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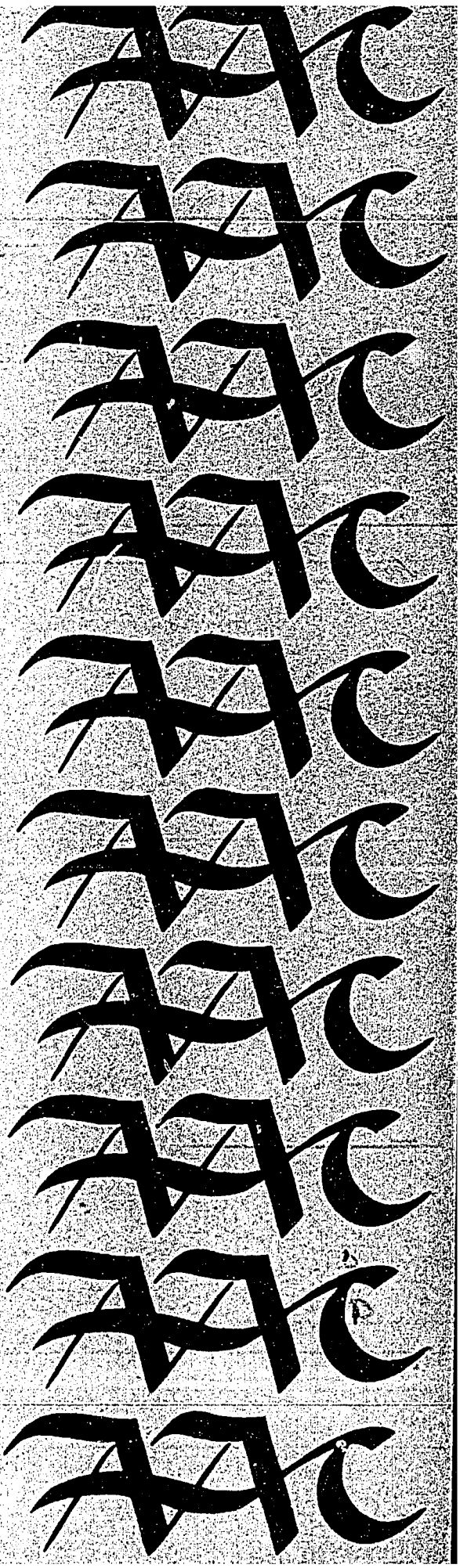
ABSTRACT

The third in a series of reports on AAC-sponsored dialogues on liberal learning is presented. This dialogue, focusing on the role of liberal learning in professional education, was designed for both teachers and administrators representing a variety of colleges of business, engineering, fine arts, and the health sciences. In the first case study, the Worcester Polytechnic Institute's revised engineering and science curriculum, called the WPI PLAN, is described. It attempts to prepare students for real-world problems and stresses the integration of the humanities and social sciences into the engineering curriculum. A second case study describes the involvement of Tufts University and the health services professions. Tufts encourages the maximum cross-registration of students in its various colleges and programs by making crossovers between professional- and liberal-oriented courses as easy as possible. New programs like the Community Health Project mix traditional academic courses with off-campus courses and projects that expose liberal arts majors to professional work. In a third case study, Babson College focuses on increased integration of liberal arts and management studies. Three liberal arts-related majors have been introduced (society and technology, communications, and American studies) that integrate the humanities to real-world problems. (LBH)

A DIALOGUE ON

Liberal Learning in Professional Education



A DIALOGUE ON LIBERAL LEARNING IN PROFESSIONAL EDUCATION

held at

Worcester Polytechnic Institute

Worcester, Massachusetts

22-23 November 1976

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FOREWORD

In pursuance of the reoriented mission of the Association of American Colleges -- the National Association for Liberal Learning -- as mandated by its members at the annual meeting of 1976, the Association initiated in the fall of that year a series of invitational dialogues on various aspects of liberal education.

Five such dialogues were conducted in October - December 1976, with the help of host institutions in different parts of the country. Additional dialogues, addressed to the distinctive concerns of the several kinds of institutions of higher learning that make up the Association's present and potential membership, are planned for the near future.

This pamphlet summarizes the proceedings of one such dialogue, held on November 22 and 23 on the campus of Worcester Polytechnic Institute, Worcester, Massachusetts. The dialogue, Liberal Learning in Professional Education, was designed for the benefit of an important sector of the American academic community. The participants were some thirty-eight men and women -- both teachers and administrators -- representing a variety of colleges of business, engineering, fine arts and the health sciences. Some of these colleges are four-year institutions; others represent colleges within the larger university complex. Ten of the institutions are in Massachusetts, two each are in New Hampshire and New Jersey, one each in Connecticut, Rhode Island, Vermont and New York.

The Association of American Colleges is deeply indebted to President Hazzard and his colleagues of Worcester Polytechnic Institute for their warm hospitality and their skillful organization of the dialogue. Special thanks are due to Professor Lance E. Schachterle, of the Department of Humanities, for his lucid and lively reporting. We hope and believe that his report will prove illuminating to other colleges as they grapple with the problems of liberal education in professional training. We hope that it will encourage them to repeat, or rather extend, the dialogue so auspiciously begun. If so, it will make an invaluable contribution to AAC's mission of promoting and enhancing humane and liberating learning.

Frederic W. Ness
President
Association of American Colleges

INTRODUCTION

President George Hazzard of WPI opened the first New England regional dialogue of the Association of American Colleges by welcoming the participants and briefly explaining the history of the sponsoring organization, the Association of American Colleges. President Hazzard stressed the importance of the participants exchanging ideas freely, as a contribution to the new direction and goal of the AAC. He then introduced Dr. Regina Kyle, Director of Program Development at AAC; Miss Kathleen McGurl, Executive Assistant of the AAC; and Dean William Grogan of WPI, who presented the first case study.

