

Why Is a Liberal Education So Elusive?

In view of the enormous impact of science and technology on the human condition and the insights that science brings to an understanding of the world, these subjects occupy an astonishingly marginal place in a liberal education. This deficiency surely contributes to the disjunction between scientific consensus and political will on issues as diverse as stem cell research and global warming. For 50 years, federal support for basic research within U.S. universities has made our graduate education, postdoctoral training, and research accomplishments the envy of the world. No one wishes to see this outcome changed. But the process has also created competition among universities for research-based reputation, with deep-seated consequences for the education of undergraduates.

1) Universities have actually ceded some of their autonomy to outsiders by letting individuals at other institutions certify their faculty members' research accomplishments in the context of appointments, promotions, and grant funds. That practice deemphasizes other institutional needs, and universities do little to provide incentives for faculty to meet those missions that lie beyond research.

2) In the words of John Sexton, the president of New York University, "we have encouraged, nurtured, even indulged the notion of the faculty member as an independent contractor—a person who does what he or she wants, when he or she wants, with little formal obligation."

3) Time is a precious commodity for faculty. Discussions of curriculum are often limited to who "covers" what, an approach more suited to barn painting than to education. There is little or no discussion while planning what students should know and subsequently no searching exploration of how we discover what they have learned.

4) Lecturing is a faculty addiction, sustained by high ratios of students to teachers; it is the form of "distance learning" that's already here! But for students whose world view is very different from the instructor's, more individualized contact and more imaginative access to student feedback may be essential.

5) A sharp dichotomy exists between the effort given to mentoring graduate students in research and that given to mentoring them as future educators. This is hardly surprising, since faculty are products of the same educational system.

6) The focus of faculty searches is research promise, with little or no attention paid to the educational needs of undergraduates.

7) The increased specialization of graduate education has seeped into the education of undergraduates. Many instructors are unwilling to teach outside of their specialized area of research. This poses a particularly acute problem for the many students who want and need to understand the connections between areas of knowledge.

Change must come from within the academy, and in a way that spares the health of the research enterprise. But it will be difficult: The diversity among institutions and their independence of spirit will limit unilateral action, and outside agents lack the necessary authority, let alone wisdom, to address the issues usefully. Adding palliative assessments of teaching to the tenure review process, however, does not begin to recognize the scope of the challenge. What is needed is akin to a cultural change within the university.

Unfortunately, the necessary conditions for implementing that change do not now exist. Faculty will correctly see such commitments as time-consuming, and many will feel little or no incentive to engage. Administrators will not wish to put their institutions at a competitive disadvantage. Improving the education of undergraduates will therefore require changing the internal incentive structures of our institutions. Relating the allocation of faculty slots to solid evidence of collective departmental commitment to educational excellence is but one possible example.

Consider a shared vision of educational professionalism, encapsulated here in an approach to new hires. Everyone would convey a collegial commitment to student learning. We are interested in your research, but we are equally interested in your thoughts about teaching, and we want you to become part of our ongoing experiment in how to facilitate learning. We have a collective responsibility to a wide group of students, many of whom have emerged from their high-school experience with intellectual antibodies to science. As tomorrow's citizens, they represent a challenge no less important than the smaller number of students who will major with us. This kind of reformulation would go far to accomplish not only a needed rebalancing of research and teaching but a restored sense of collegiality as well. Because that vision is so central to the very concept of the university, it should engage us all, and leadership will be essential.

Timothy Goldsmith

Timothy Goldsmith is in the Department of Molecular, Cellular, and Developmental Biology at Yale University, New Haven, CT.