

Undergraduate Education

Introduction

Across the nation, colleges and universities are once again focusing their attention on the nature and the quality of undergraduate education. Perhaps goaded on by the criticisms from the right--Allan Bloom and William Bennett, or the criticisms from the left for new styles of learning based on nonwestern cultures and new forms of thought such as feminism, liberation theology, and so on. Or because of the recognition that the spectre of an abrupt decline in the number of high school graduates as our nation slides down the backsides of the post-war baby boom which threatens our supply of outstanding students. Or, perhaps simply because of the cyclic nature of these concerns, which seem to rise once again to the top of our agenda every decade or so. In November, 1986 I had the pleasure of attending the Conference at Harvard when Ernie Boyer introduced the Carnegie Foundation report on the undergraduate experience in America. Interestingly enough, only a very small handful of the invited participants were from public research universities such as ours. On several occasions I was cornered in the halls and asked by my colleagues: "Why is Michigan here? You people aren't concerned with undergraduate education, are you?"

In fact, it was this perception--rather, misperception--of the role of the research university in undergraduate education that disturbed me more than any of the other issues raised by Dr. Boyer and his colleagues. Indeed, even our own undergraduates feel this way. In our 1986 Enrollment Decision project, we found that both those students that choose to come here, and those that go elsewhere, believe that undergraduate education is a low priority of the University.

The Myth and the Reality

We all know the popular myths.

When one thinks of distinguished private institutions such as Harvard and Yale, one thinks first of Harvard College and Yale College, their superb undergraduate colleges, since these are perceived as both the focus and intellectual soul of private higher education. But what do you think of first when someone mentions Michigan or Michigan State, or Minnesota or Ohio State. Football, perhaps? Fraternity and sorority life?

Actually, I suspect that one first tends to think of the commitments that these great public universities have made to the professions, to their schools of law and medicine, engineering, and agriculture. We also might recognize the responsibilities of these institutions to serve the public and about their great research programs. But, few of us would think first about their commitment to undergraduate education.

Rather, the image of undergraduate education in large public universities such as ours is one of thousands of students wandering in and out of large lecture courses in a random fashion, of courses taught by foreign teaching assistants, attended by students on their way from their fraternity or sorority house to the football stadium. We think of undergraduate students in these institutions as identified only by their I.D. number until the time of their graduation, where they are asked to stand and be recognized along with thousands of other fellow graduates.

Let us look beyond the myth at the reality for a moment, however:

- (1) Well over half of the students on the campuses of major public universities are undergraduates. Indeed, at Michigan we enroll over 18,000 undergraduates in our liberal arts college--which makes it the largest commitment to liberal arts education in any university in the nation.
- (2) By essentially any measure, the undergraduates on our campuses today are our strongest students--just as they are at other highly selective institutions such as Harvard, Yale, and Stanford. For example, this fall our average entering freshmen will rank among the top 3% of high school graduates. Indeed, over 1,000 of our entering freshmen will have graduated in the top 1% of high school graduates. Hence, whether measured by quantity or quality, the significant fraction of our efforts are--or at least should be--focused on undergraduate education.
- (3) The intense competition for admission to our undergraduate programs and the attractive marketplace for our graduates suggest that we must be doing something right. For example, at Michigan applications for admission to our freshman class have been increasing at a rate of about 10% per year for several years, despite the well-known demographic decline in the number of high school graduates. This year we received over 19,000 applications for the roughly 4,500 positions in our freshman class. Furthermore, the demand for our graduates continues to increase, whether from employers, professional schools, or graduate schools.
- (4) Although we have all seen studies such as the one released by the Oberlin group suggesting that small liberal arts colleges are the key sources of students for our graduate and professional schools, the facts suggest otherwise. Recent studies by the National Science Foundation have confirmed that the largest source of professionals, of scholars, of leaders of our society, are our

large, comprehensive, public research universities. Indeed, at Michigan we have led the nation for many years in the number of our undergraduates who go on to professional careers such as law, engineering, and medicine. But this should not be too surprising, since the impact of our programs is generally dependent on both the quality and number of our graduates.