CASE STUDY I: THE WPI PLAN FOR ENGINEERING

Summary

In 1970 WPI adopted the WPI PLAN, a complete revision of its traditional engineering and science curriculum. The PLAN based graduation upon four degree requirements rather than upon course accumulation or distribution requirements. By emphasizing project work in three of the degree requirements, the PLAN attempts to prepare students to encounter the kind of "real-world" problems professional scientists and engineers must deal with. The PLAN also stresses the integration of the humanities and social sciences into the engineering curriculum by mandating that two of the four degree requirements encompass disciplines outside the student's technical major.

Dean Grogan divided his report into three parts: 1) a history of the process of change which led to the PLAN, 2) the implementation of the PLAN, and 3) the role which the liberal arts plan in PLAN education.

History of the PLAN

In its first century the conventional and rigid WPI curriculum required only two decisions of students: 1) determination of major field, and 2) selection of a few electives in the senior year. The revision of this prescribed program

began not out of a sense of crisis but because the faculty increasingly realized that an inflexible academic program was inappropriate to developing in students the flexibility and creativity which professional careers required. Traditional classroom lecturing not only placed students in a passive role, and exercised little of their originality, but also offered no opportunities to learn to work together and to communicate with others. Furthermore, traditional engineering and science education never required students to integrate material acquired in separate courses in the way expected of professionals. Students for their part often found the middle two years of their education static and boring, and significant numbers dropped out. In summary, the traditional program lacked a sense of purpose. Students were expected to develop as creative thinkers in their disciplines by taking a standardized sequence of courses whose pedagogical merit was never questioned and whose value in encouraging originality was doubtful.

In 1969 a faculty-elected committee considered WPI's future by means of an intensive examination of the faculty, students, alumni, trustees and administration. This committee (most of whose members were engineers and scientists long associated with WPI) examined educational systems throughout the world, and paid close attention to the numerous suggestions for academic changes from the 1960's. Working closely with students and alumni, they constructed a model for WPI which optimized all the best features of the educational systems they inspected, within the constraints imposed by WPI's resources and projections of future trends in higher education.

This preliminary model contained two suggestions which aroused much debate. First, it proposed that traditional departments be replaced by freer administrative structures more responsive to curricular patterns. Though Dean Grogan still advocates this approach to administration, he

admitted it was "too much" for most of the faculty. It was subsequently dropped. Secondly, the model contained an "operational chart" for administering the new educational program. Dean Grogan confided that this chart was a tactical mistake; the faculty immediately began guessing what real-life names would fit the slots on the chart instead of criticizing the chart in the abstract. It too was dropped from the final PLAN.

After these revisions the final PLAN was presented to the faculty in spring 1970, and passed by a two-to-one vote. Furthermore, the faculty decided to commit the entire campus and all its resources to the PLAN rather than beginning more modestly with a pilot program. The wholesale commitment to the new program was probably crucial psychologically; there was no way to "turn back" and the whole faculty realized that implementing the PLAN was necessary for the college to continue.

The specific degree requirements of the PLAN were chosen to implement the three-part 1969 statement of the "Goals" of the college: 1) from the beginning of college, students must learn how to learn on their own, 2) they must demonstrate the ability to translate learning into worthwhile action, 3) they must integrate basic knowledge, technical expertise and an awareness of human and social needs. The four PLAN degree requirements translated these goals into effective learning devices: 1) a Competency examination and 2) a Major Qualifying Project (MQP) in the major field assessed ability in the technical discipline, while 3) an Interactive Qualifying Project (IQP) and 4) a Sufficiency or minor in humanities tested learning in the social sciences and the humanities per se as well as in their relation to technical studies. Though traditional lecture courses were still considered pedagogically efficient, merely passing a set number of them was not in itself a degree requirement. (Dean Grogan noted, however, that in its one major compromise with the original

PLAN the faculty voted an amendment that students had to pass three years work in courses or projects before taking their Competency examinations.)

Implementation

By 1976 the entire education system of the PLAN had been put into effect, though constant revision and response to new conditions make a "steady-state" operation unlikely at any time. Students, faculty, and placement personnel have grown used to the PLAN two-step passing grade system (one passing grade, one distinction grade). Failure in courses is not recorded; experience suggests that the absence of one or more courses from the student academic report is at least as effective a deterrent as the traditional "F." A "not acceptable" grade is used in project work, to emphasize its seriousness; but the grade is rarely used since students work very hard to avoid so severe a censure. The absence of a QPA and a student rank system has also been accepted by students and their recruiters.

The length-of-term reorganization at first caused serious discomfort. The PLAN specified four seven-week terms, two in the spring and two in the fall, with an optional fifth seven-week term for summer school. This format was designed to make the grouping of students in project teams more flexible, and to facilitate 100% time commitment to project work off-campus. However, the reorganization of courses did not always occur smoothly; some faculty attempted to cram all of their former 14 week course into a seven-week format. Genuine difficulties appeared in some courses which require a time period of longer than seven weeks to assimilate abstract conceptualization. WPI compromised to make fourteen-week courses (two terms at half the normal credit load) available where appropriate. The student load of three courses or projects per term seems reasonable. Each course or project carries one-third of a unit of credit per term. However, the base-three credit system (one-third

unit per activity) admittedly makes for clumsy sub-divisions if fractional credit is available (e.g., one-sixth and one-twelfth units of credit are also possible), and a different credit-unit system is advisable. The move to seven-week terms also placed a severe intitial pressure on support systems (e.g., bookstore, library) which had to be able to get material needed by students much more quickly than before. However, students and faculty have now accepted the seven-week term -- the most troublesome mechanical feature of the PLAN to implement -- as the normal semester length.

