

Almanac

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United Way

September 28, 1976

Dear Colleagues:

During these early weeks of autumn as we are all doing our part in getting the new academic year under way, our sense of community becomes especially apparent. It is a time when we are keenly aware of our mutual purpose.

I appeal to that sense of community now by asking you to show your personal regard and concern for our University's neighbors within and beyond the campus area. This year, the United Way of Southeastern Pennsylvania has a new symbol and a new goal. Its graphic symbol conveys the spirit of 40,000 volunteers working in Philadelphia, Delaware and Montgomery Counties and parts of Chester County on behalf of more than 250 charitable agencies and services. Their goal is to raise \$23,000,000 for the 1.5 million persons, young and old, who require the special health care, cultural opportunities and personal guidance offered by these agencies.

In a few days, the 1977 United Way Campaign will formally begin. We can tangibly demonstrate our attachment to these social tasks by responding generously through the University's payroll deduction plan.

I urge you to join in demonstrating that we are a University of heart as well as mind by returning your pledge card as early as possible.

Sincerely,

President

TRUSTEES: NURSING DEAN, MUSEUM DIRECTOR

At their September 30 meeting the Trustees Executive Board will vote on a new dean of the School of Nursing, a new director of the University Museum and a new Secretary of the Corporation whose title will become Secretary and Vice-President.

They will designate the present Secretary, Donald T. Sheehan, as secretary and vice-president for the remainder of his term ending October 30. After retirement from that post Mr. Sheehan will continue with the University, coordinating boards of overseers for the schools and heading other projects to relate the University to public constituencies.

Also on the agenda of the open portion (11 a.m. to 12:30 in the Tea Room of the Faculty Club) are a proposal to increase the number of Trustees; the appointment of overseers; faculty appointments and promotions; administrative progress reports on finance, SAMP and Veterinary Medicine; and Trustees' committee reports on development and physical plant.

COUNCIL: COMMENT ON PHASE-OUT POLICY

At the University Council's meeting Wednesday—the first in which Council has been asked to weigh a Reallocation Review Board finding—members discussed primarily basic principles and criteria for phase-outs. The SAMP report (*Almanac Supplement* September 21), which was on the agenda for discussion without vote, drew debate on University mission (teaching versus research; publishing to advance a profession versus scholarly publication) and on how a school or program is or ought to be considered for phasing out. Highlights of the debate will appear next week.

Council's only formal actions were reelection of Dr. Peter Nowell as moderator and approval of a Faculty Affairs Committee recommendation that its subcommittee on honorary degrees become freestanding.

VETERINARY MEDICINE: NO STATE ACTION

At Council, President Martin Meyerson announced that the General Assembly of the Commonwealth did not vote this year on a closer relationship for Penn's School of Veterinary Medicine, but did increase the School's separate appropriation by \$1.7 million.

TASK FORCE: ADMISSIONS

Provost Eliot Stellar will shortly name a search committee to recommend a successor to the Rev. Stanley E. Johnson as dean of admissions. Dean Johnson, who continues as University chaplain, will complete in June the three-year term he agreed to serve as dean.

In the meantime, a new task force is meeting weekly to study administrative and structural aspects of admissions. Its advice is due this semester.

Dr. Joseph Bordogna, associate dean of the College of Engineering and Applied Science, chairs the new task force. On it are Drs. David Hildebrand, associate professor of statistics; Alice

Kelley, associate professor of English; Frederick Kempin, professor and chairman of business law; and Norman Oler, professor of mathematics. Student members are Alexander Coy III, '78 FAS; Ted Maciag, '77 W; and Ken Taber, '78 W.

PROVOST'S COMMITTEE: WOMEN'S SAFETY

An Ad Hoc Review Committee on Safety and Security for Women has been named by Provost Eliot Stellar to look at the effectiveness of Penn's program in women's safety and to evaluate recent criticism of it.

Joette Clark, associate in nursing and chairman of the Council Committee on Safety and Security, heads the committee. Its members are Andrew J. Condon, director of student activities;

Dr. Helen C. Davies, associate professor of microbiology (Med); Dr. A. Leo Levin, professor of law; Karen Miselis, assistant dean of the College of General Studies; Dr. Elliott Mossman, associate professor and chairman of Slavic languages; Sharon Mullalley (Grossman), coordinator of Women's Center; Dr. Marvin Wolfgang, professor of sociology and criminology; and students Ken Taber, '78 W, and Claire A. Koegler, '77 GRF.

In his charge to the committee Dr. Stellar asked for accurate data on the incidence of rape and personal assault; review of the performance of University police in prevention of assault, treatment of victims and investigation of cases; and review of the structure and effectiveness of the now-vacant post of women's security specialist (*Almanac* September 14).

ESCORT SERVICE . . . RAPE SQUAD

The Office of Security and Safety has expanded two segments of its operation relating to personal safety of faculty, staff and students:

The escort service has added work/study students (most of them athletes) for trips within walking distance, supplementing the uniformed University Police Officers and relieving the load on the campus security wagon. The escorts will also wait with campus members (male or female) for subways, buses, cabs or rides. Escort hours are 8 p.m. to 1 a.m. Ext. 7297 or 7298.

The rape squad has been expanded to four uniformed campus policewomen: Detective Barbara Cassel is on call 24 hours and the three others are available on their staggered shifts to aid victims of rape, attempted rape or other personal assault. Threats, obscene calls and other problems should also be reported. Ext. 6600.

NOTE: For other emergencies, the University Police can be reached at Ext. 7333. Emergency phones are in campus elevators and on building exteriors, identified by blue lights.