Therefore, let us set aside both the myths and the realities for the moment and address the most critical questions of all:

- (1) What is the role of the comprehensive research university in undergraduate education?
- (2) How effective are our research universities--in particular, our great public research universities such as the University of Michigan--in responding to the challenge of undergraduate education

What we are...and what we are not!

What is unique about our universities? What is our "market niche"? Well, we are all large, comprehensive, public, research universities. We all share a serious commitment to scholarship as well as a commitment to unusual breadth across a rich diversity of academic disciplines, professional schools, and social and cultural activities. We have all achieved an unusual degree of pluralism in our students, faculty, and staff. Our campuses demonstrate an unusual degree of participation of faculty and students in the university decision process. And we all share in an unusually strong commitment to the quality of our students, our faculty, and our programs. In a sense, the strength of our institutions depends upon our efforts to achieve an optimum blend of quality, breadth, and scale. We attempt to do a great many things, to involve and benefit a great many people, and we attempt to do everything very well. Furthermore, we attempt to achieve a balance among teaching, research, and service, as well as undergraduate education, graduate education, professional education, and faculty scholarship and development. It is important to note that we do not view achieving this balance as a conflict between competing goals. Rather we view it as an opportunity to exploit an important creative tension. It is this blend of missions which provides our research universities with such a unique environment for undergraduate education. We are not--nor should we try to imitate--a small liberal arts college, with a faculty chosen primarily for their teaching skills, and with a curriculum limited both by design and resources. Rather, we are a large, comprehensive university, spanning almost every intellectual discipline and profession. We have the capacity to attract and sustain many of the world's leading scholars. We provide intellectual resources unmatched elsewhere in our society, whether in the extent of our library and museum collections, or in the laboratory facilities we provide, or in the exotic new tools of our intellectual trades ranging from supercomputers, to the sophisticated equipment required for solid state electronics and recombinant DNA research, to the expensive instrumentation used for positron emission tomography in our medical centers.

This suggests that research universities can and should play a very unique role in undergraduate education:

- (1) We should provide our undergraduates with an experience which draws on the vast intellectual resources of the modern research university: its scholars, its libraries and museums, its laboratories, its professional schools, its remarkable diversity of people, ideas, and endeavors.
- (2) We should expose our students to the excitement of great minds struggling to extend the bounds of knowledge. Of course we recognize that the scholars we place in the classroom may not always be the best teachers of knowledge in the traditional sense. But research universities benefit from the presence of a cadre of excellent, stimulating teachers, and we are convinced that only by drawing into the classrooms faculty with strong commitments to scholarship can we stimulate our students to develop the skill at inquiry across the broad range of scholarly disciplines that is so essential to life in an age of rapidly expanding knowledge.
- (3) We should develop in our students both the ability and will to strive for knowledge. We believe that a critical component of an undergraduate education in a research university is the development of the will to seek and the skill to find.
- (4) We should expose our students to the diversity, the complexity, the pluralism of peoples, cultures, races, and ideas that can only be found in the intellectual melting pot of the modern research university.
- (5) And we must also accept our mission to educate the leaders of American society. Indeed, if past experience is any guide most of the leaders of this nation will continue to be produced by our great research universities.

Improvement of the Undergraduate Experience

Of course, for several years, long before the Carnegie Foundation Report, there has been a resurgence of efforts to re-examine and improve undergraduate education in our public research

universities. Indeed, every major university with which I am familiar has had some level of activity aimed at examining and enhancing the quality of undergraduate education underway for some time.

Why the recent focus in our institutions on undergraduate education? Well, I suppose one might explain this by saying that curriculum reform is cyclic, and the pendulum is now swinging back after the permissiveness of the 1960's. One might also suspect that market forces are at work. We are all too aware that the population of high school graduates will drop in this part of the United States by 25-30% by the early 1990's. There is nothing like a demographic crunch to stimulate educational institutions to improve their product.