The Competency examination remains the most difficult substantive feature of the PLAN to operate. A significant minority of students repeatedly failed the examination, because of a combination of nervousness and inadequate preparation. After the most extensive and continued re-examination of any part of the original PLAN, several faculty committees intend to recommend the continuation of the Competency examination in roughly its present form. This reconsideration indicates that the original goal of the Competency -- to test what a professional should be expected to know before beginning his or her career -- is still valid. Many of the failures reflect the inadequacy of traditional course lectures as preparation for so unconventional an assessment. The judgment of the faculty is that the assessment is sound, and that revisions must be made in course structure rather than in the Competency itself. Student and faculty uneasiness about the Competency highlights the enormous difficulty in making a campus-wide revision of traditional teaching methods. But after several years of close scrutiny, the goal of the Competency has been vindicated, and the need reenforced to reassess teaching methods continuously.

Liberal Arts in the Engineering School

The meaningful integration of the Liberal Arts into the curriculum of the engineering student was a major goal of the PLAN. Traditional programs

were especially feeble in relating the social sciences and the humanities to technical education, although current events have brought home the dangers to society of failing to help engineers and scientists develop critical philosophical values. Thus two of the four PLAN degree requirements stress the relationship of social and personal values to technology: the Interactive Qualifying Project (IQP) and the Sufficiency (or humanities minor).

The IQP was intended as a major innovation, giving technical students the opportunity to do a major project (equivalent in time to three or more courses) on a topic relating technology to social needs and problems. Five different kinds of IQP's were envisaged: 1)defining and solving a social problem, preferably one suggested by an off-campus agency, 2)advocacy or planning involving social and technical issues, 3)experiential field-work accompanied by appropriate academic research, 4) theoretical research mainly involving library research, and 5) historical analysis. An IQP could follow any one of these patterns; indeed the fundamental power to designate a project an IQP rests entirely with the sponsoring faculty member, and no formal review of projects is made. This lack of review, while raising possible problems of quality control, was intended to encourage diverse experimentation in the period of IQP implementation, when admittedly few faculty agreed on the methods to accomplish the goal. Because of the uncertainty about methodology, the IQP was not made mandatory for students. It is, however, strongly encouraged, and has become the norm; over 95% of WPI graduates finish an IQP (the small minority does two Major Qualifying Projects).

Many IQP's are co-advised by one faculty member in science or engineering, and one in social sciences or humanities. All departments are expected to contribute to IQP's, except for the humanities department (whose main function is the Sufficiency). The decision not to centralize the IQP in one department

or area was crucial, since the intent was to give the IQP visibility throughout the campus. The participation of all science and engineering faculty was strongly encouraged, in order to offer students appropriate role-models in the technical faculty itself. Two externally-funded eight-week summer sessions involved about half the technical faculty in preparing -- both academically and pragmatically -- for IQP's. In these sessions faculty learned basic concepts in the social sciences and humanities on campus, and then went off campus to develop preliminary contacts with public agencies. An enormous number of projects, on campus and at off-campus sites like WPI's major project center in Washington, DC, have been carried out and reported on. (Copies of the IQP's resulting from the two summer sessions, and of all IQP reports are on file at WPI.)

The second degree requirement which emphasizes the liberal arts is the Sufficiency, or humanities minor. Because the developers of the PLAN could not fit a humanities requirement entirely into the project format, the humanities degree requirement was couched in terms of six elective courses. In every case, however, the last of these six must be a project or independent study in which students write a major essay on a topic of their choice which isolates and develops a theme running through all the previous courses. WPI abandoned the traditional engineering college approach to the humanities -- a series of introductory courses in various areas -- and opted for the immersion of students into a single area of their choice. Students can select courses from among topics in art, music, literature, drama/theatre, history, history of science, philosophy and religion, and foreign languages. Any sequence of courses in any of these areas -- or an appropriately related sequence cutting across disciplines -- which leads to a final independent study essay fulfills the requirement. For example, one student with five

courses from music and history wrote his final essay on the influence of Wagner on Hitler.

The goal of the Sufficiency is two-fold: to permit students to go in depth into a single topic in the humanities, and to develop writing skills appropriate to producing a literate final paper. To reenforce the second goal, all WPI humanities courses are limited to 35 students so that time is available for attention to student writing problems.

FIRST DISCUSSION SESSION

President Hazzard, in opening the discussion section, mentioned that implementation of the PLAN had cost about three million dollars, much of which was raised from off-campus grants. He the reminded the participants that the primary topic for consideration was liberal education at the professional school, and invited questions about the IQP and humanities Sufficiency.

Effect on Faculty

In response to a question about the effect of the PLAN on the faculty, Raymond Hagglund (Professor, Mechanical Engineering) replied that the faculty had developed new abilities. For example, the two summer sessions on the IQP had involved a great deal of "mind-stretching" for many technical faculty. As a result most -- but not all -- of the faculty involved significantly enhanced their ability to do IQP's. The participants were selected to mix faculty with varying commitments to the PLAN, and the requirement that two-people teams work out possible IQP projects made them face what the students later would encounter. The incentive for summer participation was a stipend, and since all faculty were expected to become involved eventually in IQP's, the incentive for a follow-up was making the IQP part of the workload easier. The sessions helped many faculty overcome

their great uneasiness about teaching in an area outside of their technical expertise. The use of off-campus agencies for real-life involvement, and the enormous variety of IQP topics available, had made it virtually impossible for students to copy from earlier reports.