SELF-DEFENSE CLASSES

Women's self-defense classes have already begun but latecomers can join this week: for beginners, Monday and Wednesday, 5:30-7 p.m. and for intermediates, Tuesday and Thursday, 5-6:30 p.m. To register, come to class at the Weightman Hall Dance Studio and wear loose clothing. Classes are open to all women in the University community—faculty, staff, students, and "dependents." For information, call Ext. 8331, 7438, or 8611.

FAS: DR. DYSON, DR. LAMBERT

Dr. Robert H. Dyson, Jr., professor of anthropology and curator of the Near East section of the University Museum, has been named associate dean of the Faculty of Arts and Sciences.

Starting in November Dr. Dyson, who was co-chairman of the University Development Commission, will share FAS development responsibilities with Dr. Richard Lambert.

Dr. Lambert, professor of sociology and South Asia regional studies who has been associate dean, has been appointed dean of instruction and curricular planning effective immediately, Dean Vartan Gregorian said. He will give other details next week.

MEMORIALS: DR. SHOVER, DR. McBRIDE

A memorial service will be held for Dr. John L. Shover on Wednesday, October 6, at 4 p.m. in Room 200 College Hall. Dr. Shover, who had been professor and graduate group chairman in history, died September 4 at 49.

Bryn Mawr College will hold a memorial service October 1 for its late president, Dr. Katharine Elizabeth McBride, who was one of the University of Pennsylvania's first woman Trustees. The service begins at 4:30 p.m. in Goodhart Hall.

LETTERS ON DR. LANGFITT'S PROPOSAL

September 22, 1976

Some readers of the report on SAMP (*Almanac Supplement*, 9/21/76) might conclude that the School made little response to the recommendation of April 29 that it be phased out (page 1) and to the July 1 statement of reasons for that recommendation (page 2). Many persons within and without the School and University contributed to our responses, which have continued without pause since May 6 when I received a copy of the Vice-President's letter to the Provost.

On May 11 my office issued a seven-page statement, with seven appendices, in response to the proposed closing of the School. This SAMP "response packet" was distributed to the two review committees, to key central administrators, to the SAMP Faculty, and to the academic and undergraduate deans. The response commented both upon the issues as they were known at that time and upon the process of the review through which the School had gone.

The Vice-President's detailed statement of reasons for recommending that SAMP be phased out was received on July 14. Convinced that the selection between SAMP and Nursing described in that statement posed a spectrum of options which differed from those presented in April and for which there was no documentation, and receiving no objection from the Dean of the School of Nursing, I asked the Provost to intervene by expanding the scope of reallocation choices under review at that time. The Provost did not agree with my contention; nor, as I learned later, did the reallocation review board.

When the Vice-President's July statement appeared in *Almanac* I responded in detail to the Provost, with copy to the President, on the Nursing/SAMP issue. My response was not one of urging a selection of SAMP over Nursing. Nursing and SAMP have much to offer each other. The maximum contribution of either one to the future mission of the University and the health area will not be realized by discarding the other.

The remainder of the Vice-President's reasons merit brief comment:

1. Ability to attract a qualified dean will depend upon the decision of the School, not the other way around;

2. Financial implications are discussed in Part IV of the Steering Committee's Report, and the proposal with projections submitted by SAMP in January (with refinements in June) is expected to receive further study;

3. Funding for graduate level activities is expected to continue to improve as federal allied health priorities shift from quantity to quality, and ability to attract endowments has been and will continue to be some function of the administration's commitment to the School;

4. Opportunities for scholarship in the SAMP disciplines are discussed in Part III A of the Steering Committee's Report;

5. SAMP provides over 50 percent of the Commonwealth student capacity in two of its programs, and its graduates are in demand nationwide in all three professions; and

6. The alliance for audition and speech science programs is preferred by both parties but joint planning has been frustrated by the recommendation to phase out SAMP.

The July statement of the Vice-President mentioned the option of relocating the SAMP programs into the School of Medicine. After an extensive survey of allied health units around the country, the dean of Medicine and the acting dean of SAMP agreed that no compelling reason could be identified for that relocation. The fact that the option as proposed would have required that SAMP eliminate its current viable student base and convert to graduate programs only, was sufficient reason, I believe, for Medicine not to be terribly interested in acquiring what promised to be a financial burden.

—Eugene Michels, Acting Dean
School of Allied Medical Professions

For the past two years the HEW's Fund for the Improvement of Postsecondary Education has supported at Penn a Project on the Design and Management of Instruction. Following is a chapter from the Project report, which will be discussed at a conference here October 11. One session, at 4 p.m. in the conference room of Van Pelt Library, is open to the campus at large.

Management for Learning: A Program for Administrators

by Charles E. Dwyer and Seymour J. Mandelbaum

This document is addressed to the President of the University, the Provost and his principal assistants, and the deans of the several faculties. It is intended to express to them the principal assertion emergent from two years of planning in the Project on the Design and Management of Instruction: Major improvements in instruction at the University of Pennsylvania depend upon shifts in the management system. While a great many actors participate in management functions, the responsibility for leadership rests upon the formal administrators. If they do not act, who will?

Ideally this document should be read after one has examined the general rationale for the Project developed in Mandelbaum, "The Intelligence of Universities," and the advice to instructional units in Dwyer and Mandelbaum, "Instructional Improvement: A Process Approach." Both are available for inspection at the Office of the Secretary, 112 CH.—C.E.D./S.J.M.

