispensable office, to teach
elements. But they can only serve us when they
aim not to drill but to create; when they gather
from far every ray of various genius to their
hospitable halls, and by the concentrated fires,
set the hearts of their youth aflame..."
I think that sums up Michigan's educational aspirations
wonderfully well.
I hope I have given you a sense of the educational fires
we are igniting in our students here in Michigan.