Professor Hagglund remarked that the faculty workload had increased only slightly from pre-PLAN days, when each faculty member usually was involved in three courses per term (now one per term is normal). President Hazzard indicated that given the outside funding during the transition, the cost to WPI of the new program was about the same as the old. However, the new system accentuated the natural workload differential between strong and weak faculty: the better teachers tended to attract more students and more project advisees; while the weaker teachers -- no longer guaranteed captive audiences by a prescribed curriculum -- had relatively light loads. Much of the cost of the new program was thus born by the stronger faculty, especially since the undergraduate population expanded at a greater rate than the faculty.

Liberal Learning

Lance Schachterle (Associate Professor, English) described the Sufficiency and its goals in detail. He stressed the emphasis on writing, and on imparting to students a knowledge of an area of the humanities sufficient to encouraging them to pursue that interest after graduation, as a complement to their technical work. The humanities faculty is respected by their engineering colleagues, because the Sufficiency is one of the four degree requirements rather than merely a service function. Furthermore, the new humanities faculty have been recruited not only specifically to staff the new program, but to continue their own scholarship. Consequently they have academic and research credentials equal to those of their colleagues. The emphasis on projects, both in the Sufficiency and the IQP, often enables them to match student project

interests to their own research. Many humanities faculty prefer teaching non-majors, both as a challenge and because humanities majors are currently pessimistic about job potentials. The combination of academic study of values through the Sufficiency, and real-world engagement with social problems in the IQP reinforce each other as vehicles for integrating the liberal arts with technical studies.

Faculty in engineering and science are interested in the humanities and the arts to a far greater degree than most liberal arts faculties are interested in technology. For this reason the WPI program integrating humanities and technology seemed more likely to succeed at WPI than if a liberal arts school attempted to make technology an integral part of its curriculum.

Admittedly not all WPI students, especially in engineering, were enthusiastic about the Sufficiency, but few seriously questioned the requirement. Most students seemed to prefer in-depth examination of one humanities topic to the superficial surveys available at some other engineering schools, because by the end of the Sufficiency they had the self-satisfaction of attaining a reasonably thorough competence in their topic.

Learning on One's Own

The transition from high school to college is admittedly made more difficult for some students at WPI because of the demand to begin self-disciplined and self-motivated learning in the freshman year. But statistics showed that the WPI drop-out rate is about the same as pre-PLAN, except that students leave six months to a year later on the average than before. About 65% of entering students graduate four years later. The PLAN is not only good for gifted students; it helps moderate students to mature more quickly by putting them in situations which require and reward accomplishment. But weak students, who in any program would need help throughout, are inappropriat for the PLAN. The WPI admissions policy requires students to "self-select" the

college by admitting themselves, if after an interview they believe the PLAN is suited to them. As a result WPI is beginning to attract a student body suited to the PLAN. WPI students have gone on to traditional science and engineering graduate programs, and have at the least held their own in competing for business, medical, dental, and legal professional schools.

Evaluation of the Plan

Several evaluations of the effect of the PLAN on graduates are under way. While the evidence as yet is statistically invalid, some individual case studies suggest the PLAN is having its intended effect on students. Recruiters indicate they are impressed with the ability of WPI students to communicate (having three projects to discuss on the interview helps WPI students to stand out) and some evidence suggests WPI students are moving more quickly ahead than others.

Women Students

WPI is trying hard to attract women students. The present women differ in academic profile from the men mainly in disclosing a higher rating for self-confidence. They are strong in mathematics, but weaker in engineering disciplines which involve an ability to work with machines -- perhaps because of early sex differentiation in the use of tools.

Supervision of Projects

At the beginning of its off-campus project work, WPI adopted a firm "no pay/credit, pay/no credit" policy. Students working for WPI credit off campus are entirely under the academic supervision of WPI faculty; on-site industrial or managerial personnel may offer advice and material support, but may not interfrer with the stated academic goals of the project. Students are free to engage in project-related work for pay, but not while taking the project for credit.

Humanities vs. Social Science faculty

WPI has roughly 20 humanities faculty as opposed to six in the social sciences largely for historical reasons; at the beginning of the PLAN, the humanities department was much larger than social sciences, which is now being built up as quickly as the overall tenure picture on campus permits. Some social science work is done through consortium arrangements within Worcester, and with part-time faculty. Also, WPI avoided bringing in a large social science faculty for fear that the IQP would become associated solely with them rather than become the responsibility of all faculty. Social science faculty are encouraged to co-advise as many IQP's as possible.

Advising

As at virtually all schools, good advising of students is a major problem, intensified at WPI by the unusually large number of decisions students must make at every point in their career. The big engineering departments have too many students and thus too many advisees. Some seminars were run to help faculty adjust to the new responsibilities as advisors. But the new "Freshman Seminars" have been more successful; here freshmen work closely with seniors as well as faculty to work out a long-range program for their studies through graduation. About half the incoming class in the last two years has taken this seminar as one of their 12 freshman year courses.

Adaptability of WPI PLAN

The consensus of on- and off-campus observers is that the PLAN is too much the specific product of the history of one college to be transplanted entire to another school, though some individual components may be adaptable. The greatest advantage the PLAN had was that it was <u>faculty</u> originated and implemented, and the faculty was willing to pay the price in a stiffer workload to make it succees. It probably functions best at a small college with a

strong undergraduate emphasis; the presence of some graduate students helps in offering some assistants for projects, but a large graduate program would be a distraction. Perhaps at a large university the PLAN could work as a "school within"; certainly if imposed on a large campus the fears of many faculty to abandon the security of their own discipline might prove insuperable.

Future of WPI Departments

President Hazzard indicated that he doubted if the present department structure would be modified. The co-advising of projects has to some extent broken down traditional department barriers, and the consequent realignment of at least some faculty seems strong enough to continue implementing the PLAN without restructuring the departments.