I. The Dilemmas and Possibilities of Administration

As the President, Provost and the deans of the large and heterogeneous faculties appreciate, they can neither plan nor implement an instructional program. That is a task which is jealously guarded by individuals, departments and varied *ad hoc* faculty units. This group of administrators does, however, play two important functions in the process of instruction. First, it confirms (through passive acceptance) or critically challenges the established organization of instructional planning. This function was quite apparent in the debate over responsibility center budgeting. Everyone understood that the Associate Provost was not even hinting at the possibility of intervening in the content of departmental courses. The new budget format did, however, appear to alter the framework within which departments would choose among instructional alternatives.

The second function of these administrators is to guide the allocation of resources within the University. Presented with competing claims upon resources, the President, Provost and deans sit in the chairs of judgment: helping this claimant, turning a deaf ear to that one and, more recently, asking everyone to take less.

Neither of these functions, as they are embedded in a network of roles, is played out in complete freedom. Aggressive action within an established "plan for planning" may go unchallenged but even modest changes in that plan arouse anxieties and generate protest. Deviations from a pattern of incremental budgeting, as in the proposals to cultivate "centers of excellence" and to terminate programs, have engendered countless hours of faculty and administrative deliberations.

Our experience in the Project on the Design and Management of Instruction has convinced us that there are enormous possibilities for instructional improvement at the University of Pennsylvania. Contrary to the conventional judgment (as expressed, for example, by Clark Kerr), basic faculty attitudes and interests are not the major obstacles to improvement. Indeed, we find enormous resources for change in what are often seen as conservative faculty groups. The main obstacle to improved instruction lies instead in a management system designed to preserve the University against an intellectual state of nature. The norm of the system is to make judgments and to allocate resources without ever asking (except perhaps in the most diffident and apologetic way) about the objectives of instruction or the measures of performance. This norm of silence and the organization of administrative work which it governs is, in our minds, the principal constraint on the ability of the University of Pennsylvania to enhance its own collective intelligence and to use this intelligence to encourage student learning.

A gun-shy administration, afraid of arousing conflict or content with the (often very effective) competitive substitutes for intelligence, will not try to breach the silence. It should not then expect, however, that change will emerge from the faculty, like Atlantis risen from the sea. There is a constant flow of voluntary innovation which is very powerful at the University of Pennsylvania. Voluntarism works best at the margins of established activities or in bridging between units. It is not likely to lead to major shifts in the great bulk of instructional practice. Nor is it likely to break the grip of the dilemma of underinvestment in highly desired collective goods. The administration holds in its hands the symbols and prerogatives of legitimate authority. If it chooses to use that authority to improve instruction, change is possible (though not, of course, guaranteed); without that authority, the boundaries of voluntary innovation will prove impassable.

Administrators will not be surprised by an argument that instructional improvement depends upon their behavior. For years, they have been asked by critics to select, promote and reward good teachers. Administrators are likely to be wary of this advice since it frequently looms as both an ineffective policy and one which conflicts with other important values. Our proposal, however, goes beyond the ordinary emphasis upon excellent individual pedagogy. We believe strongly that the improvement of instruction depends upon changes which go beyond the personal incentives offered to the faculty.

The following list summarizes what we believe are the major requirements for a program of intelligent change in the processes of instruction. The rationale for the list is developed in the

accompanying documents.* What should be obvious—even if you don't accept every particular item in the list—is a general emphasis upon the general conditions under which a great many individuals interact. The guidance of those conditions (what we called earlier, the “plan for planning”) is the special function of the administrative system of the University.

1. *The Intelligence of the Instructional Process*

The instructional process (to personify it for a moment) lacks the three major conditions of collective intelligence: public measures of learning outcomes, knowledge of its own dynamics, and the ability to intervene self-consciously to improve itself. The failure to meet these conditions touches every experience of the process. The failure focuses attention on standards of input rather than output; engenders debates but offers no inquiring method for their resolution; supports innovation but not progressive development.

2. *Sequence, Reinforcement and Collective Intellectual Goods*

The mastery of complex and difficult ideas characteristically depends upon sustained sequential development. Unfortunately, in many instructional units the intense decentralization and the privacy of instructional planning inhibits both sequence and reinforcement. The most valued collective intellectual goods of the discipline or profession suffer from underinvestment.

3. *Boundaries*

The boundaries of the stable instructional units impose both intellectual and social inhibitions on the instructional process. On the one side, they do not encourage the giving of “reasons” and the exploration of limits. On the other, they support the development of comfortable social resolutions which preserve the peace of groups at the cost of intellectual vitality and effective learning.

4. *Expertise*

Most groups lack one or another form of expert knowledge which would encourage instructional improvement. The gaps in knowledge range across group dynamics, organization theory, experimental design, developmental and educational psychology, statistics, instructional design, measurement, epistemology and the details of particular technologies. We stress the breadth of the gap to counter the foolish conception that the missing expertise is “merely in education,” a field regarded as of little status and little use. This conception of the triviality of the missing knowledge is a defensive anti-intellectualism, protecting us against the close examination of our own processes. It does us little credit.

5. *Information for Instruction*

The instructional processes of the University are weakened by two major flaws in the flow of information about students. The first, emphasized in our treatment of intelligence, is the lack of outcome measures. The other is equally important. Instructors at virtually every stage of the process—and we believe in virtually every department—suffer from a lack of timely information on the nature of current student knowledge and the sources of learning difficulties. As a result, enormous resources are wasted in either inappropriate or repetitious instructional efforts.