However, perhaps there is a higher motive to these actions. I noted earlier the remarkable quality of students now entering our institutions. Perhaps our renewed focus on undergraduate education is evidence of our efforts to be a more responsible steward of these extraordinary human resources. Then, too, it might be in part our efforts to respond to the complexity of the problems of modern society.

It is also true that the focus on undergraduate education may be part of a long needed rebalancing of the priorities of our institutions. For several decades, indeed since World War II, most of our large public research universities have focused their attention on building strong programs in the professions, in law, medicine, business, engineering, and agriculture. Perhaps this was due to a sense of public responsibility. Or maybe it was due to the demand from students for these programs, or the demand from employers for our graduates. But, whatever the reason, it is probably true that most of us have invested the lion's share of our resources for many years in the professions at the expense of the quality of our undergraduate programs.

Yet, as our colleagues in the private institutions have known for so long, the cornerstone of any distinguished academic institution is its undergraduate college. This college, and those intellectual disciplines that derive from these programs, form the academic soul, the intellectual core of our institutions, and over a period of time will determine both the distinction of the institution as well as the strength of its other endeavors in the professions, in research, and in service.

Therefore, it is important that we realize that what is happening is not a revolution. Indeed, we do not need a revolution in undergraduate education, because by and large, our universities are already doing a very good job. Rather what we need is a renewal, a renewal in our commitments to quality in our undergraduate education, stimulated by our sense of responsibilities to our students and society, and by our aspirations for excellence.

Themes of the Past: From Bloom

to Bloom County...

It has become fashionable to launch slings and arrows against the undergraduate experience in American colleges and universities. Allan Bloom, in his best selling book, *The Closing of the American Mind*, proclaims that the American university has succumbed to relativism and abandoned its purpose and principles. In attempting to embrace openness and freedom, the university has allowed "radical subjectivity of all belief about good and evil" to dominate its curriculum. By consenting to play an active, participating role in society, Bloom claims that the university has become inundated and saturated with the backlog of society's problems. The classical curriculum that used to aim at providing students with the knowledge of the great tradition of philosophy and literatures necessary to become aware of the order of nature and one's place in it has been replaced by a "democracy of disciplines" that offers no university-wide agreement about what a student should study.

So too, former Secretary of Education William Bennet longs for a return to the yesterday of college education, with a new stress on moral education: "Students deserve a university's real and sustained attention to their intellectual and moral well-being."

Undergraduate Education

for the 21st Century

The debate over the character of undergraduate education general focuses on several philosophies of instruction:

The Great Books Approach: Here the goal is to transmit a defined body of learning to the student, as captured in the great works of human thought. As Bloom puts it, "Philosophy and liberal studies, in general, require the most careful attention to great books. This is because these are expressions of teachers such as we are not likely to encounter in person, because in them we find the arguments for what we take for granted without reflection, and because they are the sources of forgotten alternatives."

Methods of Understanding and Inquiry: In this approach, one stresses an acquaintance with the principal ways by which the human mind apprehends the world, i.e., methods of

understanding and inquiring about literature, art, moral philosophy, history, economy, and society, as well as natural sciences. This approach to liberal learning looks upon undergraduate education as a foundation to provide students access to many fields they can pursue later in life.

Distribution and Breadth: In this approach, one achieves breadth by requiring students to take a certain number of courses in each of several diverse categories, such as the social sciences, natural sciences, humanities, and arts. This philosophy assumes that different disciplines have separate and valuable ways of apprehending the world and that requiring students to sample a wide variety will suffice to broaden their minds.

Of course, in practice most undergraduate programs combine aspects of all three methods. Furthermore, most would agree that the undergraduate curriculum should seek a common set of goals such as those articulated by Rhodes:

1. The ability to read, write, and speak with clarity, precision, and grace, and to understand and articulate not only the facts, but the nuances and shades of meaning.
2. The habit of disciplined inquiry, the ability to delve deeply, systematically, and thoroughly into new subject areas.
3. The understanding of times and cultures other than our own.
4. An appreciation of nonverbal and nonquantitative expression, including those of the creative and performing arts.
5. An indepth study of one chosen area to develop an appreciation of the methods, boundaries, relationships, limitations, and significance of a specific discipline
6. Through a wide-ranging perspective of the world at large, develop a sense of the context--physical, biological, social, historical, and ethical--in which students will live their lives.