CASE STUDY II: TUFTS UNIVERSITY & THE HEALTH SERVICES PROFESSIONS

After dinner, President Hazzard introduced Kathryn McCarthy, Provost of Tufts University; she in turn introduced the associates in her presentation, Elizabeth Hinz (class of 1977, Jackson College) and Richard Milburn (Professor, Physics).

Summary

Tufts University encourages the maximum cross-registration of students in its various colleges and programs by making crossovers between professional- and liberal-oriented courses as easy as possible. Broad course distributions guarantee that all students in professional programs take courses in the liberal arts (in which they participate in the same classes as liberal arts majors). New programs like the Community Health Project mix traditional academic courses with off-campus courses and projects which expose liberal arts majors to professional work. Overall, the Tufts faculty avoid excessively structured programs in order to make adaptation highly responsive to changing student needs.

Introduction

Provost McCarthy briefly explained the structure of Tufts. About 6300 students are enrolled on two campuses, one in Medford and the other in downtown Boston. Academically the university is divided into four parts: the medical college, the dental college, the College of Arts and Sciences, and the Fletcher School of Law and Diplomacy. A flexible academic policy encourages Tufts students to cross-register for courses outside their own schools; for example about 120 Arts and Sciences students are presently taking courses in the medical and dental colleges.

Tufts faculty must demonstrate five qualities which enable them to assist their students in relating liberal to professional studies. They must 1) liberate students by helping them to think clearly and logically, 2) help students, especially in the professional medical schools, to learn to make decisions, 3) help students to learn to relate to other people and not as abstractions, 4) show students what a teacher-scholar is, and 5) live their own lives as examples to students of how professional liberal studies may be integrated. Above all they must show students that neither professional nor liberal studies demand exclusive commitment; each must support the other, in the lives of both students and professionals.

The Community Health Project

Miss Elizabeth Hinz, a senior majoring in sociology, spoke about her involvement in the two year interdisciplinary Community Health Project. As a sociology major she is interested in how health services will be provided in the future. The Community Health Project supplements the normal academic program of a traditional major with goal-directed project and course work at an off-campus community health agency. Along with an on-campus sequence in economics, sociology, engineering for public health, and medical ethics,

students in their junior year work for pay with an outside agency to gain first-hand experience. Last year the Project graduated its first students, some of whom went on to graduate school in their traditional disciplines while others went on to professional medical training. Flexibility in the program is assured by the willingness of the administration to alter the stated requirements if a student presents a sound alternative contract proposal. Though relatively few students rake the entire sequence of courses and projects in the Community Health Project, many students in areas like pre-med take some of it. The Project has been very successful in helping students integrate their liberal arts courses with suitable goal-oriented vocational projects, and may soon be offered as a new major in its own right.

Faculty Philosophy on Interrelating Professional and Liberal Arts Studies

Professor Milburn characterized the Tufts faculty advisors as "benevolent authorities" who encourage students to cross disciplines and who resist the over-structuring of any programs. No academic program will suit all students (or parents) and none will last too long. Therefore, a diffuse curriculum open to the new ideas of students ensures the right mix of liberal and vocational learning, and guarantees that the whole academic system can change quickly enough to accommodate rapidly-changing student needs. Tufts students have voting memberships in curricular, finance and budgeting committees which permit them to promote their own innovations. Furthermore, the twelve-year-old "experimental college" provides an academic base for courses not suitable to traditional departments, and a "College Within" provides tailor-made programs of study based on projects rather than traditional classes. The faculty stresses to students the opportunities to transfer in and out of the many kinds of academic structures available at Tufts.

SECOND DISCUSSION SERIES

Status of Liberal Arts in Professional Schools

Tufts still has loosely-defined general distribution requirements to ensure that all students take some liberal arts courses. Furthermore all liberal arts courses for all schools are offered through the College of Arts and Sciences; no attempt is made to offer "special" liberal arts courses to non-liberal arts majors. Most undergraduates take about half their courses in liberal arts and half in their professional discipline. This mix of disciplines seems the best solution to the problem that some basic science and background professional courses in the medical areas treat patients too impersonally. The emphasis on the need for medical students to take liberal arts courses is starting to come more and more from the clinical faculty in the professional schools, rather than the liberal arts faculty themselves. This advocacy assures that the liberal arts are not merely paid "lip-service" in the medically-directed programs at Tufts. The intent is that the values developed in liberal arts courses will help medical students see their patients as individual people, not as abstractions.

Science and Non-science Majors

The enormous and rapid turnover in courses at the Fletcher School helps to bring more science courses into the curriculum of Fletcher undergraduates. More important, science -- in such issues as the energy crisis and Mid East oil -- is now a necessity for students of diplomacy. Also, economics, especially with computer support, is increasingly important for Fletcher students. As the problems raised by modern science become problems of diplomacy as well, science perforce must become part of the Fletcher curriculum. Admittedly the implications of the basic sciences like Biology are less easy to integrate into the Fletcher curriculum; perhaps to deal with this problem all liberal arts students should have minors in some area of science. But

the mix and flexibility of the overall Tufts curriculum seems the best guarantee that students will have the opportunity to relate philosophical and social values to the work of science.

CASE STUDY III: BABSON COLLEGE & BUSINESS ADMINISTRATION

President Hazzard opened the fourth session by introducing President Ralph Z. Sorenson of Babson College, and Professor Edward Handler, Chairman, Division of Liberal Arts.