6. *Excessive Simplicity*

The tasks of integrating the instructional process are characteristically resolved by restricting the variety of student options as to the pace, place and mode of instruction and by asking each faculty member to perform all necessary functions. The careful differentiation of tasks would simultaneously increase the efficiency and effectiveness of the entire process, its sensitivity to individual differences and its careful regard for the uniquely valuable attributes of direct human interactions.

7. *Certification and Instruction*

The close link between certification and instruction is an important assumption in the financial organization of the University. The effect of the linkage, however, is to inhibit the full development of the diagnostic function within instruction, to encourage a sense that the purpose of the University is to select students rather than to teach them and to restrict our ability to serve excellent students for whom the ordinary pattern of intramural teaching is inappropriate.

II. *Management for Learning: A Sketch Design*

We have not developed a client-planner relationship with any of the people to whom this document is addressed. As a result, we have very little sense of their values or whether they share at all our conception of the problems of the instructional process or the major themes of appropriate developmental activity. We are, in that sense, in the middle of a planning process (which may, however, never be completed) rather than at the end. All that we can provide now is a sketch design, blocking in the major components of a program which we have called “Management for Learning” and anticipating some of its major problems. If this document and the others which accompany it elicit a positive response then we are sure responsible officers of the University will be able to proceed on their own to detail the precise administrative arrangements and the economic implications of our sketch, adapting our ideas so that they will become fully their own.

There is a first small step towards a positive response which should, we believe, precede all others. We have planned two demonstration programs, one in English and the other in the core of science and mathematics courses taken by virtually all undergraduates going on to schools of medicine, dentistry and veterinary medicine. We are apprehensive that the two programs will never be used so as to demonstrate anything to anybody. The programs—and particularly the pre-health core—have not been granted the essential resources necessary to fulfill their design, to assess their effectiveness and to improve them over time. No administrator has taken responsibility for their nurturance and supervision and for the linkage to a larger instructional development activity. Without resources and administrative support, we doubt that the impetus we have given to change will prove more than a fading ripple in the ocean of established practice.

We hope that either the Dean of FAS or the Associate Provost (or the two in collaboration) will adopt the programs so that they may, indeed, serve the function we have imagined for them.

There are two sides to any management plan: one deals with positive support and facilitation, the other with supervision and control. One side without the other is wasteful. If you encourage groups to define instructional objectives but never inquire as to how they are doing and act upon your judgment, then your efforts are unlikely to end in anything but banality. If you supervise and control without helping, then frustration and anger will properly destroy the expressions of your coercive intentions.

The immediate purpose of our recommendations is to enhance the instructional capabilities of individual units—those which already exist and those which may emerge. The paradox which must be grasped, lest it come back to haunt you as a contradiction, is that increased unit capability requires a stronger central administrative apparatus. The ability of departments and, even more strikingly, interdepartmental units, to change themselves is severely handicapped because the Provost and deans have few resources of time and expertise (even if there is money enough) to help them.

1. *Objectives, Measures and Design*

The core of “Management for Learning” is a recommendation that the deans and the Provost ask instructional units, as part of the ordinary budgetary process, to define their major value objectives, to measure and report on student learning along the dimensions defined by these objectives, to describe the design of their instructional program and the problems they would like to remedy.

As suggested in “Instructional Improvement: A Process Approach,” units will appropriately approach this task in different ways. The reporting requirements, therefore, should be open in format and allow generous time for preparation. The first round of requests should be conceived as a learning process for both units and administrators and the answers should

* Titles of all nine parts of the Report of the Project on Design and Management of Instruction are listed in an Index, page 5.—Ed.

read as a guide to the problems of value articulation and instructional analysis. Everyone should understand, however, that the ultimate purpose of the initially tentative developmental activity is to create a program of accountability in which performance is monitored and linked to the allocation of resources.

The monitoring act will require a substantial reorganization of the work pattern of administrators in College Hall and in the larger and more heterogeneous schools. We suggest that the deans and the Provost undertake systematic unit reviews every several years. These reviews would deal with the worth of the value objectives, the validity and accuracy of the measurement process, the correctness of the design description and the possibilities of improvement. An internal and external review committee would be commissioned for this purpose. Yearly reviews by an in-house staff should deal with shifts in the measures and particular problems—including many for which the unit itself would require assistance.

2. Budgetary Incentives

The measurement of learning outcomes provides a method for engaging the possibilities of enhanced instructional productivity. The surest message we have received over the course of the last two years is that units are willing and able to improve the effectiveness and the efficiency of instruction but will not do so unless they benefit from their own efforts. Units must be rewarded rather than penalized for their initiative in reducing their unit costs of instruction while raising achievement levels or for engaging in extensive extramural instruction over regional cable systems. There is no simple formula for the division of savings or income between units and the central administration. Some division, however, there must be. We suggest, as a way of approaching this problem, that the central administration offer challenge incentives for effective innovation. The budget should be used as a method of guiding behavior towards the goal of instructional improvement.

3. The Boundaries of Units

It is usual for members of one school to be appointed, *pro forma*, to the faculty of another school. Outsiders also play a real role in the work of search committees. We suggest that these bridging steps be extended to the vital area of instruction. The curriculum committee of every unit should include at least two outside members—one drawn from an intellectually nearby field, another from a distance. These outsiders, who would be changed regularly, would play the roles of goad and conscience. The dean or provost would request their report together with the yearly budget statement.