As Derek Bok, President of Harvard, puts it, the most important product of an undergraduate education in a changing, fragmented society may be "a critical mind, free of dogma but nourished by humane values". To achieve this, we need a new spirit of liberal learning, one that strives not just to impart the facts but to encourage and support our students to develop some philosophy of life.

The Michigan Initiatives

At Michigan for the last several years the larger undergraduate programs in our liberal arts college, engineering, and business administration have completed major blue ribbon studies re-examining the undergraduate curriculum. These have resulted in a great many suggestions about both academic and extra-curricular actions to improve the undergraduate experience. However, we also recognized that an institution-wide effort was necessary. Therefore, we set off on a course over a period of several years to launch a series of initiatives aimed at sustaining and enhancing the vitality of our undergraduate programs. To fund these, we have set aside over \$1 million per year to fund a series of initiatives aimed at improving the quality of our educational programs. Many of these initiatives will be determined through an open competition in which students, faculty, and staff compete for funds. We are interested in stimulating a wide range of experiments designed to improve the quality of undergraduate education. We are looking for good ideas, but we are also prepared to make the base commitments to support successful ventures.

The common thread throughout these initiatives is grass roots involvement. We seek proposals, ideas, and participation in defining programs, from our faculty, students, and staff that will address excellence in undergraduate education. We seek to invest resources in a way that will motivate our most creative people to become involved and to become committed.

We have completed the first series of awards in these programs. They will result in an interesting portfolio of new initiatives. We will be developing a new series of core curriculum courses in the liberal arts. Our instruction in science and mathematics in the freshman and sophomore years will undergo major revision. We are implementing new initiatives aimed at better integrating the arts such as theater, dance, and music into the undergraduate curriculum. We are taking major action to improve both counseling and the importance and sensitivity to pluralism in the University. And we have funded a number of student proposals, ranging from undergraduate colloquia to faculty fellow programs in the residence halls, to online counseling and information services on our campus computer network, to an alternative career center. And of course we are addressing major pedagogical needs such as teaching assistant training.

The major areas of attention during the first round of awards included

- i) promoting critical thinking and writing skills
- ii) Creating a new spirit of liberal learning
- iii) Promoting acceptance of pluralism and diversity
- iv) Promoting improved faculty-student interactions

As we now move to the second phase of our effort, we are moving away from open solicitation of proposals to working instead directly with the schools and colleges. Among the areas of particular interest are:

- i) The unique nature of undergraduate education in the research university
- ii) Linkages to the graduate disciplines and professions
- iii) Enriching the intellectual life of undergraduate students
- iv) The role of the sciences in a liberal education.

We have taken many other steps to raise undergraduate education to a higher priority within the University. For example, we established a series of named professorships, the Thurnau Professors, to honor faculty with extraordinary achievements in undergraduate education. We have launched a series of renovation and new construction projects to improve the quality of instructional space on campus, including renovation of the Undergraduate Library, all Central Campus classroom space, a spectacular central faculty for computer access (including over 400 workstations). We have launched a commission to study ways of better integrating academic programming into the residence hall environment. And we are restructuring our full range of student services to integrate them more effectively into the academic life of the university. Of course, we realize in an institution of such size, complexity, and tradition, those of us over in the blockhouse will have little capacity to define, redirect, or reorder the priorities of the University. The articulation and achievement of any mission must be a communal effort. It will rest with faculty groups in and across schools and colleges; with students inside and outside their formal organizations; with professional and other staff throughout the University. Hence, the role of the leadership of the University is simply to generate the debate and then to provide resources for continuous experimentation. □