Summary

Since the early 1960's Babson College has greatly increased its commitment to the liberal arts, in part because of its strong emphasis on decision-making as requisite for all good managers and citizens. The present curriculum requires students to take at least 40% of their courses in the liberal arts as background to their professional work. Three humanities majors -- in Society and Technology, Communications, and American Studies -- enable students to relate non-traditional interdisciplinary liberal arts majors to their management programs. The new Babson Master Plan calls for an increased integration of liberal arts and management studies in the next five years.

The Babson Plan

President Sorenson reminded the audience of a passage in St. Exupery's The Little Prince which describes "a certain red-faced gentleman" completely cut off from people, beauty, and joy. The liberal arts curriculum at Babson helps ensure that its students do not emulate the "red-faced gentleman," but instead develop as managers sensitive to the "social, cultural, ethical, and historical implications of their future decisions." Babson, which offers B.S. and M.B.A. degrees and conducts a large School of Continuing Management

Education, believes strongly that the study of the humanities and liberal arts prepares the most effective kind of business leaders. Characteristically, such leaders 1) understand the functions, interrelationships, and outside pressures on organizational structures, 2) are able to recognize and analyze problems and make proper decisions, 3) comprehend personal and social impacts of their decisions, 4) express ideas clearly orally and in writing, 5) can inspire others to work for a common goal, and 6) possess a strong sense of integrity and an ability to draw the line between right and wrong.

Three of these characteristics are clearly fostered by the traditional humanities emphasis on self-understanding: understanding the full implications for others of one's decisions, writing and speaking effectively, and developing a sense of personal values all rely upon the values taught in the humanities. Furthermore, the liberal arts can contribute to some of the specific talents which good managers must develop. Working well with employees demands a knowledge of the fundamentals of sociology and psychology; working well with government requires appropriate background in political science and political history. A sense of esthetics enters into the choice of appropriate advertising, and into the design and promotion of new products and facilities. Finally, involvement in multinational business calls for a knowledge of foreign languages, customs, and history.

Growth of Liberal Arts at Babson

Professor Edward Handler emphasized that the 1975-1980 "Master Plan for Babson College " calls for continuing integration of the liberal arts into the business program in order to ensure that Babson students will mature as fully-rounded people. In the seventies business education may well come to equal legal education in the stress placed on liberal learning.

From its founding in 1919 until the early 1960's liberal education was largely secondary at Babson; the faculty consisted mostly of part-time graduate students with few interests in management and little commitment to the college. Courses were prescribed in a variety of introductory levels, but no advanced work was available. Foreign languages and the sciences beyond a single non-laboratory course were not offered. Composition and economics courses were of course required, but no basic sequence in mathematics or the behavioral or social sciences provided the background now assumed to be an integral part of any effective management education.

The 1959 Carnegie and Ford Foundation reports on business education pointed to the need to increase dramatically the attention paid to the liberal arts, particularly in the areas of mathematics and the behavioral sciences. Babson thus determined to establish an extensive and autonomous liberal arts curriculum, taught for the sake of the disciplines themselves rather than as specific adjuncts to business education. In retrospect, the autonomy was probably too great; students were left to draw whatever conclusions they could about how their liberal learning integrated into their business education.

In the late 1960's, a nuclear group of trustees, administrators and faculty became convinced that the future of business education lay in broad programs which developed qualities of leadership and decision-making. Such an education inevitably drew extensively upon liberal arts. Thus, in 1969 the first Babson Master Plan called for an enlarged liberal arts program with a full range of introductory, intermediate and advanced offerings. Central to the new curriculum is the 40-40-20 program: 40% of the student's program must be in management, 40% in non-management, and the final 20% electives from either group. Students must take a minimum of three courses in both the

humanities and the social sciences; compostion, calculus and a laboratory science courses are also required (but may be waived by departmental examination). Otherwise all liberal arts courses are free electives. To staff the greatly increased demand for these offerings, the faculty in arts and sciences had been expanded threefold between 1962 and 1972. Cross-registration with Regis and Pine Manor colleges is also possible to supplement Babson courses in the arts and humanities. The expansion of offerings to include advanced work and the present emphasis on academic credentials for business faculty have helped greatly to overcome the morale problems experienced prior to 1960 by liberal arts faculty, who often felt out of touch with the management faculty.

The enhanced role of liberal studies at Babson provides the support necessary to educate professional managers sensitive to their obligations to society. Especially at a special-purpose institution, where vocationalism can become all-consuming, the traditional task of the liberal arts in helping students to develop as fully-rounded people is critical. Moreover, the enlarged definition of manager as one who can deal effectively with problems in any institutional structure has reinforced the need for fostering effective communication, clear thinking, and awareness of external influences which affect choices -- all skills taught by the liberal arts.

Liberal Arts/Management Interdisciplinary Majors

Babson has introduced three liberal arts-related majors: Society and Technology, Communications, and American Studies. Intentionally all three are interdisciplinary majors which avoid the narrowness of traditional majors; instead they seek to bring the self-awareness of humanities program to bear upon real-world problems confronting contemporary society. Moreover, the major

programs, by integrating liberal and career-oriented learning, seek to infuse new life into traditional liberal arts offerings.

The Society and Technology major offers eight courses (of which at least five are needed to major) which help prepare managers to deal with technology. Becoming sensitive to the implications of technology and the changes it brings is central to this program. The popular Communications major is especially useful to managers concerned with marketing and organizational behavior; all factors relevant to understanding how human communication operates, especially useful to managers concerned with marketing and organization behavior; all factors relevant to understanding how human communication operates, especially in the context of mass media, are of concern. Finally, the American Studies major seeks to examine contemporary society not with the traditional emphasis on high culture butinstead more broadly so as to encompass the multitude of cultural factors within which managerial decisions must be reached.