4. Equity within and between Units

The process of instructional development within units is likely to lead to a differentiation in work patterns: some professors will counsel, others prepare materials for computers, still others engage in testing and evaluation. Deans and central administrators should neither implicitly (by asking questions about individual course loads) nor explicitly impose standard formulae on these patterns. They should insist on a demonstration, however, that the members of the unit perceive the division of responsibilities as equitable and should be extremely sensitive to charges of exploitation or unfairness.

The issue of inter-unit equitability is embedded in a judgment as to the comparative value received for the total cost of the unit. It is appropriate to ask whether we might get better value from a different deployment of resources in the Department of Chemistry and even (though we do not relish the answering) whether chemistry or English enjoys a better cost/benefit ratio. It is inappropriate to insist that professors of English and of chemistry teach in the same pattern.

We recognize that many of our suggestions involve a substantial addition to the tasks of generating, communicating, storing and analyzing information. The burden may be somewhat reduced if deans and the central administrators examine their current demands and reduce them where the data collected are inappropriate to the decisions they, in fact, are willing or capable of making.

5. The Provision of Expert Assistance

We believe that the University should provide instructional units with a wide variety of expert assistance in developing instructional programs. We urge the creation, therefore, of an instructional design center with a full-time central staff and a large group of part-time consultants. While the center should serve any faculty member and should develop training programs which would cut across unit lines, its most important client

groups—especially in the beginning—should be entire units concerned with large dimensions of their instructional program.

We recognize that many faculties already have embryonic centers of this sort. (In the health quadrant, indeed, they are full-born.) While we believe a central facility will have important advantages, we would not like to coordinate out of existence groups which may be uniquely sensitive to their local settings. We suggest, therefore, that each instructional unit be granted vouchers for consultation services to be used anywhere in the University. Both local centers and the central facility should compete for those vouchers. The market tests of effectiveness and price would determine the balance between centralized and decentralized services.

6. An Information System

Building upon the unit explicit objectives and measures of performance, the administration should commission the design of prototype information systems which would provide instructors with timely assessments of the state of student knowledge. Given a set of registrants for a course, an instructor should be able to inquire: "What may I fairly expect them to know already?" The same system should be designed for students. They should be able to ask: "Given what I know already and what I would like to know, what are the next likely increments of appropriate instruction?"

7. The Separation of Certification and Instruction

Individual units should be encouraged to state the terms of certification so that they are independent of the conditions of instruction. While this process goes on, the central administration should modestly explore variable forms of assessment and pricing. Suppose a business executive walks in off the street and asserts that he knows as much as an M.B.A. and would like the University of Pennsylvania to attest to that fact or, more likely, that he knows half as much and would like advanced credit for that knowledge. Under these conditions, what should be our method of assessment? How much should we charge for certification?

In many ways, this suggestion for exploration is our most radical. It both opens the University to a great many diverse student relationships and imposes upon it a severe test of instructional effectiveness in which the formal processes compete against independent study in preparation for certification. We believe, however, that the separation may well prove to be a fundamental step in adapting the University to demographic, economic and communication changes in the larger society. Nowhere in these several reports have we adopted the language of a "learning society" in which all knowledge is available everywhere and local communities such as the University of Pennsylvania are exploded. We do observe, however, as more units turn towards population of adults and adopt new formats for instruction and as we explore the economics of videocassette, CAI and audiotape publishing, the standard requirements for a degree seem a pretense: How many weekends make a semester? How many TV lectures a course? As these questions penetrate into the center of our activities and consciousness we will have to find a way of answering them that deals with intellectual substance and not pedagogical forms.

INDEX TO THE REPORT

This document is part of the final report of the Project on the Design and Management of Instruction. For information about the Project and copies of other portions of the final report, write to Dr. Seymour J. Mandelbaum, Department of City and Regional Planning, University of Pennsylvania/CJ, Philadelphia, Pennsylvania 19174.

1. "Summary Report: Project on the Design and Management of Instruction"
2. Seymour J. Mandelbaum, "The Intelligence of Universities"
3. Charles E. Dwyer and Seymour J. Mandelbaum, "Instructional Improvement: A Process Approach"
4. Charles E. Dwyer and Seymour J. Mandelbaum, "Management for Learning: A Program for Administrators"
5. George L. Gropper, "On Gaining Acceptance for 'Instructional Design' in a University Setting"
6. George L. Gropper, "Student Guide To Effective Learning"
7. George L. Gropper, ed., "Curriculum Development in the Project on the Design and Management of Instruction: A Sampler"
8. Robert F. Lucid, ed., "Essays"
9. Thomas H. Wood, "Study Guide for Physics"

GRANT DEADLINES

One of the goals of the Office of Research Administration is to assist the faculty in identifying potential sources of support for their projects. One means of fulfilling that goal is the listing of upcoming deadlines for various grant programs in *Almanac*.

In addition we attempt to communicate about specific programs directly with faculty members we have reason to believe would be interested in them either because of ongoing research projects or because of their discipline. This method will be greatly enhanced with the implementation of the Faculty Research Profile currently being developed by this office.

A third service offered by ORA is the maintenance in our office of various reference books and materials containing information on funding sources; among these are the Catalogue of Federal Domestic Assistance (all federal programs), the Annual Register of Grant Support, the Foundation Directory, Grant Information System (updated monthly), National Science Foundation, Programs (updated monthly) and many others. These materials are available for use in our Office (409 Franklin Building) during normal working hours (9-5) and faculty members are encouraged to make use of them. Listed below are some upcoming deadlines for the fall. For additional information call Ext. 7293.

—Anthony Merritt, Acting Director, ORA.

