Education Reform

A supplement to The Tech — Tuesday, April 20, 1988

Editorial

"Scientists, supercomputers, guidance systems, excellence..." These words inevitably surface as we discuss the role of our education. Phrases such as "socially sensitive engineers" and "leaders of a technology-based world" fail to take on real meaning.

Everyone agrees that MIT offers an unsurpassed education in science and engineering. Nobody wants to change that. Yet something more is needed. We need to look at what students gain from their education, as well as what their impact is on the world.

The effects of technology on society, broadly defined, cannot be an afterthought to our endeavors," proclaims the Long-Range Plan written by top MIT administrators. The world has become acutely aware of the limits of its resources and the interdependence of its parts in the last few decades.

In this context, it is impossible to design a device or perform an experiment without understanding why someone is paying for it and what impact it will have on society. Asking and answering these questions should come naturally for MIT graduates, who are supposed to be leaders and planners. If it doesn't, something is wrong.

MIT is a university polarized around science, said former President James R. Killian, Jr. '26, thirty years ago. That means it should offer the resources of a university to a student body primarily interested in science. But how can it do that? It must among other things broaden its students' interests without dictating them, provide a balanced education while still allowing some elective choice, and encourage diversity in its student body.

The faculty has shown sincere interest in hearing student views on curriculum reform. Few students, however, have actively participated in the forums and discussions sponsored by the committees studying the undergraduate program. The apathetic deserve part of the blame for any shortcomings in their education.

The goal of this supplement, then, is to stimulate the minds of the MIT community. The discussion of educational reform is by no means over. In fact, students' chances to contribute are expanding as more committees seek student members and student comments. This education reform supplement contains many perspectives on what an MIT education is and what it should be. We hope that members of the community critically examine this issue and then speak up. It's an opportunity we can't afford to miss.

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courtesy MIT News Office.

Evolution of the reform movement

Fall 1984: Dean of Engineering Gerald L. Wilson '61 and Dean of Humanities and Social Science Ann F. Friedlander initiate discussions between the councils of their respective schools in the fall of 1984.

January 1985: Wilson and Friedlander establish two investigative committees: Travis K. Merritt, director of graduate humanities, is charged with studying the history of MIT's humanities requirements and comparing it with other schools; Professor Kenneth Kincaid is charged with suggesting possible models for the role of the humanities in a technical education.

February 1985: John M. Deutsch '61 named provost.

April 1985: Deutsch creates the positions of Associate Provost for Educational Policy and Programs [R. Jay Kenyon, head of the Department of Linguistics and Philosophy] and Dean for Undergraduate Education [Margaret L. A. MacVicar '65, director of the Undergraduate Research Opportunities Program].

April 1986: Committee on Educational Policy (CEP) proposes new regulations limiting the number of subjects that undergraduate major programs may require, prompted by concern that students were expected to take too many courses at the same time. The committee forms a Faculty Policy Committee to address general issues of interest to the faculty and a Committee on the Undergraduate Program to give an individual attention to education.

May 1985: The faculty approves both of the CEP's changes.

May 1985: Two dozen faculty attend a weekend meeting at the Woodstock Inn in Vermont to go over the Merritt and Keniston reports and raise further issues. They agree to form two more committees — one to fashion a new humanities requirement, the other to compose a possible curriculum teaching "dual literacy." Pauline Maier is chosen to lead Humanities and Social Sciences (HASS) committee, and Leo Marx to head the Committee on Integrated Studies (CIS).

Summer 1985: HASS committee and CIS begin meeting.

Summer 1985: Undergraduate Association (UA) President Byron R. Moore '85 revives the inactive Student Committee on Educational Policy (SCEP) and meets with MacVicar, persuading her to recommend that the faculty committees include official student members.

October 1985: Wilson and Associate Dean of Engineering Jack L. Kerrebrock establish the Commission on Engineering Undergraduate Education (CEUE), and Professor Robert Silbey puts together a School of Science committee to evaluate the Institute's general requirements in physics, calculus and chemistry.

October 1985: MacVicar's committee announcing that it would take a student member; the others also eventually agree to student representation.

October 1985: The Chronicle of Higher Education reports that the undergraduate program at MIT produces fewer business executives than other nationally prominent schools.

January 1986: Meier committee issues recommendations proposing changes in HASS requirements. Each student should take one course in socio-cultural studies, historical studies, literary and philosophical studies, and the arts. A new Institute requirement seminar entitled "The Context of Science and Technology" was also proposed.

February 1986: CEUE releases the "Goals of Engineering Education." The report reads, "Undergraduate education in engineering at MIT should prepare students for leadership in technology and for professional excellence, through an education in science and engineering, with an emphasis on fundamentals, in essential partnership with the social sciences and the humanities, for the advancement of engineering and the betterment of society."

March 1986: CEUE issues interim report. Report explains eight objectives of an engineering education, including a foundation in the sciences, acquisition of skills for self-education, design experience, communication skills, study of social issues of technology, and an understanding of the humanities.

March 1986: Interim Report of the Committee to Design an Integrative Curriculum in the Liberal Arts calls for the creation of a College of the New Liberal Arts, within which the Institute would integrate the study of the humanities and the sciences. The program is necessary to create "a distinctive intellectual community" at MIT. The proposed Bachelor of Science and the Arts degree would be "unique in American education." Committee Chairman Max Oreskes states MIT will accept the recommendation.

March 1986: CUP issues initial report. MIT needs to face the paradigm in undergraduate curriculum, the report states. MIT's "historic commitment to a broad-based education for all undergraduates...is...not manifested clearly in the current educational program." Institute requirements should emphasize general education rather than pre-professional preparation, the paper continues.

Harold A. Stern