Future Directions in Bridging the Management-Liberal Arts Gap

The second Babson Master Plan reaffirms the college's commitment to the liberal arts but in addition focuses attention on the continuing need to integrate the liberal arts securely into management education. Appropriate interdisciplinary courses are sought to help students relate liberal arts learning to their professional studies. For example, one humanities course examines "images of leadership" in literary, historical, and philosophical contexts, in recognition of the significance of developing leadership abilities in management. Another course examines corporate institutions in light of political theory.

The prominence of the liberal arts as an integral part of Babson education was established in the 1960's, and has permitted the college to develop an effective liberal arts faculty secure in the knowledge that their disciplines

are not merely service functions. Babson is now in a position to make another large-scale advancement in efforts to bring together the two mainstreams of its education program -- the liberal arts and management. In emphasizing self-development for its students, Babson "demonstrates that it has progressed beyond narrow vocationalism and is incorporating some of the traditional goals of liberal education into its conceptions of its missions."

THIRD DISCUSSION SESSION

President Hazzard began the fifth and final session by inviting "questions and pronouncements" about the four preceding meetings.

Role of Liberal Arts at Babson

The Babson 40-40-20 program was begun too recently to permit a meaningful overall evaluation of the effect of the liberal arts program on business-oriented graduates. Furthermore, present instruments for measuring such success are too primitive to detect if the new program is teaching liberal studies in ways superior to the old. Admittedly, most students use the 20% free electives to take advanced professional courses, and some of the liberal arts electives in the 40% block (like mathematics and economics) lend themselves directly to professional application. But the variety of liberal arts at Babson available through all four years does ensure some admixture of liberal studies into the professional curriculum. In a sense Babson believes the liberal arts are too important to be left to traditional liberal arts faculties; thus a strong emphasis falls on integrating liberal studies into professional studies, especially by means of majoring in one of the three new liberal arts majors. Experiments are under way with liberal arts faculty teaching some management material and mangement faculty introducing some liberal arts topics, in order to maximize the effect of faculty as role models for students. Liberal arts offerings are balanced numerically among introductory, intermediate and

advanced topics in such a way that no student can fulfill the 40% liberal arts requirement by taking only introductory courses.

Accreditation

Representatives from Babson, Stevens and WPI agreed that the traditional course distribution requirements of the professional licensing societies (Engineers' Council for Professional Development, the American Assembly of Collegiate Schools of Business) interfere with attempts to try new and better modes of integrating the liberal arts into professional education. However, WPI reported success in making its case to ECPD that the PLAN fulfilled ECPD objectives. (WPI recently received re-accreditation for its engineering programs for the maximum period of six years.)

Are the Liberal Arts "Liberating"?

Was the pressure upon business schools, brought by the Ford and Carnegie Commission reports, to integrate liberal studies into the business curriculum justified? Often liberal arts courses are too narrow to be "liberating" in any sense and too many liberal arts faculty are grossly ignorant of the fundamentals of business and management. Traditional liberal arts studies since the Greeks have glorified abstract thought and scorned practical application.

President Sorenson responded that the recent trend, encouraged by the national economy, of students moving away from liberal studies to professional courses, opens the possibility of widening traditional liberal arts education to encompass management and business topics. Some evidence at Babson and elsewhere suggests that the highest national SAT-score students are moving towards business majors, and the attendance at Babson courses by students from Pine Manor, Regis and Wellesley has risen sharply. Similar drifts towards professional course work were reported at WPI (relative to liberal arts students in the Worcester Consortium) and at the University of Massachusetts/Boston.

The best art majors at the University of Hartford were reported to be interested in abstract thought in all disciplines, including business. The possibility of liberal arts colleges introducing business or management minors is strong. These trends all suggest that future liberal arts faculty will have a broader perspective, and will teach so as to validate A. N. Whitehead's belief that the division between liberal and professional studies is false: all education should emphasize the utilization of ideas.

A representative from IBM indicated that, both for sales and technical work, industry is looking more and more for students with liberal arts backgrounds. Pressure from liberal arts students fearful of job scarcities is requiring liberal arts faculty throughout the country to consider the need for a broader general education, in which some professional courses play a role.

Teaching of Writing at Babson

Like all schools Babson faces the problem of imparting skills to students raised in a society which values literacy less and less. The old-fashioned required composition course at Babson was enormously expensive, not very successful, and finally dropped. Now, however, students as well as faculty and employers recognize the need for course work in writing, and a composition course has been re-instituted. Moreover, writing of case studies is emphasized throughout the curriculum, and projects are increasingly used in the final years of the undergraduate program.

Integrated Core Curriculum

A need still remains for professional schools to design freshman introductory courses in the humanities, in order to integrate scientific and philosphic material with professional studies. Most liberal arts programs at

professional schools remain fragmentary, and the liberal arts material is still taught too narrowly, without an attempt to relate it to the whole curriculum. Also, at some engineering schools the social sciences have displaced traditional humanities offerings as the complement to technical studies.

Faculty Responsiveness to Students

Provost McCarthy from Tufts expressed some uneasiness with excessively structured programs like that at Babson which provide only one method to mix professional and liberal studies. Such programs are expensive in time and money to create, naturally become rigid, and cannot -- given tenured faculty -- respond quickly enough to changing student needs. How can faculty educated in the 1950's and '60's -- who took a previous generation of teachers as models -- respond to the class of '77 which is already completely different from that of '73? Perhaps no single model or plan should dominate a curriculum; a mix of different programs and possibilities is more practical. (Some conference participants, however, argued that an excessively diffuse curriculum is ineffectual and a faculty dismissal of responsibility to plan the best program for its students.)

Should Undergraduate Education be Liberal Arts?