HEW - PUBLIC HEALTH SERVICE

- Oct. 1 Research Renewal Applications
Research Career Development Awards
Individual Postdoctoral Fellowships (National Research Service Awards) for NIH
- 15 Individual Postdoctoral Fellowships for NIMH, NIAAA & NIDA
- Nov. 1 New and Supplemental Research Grant Applications
NIDR—laboratory and clinical research relevant to acquired craniofacial disfigurement
Investigations of determinants of child-bearing among females under the age of 18—Population Research Grants Branch
NICHD. Contact Dr. V. Jeffery Evans, RFA office, PRGE, CPR, NICD, Room C-733 Landow Bldg., Bethesda, MD 20014 (301) 496-6515
Young Investigator Research Grant, National Heart and Lung Institute. Contact staff of NHLI program area to which research will be related or call (301) 496-7225.

NATIONAL SCIENCE FOUNDATION

- Oct. 1 Faculty Resources Development
- 8 Student Science Training Program
- 15 U.S.-Latin America Cooperative Science Programs
- 29 Comprehensive Assistance to Undergraduate Science Education (CAUSE)
- Nov. 1 U.S.-France Exchange of Scientists
- 1 U.S.-Israel Binational Science Foundation
- 1 Computer Science Research (Unsolicited Research Proposals)
- 5 Local Course Improvement Program
- 12 Undergraduate Instructional Scientific Equipment Program
- 19 Women in Science
- 29 NATO Postdoctoral Fellowships
- Dec. 1 Graduate Fellowships for 1977-78
- 1 Student-Originated Studies (SOS)
- 1 Engineering Research Initiation Program
- 1 Specialized Research Equipment for Biological Sciences
- 3 National Needs Postdoctoral Fellowships
- 10 Research Initiation and Support (RIAS)
- 15 Scientists and Engineers in Economic Development (SEED)

New Programs

Sensory Physiology and Perception Program—contact Dr. Terrance Dolan, Program Director (202) 632-4264.

Memory and Cognitive Processes Program—contact Dr. Joseph Young (202) 632-5714.

DEPARTMENT OF TRANSPORTATION

- Dec. 1 Program of University Research-Problem Areas—Economics and Regulation of Transportation: Science and Technology; Operations and System Concepts; Social and Behavioral Aspects; Safety and Equipment; University-originated Topics. Brochures available in ORA.

NAT'L HISTORICAL PUBLICATIONS & RECORDS COMMISSION

- Nov. 15 Historical Records Grants Program—projects relating to preservation and use of historical records—contact National Historical Publications and Records Commission, National Archives and Records Service, Washington, D.C. 20408; (202) 724-1616.

ROCKEFELLER FOUNDATION

- Oct. 1 Humanities Fellowships—contact The Rockefeller Foundation Humanities Fellowships, 1133 Avenue of the Americas, New York, N.Y. 10036.
- Dec. 1 & May 1 Conflict in International Relations Fellowships (Postdoctoral)—contact The Rockefeller Foundation, 1133 Avenue of the Americas, New York, N.Y. 10036 (212) 869-8500.

WOODROW WILSON INTERNATIONAL CENTER FOR SCHOLARS

- Oct. 1 Postdoctoral fellowships—contact Woodrow Wilson International Center for Scholars, Smithsonian Institution Building Room 321, Washington, D.C. 20560.

NATIONAL ENDOWMENT FOR THE HUMANITIES

- Oct. 18 NEH Summer Stipends for summer of 1977—contact Division of Fellowships NEH, 806 15th St. N.W. Washington, D.C. 20506. (Limited to three applications per institution; contact Dean Gregorian FAS before submitting).

TECHNION INSTRUMENTS CORPORATION

- Dec. 15 Program of Grants in Biomedical and Industrial Instrumentation. Preliminary submission required prior to preparation of proposal. Necessary forms available at ORA.

NASA

- Dec. 3 Spacelab 2 Mission. Letter of intent due Oct. 1, 1976. Announcement available in ORA.

FROM THE UNIVERSITY PRESS

The University of Pennsylvania Press has announced the publication of the following volumes:

The Country Gentleman: A "Lost" Play and its Background edited by Arthur Scouten* and Robert D. Hume; \$14.95 cloth, \$4.95 paper. Misplaced for more than three centuries—from its banning by Charles II in 1669 to its discovery in the Folger Library in 1973—*The Country Gentleman* is only the second such Restoration play restored in the 20th century.

The Oldest Revolutionary edited by J.A. Leo Lemay; \$12.00 cloth. A collection of essays on Benjamin Franklin.

Speech Play: Research and Resources for the Study of Linguistic Creativity edited by Barbara Kirshenblatt-Gimblett*; \$15.00 cloth. An investigation into the linguistic and social resources that produce riddles, proverbs, jingles, jokes, and other speech play.

Vigilante Politics edited by H. Jon Rosenbaum and Peter C. Sederberg; \$10.00 cloth. The goals and personalities of vigilantes in America, Asia, Africa, and Europe are examined.

Women in Medieval History edited by Susan Mosher Stuard; \$15.00 cloth, \$4.95 paper. One of *The Middle Ages* series edited by Edward Peters*, this collection of essays takes up the alterations in woman's social position during the late middle ages.

Biological Control of Water Pollution, edited by Joachim Tourbier* and Robert W. Pierson, Jr.; \$20.00 cloth. Composed of 39 contributions to a conference on the title topic held at Penn in 1975, the book's six sections outline possible treatment alternatives for polluted water supplies.

To order a Press catalog or book, call Ext. 6261.

*Penn faculty member

WHO NEEDS IT?

What could be more useless than the pounds of paper that were pulled out of your files over the summer because there isn't room for another cabinet even if you had the spare funds to buy one?

The Penn Recycling Group has a use for the useless. Last year by recycling old computer printouts and cards, dead reports and deader newspapers, PRG planted three trees in the Penn Community Park—plus making cash donations to the University Library and other worthy causes.

The nonprofit student organization stands ready to do it again this year. Drop bundled or boxed paper at one of PRG's collection points (Hill Hall, the Quad, all high-rise dorms) or call to arrange for really large pick-ups: Seth Frankel, 1503 Harnwell House, EV2-0165.

OPENINGS

The following listings are taken from the Personnel Office's bulletin of September 22. Dates in parentheses refer to the Almanac issue in which a complete job description appeared. The full list is made available weekly via bulletin boards and interoffice mail. Those interested should contact Personnel Services, Ext. 7285, for an interview appointment. Inquiries by present employees concerning job openings are treated confidentially.

The University of Pennsylvania is an equal opportunity employer. Qualified candidates who have completed at least six months of service in their current positions will be given consideration for promotion to open positions.

Where qualifications for a position are described in terms of formal education or training, significant prior experience in the same field may be substituted.

The two figures in salary listings show minimum starting salary and maximum starting salary (midpoint).

ADMINISTRATIVE/PROFESSIONAL

APPLICATION PROGRAMMER ANALYST II (9-21-76).

ASSISTANT DIRECTOR OF ADMISSIONS (RECRUITMENT) (9-14-76).

ASSISTANT DIRECTOR CAREER ADVISING & RESOURCES to advise students on a one-to-one basis, including those pre-professional students who have not yet opted for specific advising components; conducts outreach workshops; coordinates advising with Fieldwork Resources, PreLaw and PreHealth, other components of Career Advising; develops career information for the Resource Library; assists in the planning and execution of career forums; and consults with other University offices. *Qualifications:* Graduate degree in relevant discipline preferred. At least one year's experience. Must be genuinely interested in students and effective in dealing with their advising needs. Ability to coordinate activities and work independently. \$9,850-\$13,550.

ASSISTANT MANAGER CONTRACT ACCOUNTING (9-14-76).

DIRECTOR OF ADVANCED PLACEMENT (9-21-76).

BENEFITS COUNSELOR (9-21-76).

DIRECTOR OF COLLEGE OF GENERAL STUDIES & SUMMER SCHOOL (9-14-76).

DIRECTOR OF RESOURCE MANAGEMENT (9-14-76).

DRAFTSMAN (9-14-76).

FACILITIES PLANNER to evaluate and lead the planning of facilities for school. Will work closely with the Planning Committee and other faculty and the University planning staff. Specific duties include analysis of the existing facilities for efficiency, utilization, and establishing of standards and guidelines for space assignment, writing functional programs, and providing liaison between the faculty and design consultants. *Qualifications:* Applicants should have advanced degree in industrial management, engineering, health care administration, or the management sciences with a minimum of ten years of progressively

responsible experience, including three years on a staff responsible for similar activities. Applicants must demonstrate capability to work closely with researchers within the school and interface with University-wide planning functions and needs. *Salary to be determined.*

FISCAL COORDINATOR (2) (9-14-76).

JUNIOR RESEARCH SPECIALIST (9-21-76).

LIBRARIAN II (9-14-76).

MANAGER OF OPERATIONS (9-14-76).

OFFICE MANAGER (9-14-76).

SECURITY SPECIALIST (9-14-76).

STATISTICIAN (9-21-76).

SUPERVISOR—MECHANICAL SYSTEMS (4) (9-14-76).

SUPPORT STAFF

ADMINISTRATIVE ASSISTANT I (2) (9-14-76).

ADMINISTRATIVE ASSISTANT II (9-14-76).

BILLING ASSISTANT responsible for all billing and initiating and answering correspondence related to billing. Various secretarial duties assigned by administrative assistant. *Qualifications:* Two years secretarial school; two years' experience. \$6,950-\$8,675.

CLERK III (2) (9-14-76).

FACILITIES COORDINATOR takes care of reservation and scheduling of University facilities in connection with all events not related to the academic program. Estimates approximate charges in accordance with the services requested. Prepares a list of the next day's activities giving times, organization names, and location. Maintains activities calendar, which involves periodic keypunching. Layout and prepare calendar for printing. *Qualifications:* Typing; keypunching experience helpful. \$6,950-\$8,675.

HEAD STOCKKEEPER supervises the work of stockroom personnel. Places orders for customers with vendors; records invoice prices on requisitions. Supervises and performs the billing of stockroom customers' accounts, procurement of supplies, etc. Performs related duties as assigned. *Qualifications:* Knowledge of mechanized stockroom procedures. Ability to supervise the work of others. Good administrative aptitude. Key punching and some typing are required. High school graduate with two to four years of procurement or stockroom experience, preferably at a college or university, or demonstrated ability. \$6,950-\$8,675.

MEDICAL SECRETARY (1) (9-14-76).

PAYROLL CLERK computes earnings using charts and appropriate withholding percentages. Posts salary cards, audits output from data processing, composes letters/other requests for information, prepares journal entries etc., answers telephone, mail. *Qualifications:* Good aptitude for clerical work and figures. Adding machine work. Graduation from high school with a course in bookkeeping and office practice. Two years' experience in an accounting department, preferably in the payroll section of a college or university. \$6,950-\$8,675.

PHYSICAL LABORATORY TECHNICIAN II (9-14-76).