Many liberal arts faculty believe that professional studies should begin only on the graduate level, as is the case in law and medicine now. To many professional faculty such a program would be a waste of time. One solution is to begin college-level liberal arts studies earlier in a student's life; at Dallas, for example, some good high school students spend part of their last two years of high school at a community college.

Liberal Arts and Graduate Professional Schools

To some extent research needs have changed in the last ten years; more and more problems are interdisciplinary and need input from the liberal arts. Thus some liberal studies may be appropriate in graduate education.

Future Agenda Items

Dr. Kyle suggested that most of the representatives at the present conference were from professional schools or departments, and that the liberal arts side of the dialogue was understated. Perhaps future agendas might attempt to bring together a better balance of faculty to pursue the issues raised here. It was also suggested that the present conference had over-emphasized the humanities, especially in engineering education, and that the role of the social sciences should be given equal attention.

President Sorenson proposed that a future session consider what role liberal studies should play in continuing education of professionals. Continuing education should stress the part liberal studies will play professionally and avocationally, and could have great potential in helping professionals to prepare for changes in the lifestyle late in their careers and in retirement.

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Massachusetts

Mr. Ralph Z. Sorenson
President
Babson College
Babson Park, MA 02157

Dr. Edward Handler
Chairman
Division of Liberal Arts
Babson College
Babson Park, MA 02157

Dean Richard B. Maffei
School of Management
Graduate Division
Boston College
Chestnut Hill, MA 02167

Dr. Richard L. McDowell
Dean of the College of
Business Administration
Suffolk University
Beacon Hill
Boston, MA 02114

Dr. Melvin Krant
University of Massachusetts/Worcester
Medical School
55 Lake Avenue North
Worcester, MA 01605

Dr. Kathryn McCarthy
Provost
Tufts University
Medford, MA 02155

Miss Elizabeth Hinz
Tufts University
Medford, MA 02155

Professor Richard Milburn
Tufts University
Medford, MA 02155

Dr. John B. Duff
President
University of Lowell
1 University Avenue
Lowell, MA 01854

Dr. Roger Schinness
Assistant to the President
University of Lowell
1 University Avenue
Lowell, MA 01854

Dr. Patricia L. Wilkie
Director of General Education
College of Professional Studies
University of Massachusetts
Harbor Campus
Boston, MA 02125

Dr. Donald D. Babcock
Acting Vice Chancellor for
Academic Affairs
University of Massachusetts
Harbor Campus
Boston, MA 02125

Dr. David Bischoff
Assistant Provost for Professional
Schools
University of Massachusetts
Amherst, MA 01002

Dr. Wes Staton
University of Lowell
1 University Avenue
Lowell, MA 01854

Dr. Allan W. Bosch
Western N. E. College
1215 Wilbraham Road
Springfield, MA 01119

Dr. Robert Campbell
Western N. E. College
1215 Wilbraham Road
Springfield, MA 01119

Dr. Clyde A. Painter
Western N. E. College
1215 Wilbraham Road
Springfield, MA 01119

Dr. Don C. Lemmon
Western New England College
1215 Wilbraham Road
Springfield, MA 01119

Dr. E. Louis Raverta
Western New England College
1215 Wilbraham Road
Springfield, MA 01119

Dr. George W. Hazzard
President
Worcester Polytechnic Institute
Worcester, MA 01609

Dean William Grogan
Dean of Undergraduate Studies
Worcester Polytechnic Institute
Worcester, MA 01609

Dr. Ray E. Bolz
Vice President, Dean of Faculty
Worcester Polytechnic Institute
Worcester, MA 01609

Professor Lance E. Schachterle
Professor of English
Worcester Polytechnic Institute
Worcester, MA 01609

Mr. Roger N. Perry, Jr.
Director of Public Relations
Worcester Polytechnic Institute
Worcester, MA 01609

Professor Harit Majmudar
Professor and Head, Electrical Engineering
Worcester Polytechnic Institute
Worcester, MA 01609

Professor Raymond R. Hagglund
Professor, Mechanical Engineering
Worcester Polytechnic Insititute
Worcester, MA 01609

New Hampshire

Dr. David W. Ellis
Vice Provost of Academic Affairs
University of New Hampshire
Durham, NH 03824

Mr. Martyn Howgill
Gehrung Associates
Jaffrey, NH

Dr. Charles A. Hildebrandt
Chairman, Social Sciences Department
Keene State College
229 Main Street
Keene, NJ 03431

Mr. James A. Quirk
Chairman, Science Department
Keene State College
229 Main Street
Keene, NH 03431

Rhode Island

Dr. William F. Wyatt
Assistant Dean of Faculty & Academic Affairs
Brown University
Providence, R 02912

Vermont

Colonel Sumner H. McIntire
Dean of the University
Norwich University Central Office
Northfield, VT 05663

New Jersey

Dr. John P. Pattinson
Chairman, Humanities Department
New Jersey Institute of Technology
323 High Street
Newark, NJ 07102

Dr. Edward A. Friedman
Dean of the College
Stevens Institute of Technology
Castle Point Station
Hoboken, NJ 07030

New York

Father Tom Phelan
Dean of Humanities & Social Science
Rensselaer Polytechnic Institute
Troy, NY 12181

Miss Frances Kelly
Manager, Special Educational
Support Programs
IBM
Armonk, NY 10504

Connecticut

Mr. Bernard Hanson
Dean of Hartford Art School
University of Hartford
200 Bloomfield Avenue
West Hartford, CT 06117

Washington, DC

Dr. Regina M. J. Kyle
Director of Program Development
Association of American College
1818 R Street NW
Washington, DC 20009

Ms. Kathleen McGurl
Executive Assistant &
Meeting Coordinator
Association of American Colleges
1818 R Street NW
Washington, DC 20009