PSYCHOLOGY TECHNICIAN II (9-14-76).

RESEARCH LABORATORY TECHNICIAN II (2) (9-14-76).

RESEARCH LABORATORY TECHNICIAN III (11) (9-14-76).

SECRETARY I types, answers telephones; some dictation or speedwriting. *Qualifications:* Good typing needed. \$5,625-\$7,025.

SECRETARY II (7) (9-14-76).

SECRETARY III (7) (9-14-76).

STOCKKEEPER II unloads and shelves miscellaneous chemicals, materials, and equipment. Disburses same; takes periodic inventory of stockroom contents. Keeps necessary records and files. Performs related duties as assigned. *Qualifications:* Aptitude for learning to handle and identify chemicals and related chemical materials. Graduation from high school preferably with a course in chemistry. Some experience in a stockroom or store. Physically able to move about and do strenuous work on occasion. \$6,050-\$7,550.

SHAPING UP VIA HUP

The Center for Behavioral Medicine will soon start fall programs for stopping smoking, controlling drinking and assertive training. The smoking program, which meets weekly for eight weeks and has five follow-up sessions, has a \$100 fee of which \$50 is refundable. There are sliding-scale fees for the alcohol group (twelve weeks with five follow-ups) and the assertive training program (ten weeks, with two follow-ups). For information: 662-3503, or 227-3503 from University phones.

HUP has another program for you, but you have to be admittedly hypertense. You also have to have blood pressure of 140/90 or higher, to be taking no antihypertensive medication, to be less than 55 years old, to have no heart or kidney damage, and to be available for weekly sessions for three months. The program is directed by Dr. Lester Luborsky, professor of psychology in psychiatry. An initial deposit fee will be returned when treatment is completed; other fees are nominal. If you want to join up, don't get excited; just call Paul Christoph, 662-2831, or 227-2831 from University phones.

The former Training Office—now renamed the Department of Organizational Development and Training—has just sent to deans, directors, and budget administrators a brochure giving details on its course offerings for University personnel. Starting dates are to be announced. In the meantime, Director Jack Glover and his staff members Thomas Wyly and Barbara Langston offer thumbnail descriptions of four courses now available:

THE ADMINISTRATIVE MANAGEMENT SEMINAR

This ten-week course in problems and policies in University administration, now substantially revised, is designed primarily for business administrators, administrative assistants, office managers, and others in comparable supervisory positions. It will feature a number of the senior administrators of the University discussing such topics as the economics and finance of higher education, University governance and management, personnel relations, administrative writing and communications, the impact of the energy program, affirmative action and equal opportunity, and other subjects as well. The fee will be \$50.

IN-SERVICE SECRETARIAL TRAINING

We offer both beginning and more advanced courses in both typing and stenography (Gregg shorthand). Beginning courses meet three hours a week for twelve weeks and cost \$45; more advanced courses meet for six weeks and cost \$25. Texts are provided.

ADMINISTRATIVE WRITING & COMMUNICATIONS

A basic administrative writing course, lasting eight weeks, with special attention to writing in the University context. Topics include common writing errors, the planning and organizing of business communications, consideration of audience, favorable and unfavorable responses, information gathering, and the long and short report. An important concern in any organization, effective communication is especially important in a University, whose constituent groups are so different and diverse. The fee will be \$30.

INTRODUCTORY ACCOUNTING

This introductory course, designed in conjunction with the Comptroller's Office, will be a series of "nuts and bolts" workshops for secretaries, office managers, and individuals in similar positions who have input into the budgetary and accounting systems. This training is intended to support the more intensive training the Comptroller's Office will initiate later this term for business administrators. Schedule and fee to be determined.

THINGS TO DO

LECTURES

"The Dragon and the Whale: 'Beowulf' and 'Moby Dick'" by Dr. Edward B. Irving, Jr., is scheduled for 4 p.m. October 4. The discussion of *fauna and fiction* is the Philomathean Society's first lecture of the fall; fourth floor, College Hall.

October 12 begins the Institute of Contemporary Art fall series of talks entitled *Emerging Traditions II: Eight Pivotal Figures*. Anne d'Harnoncourt, curator of 20th century art at the Philadelphia Museum of Art, speaks on Marcel Duchamp at 7:30 p.m. in the Fine Arts Building.

EXHIBIT

Art partners in the Philadelphia-Houston Exchange include a dozen talents from each city, the Texas twelve showing their stuff starting October 8 at the Institute of Contemporary Art. Next year, twelve Philadelphia artists travel to Houston. Gallery hours here are noon to 5 p.m. on weekends, 10 a.m. to 7:30 p.m. Tuesdays, and 10 a.m. to 5 p.m. Wednesdays to Fridays; closed Mondays. For information, Ext. 7108.

MIXED BAG

Penn plays Columbia in *football* at Franklin Field on October 2 at 1:30 p.m. Faculty and staff are entitled to discounts on season tickets. For information, call the ticket office, EV6-0961.

Let's sing in a concert by a 100-voice choir of males; October 2, 7 p.m.; \$5 admission; Harrison Auditorium, University Museum.

FILM

Underground, the second in the Christian Association's *Real to Reel* documentary series, shows September 29 at 8 p.m. A series of interviews and discussions with members of the Weather Underground, the film will be screened in the CA Auditorium and will be followed by a discussion. Admission: \$1.

Annenberg's own *Documentary Film Lab* series presents a number of short documentaries on September 29 also; 4 and 7 p.m.; Studio Theater of the Annenberg Center.

And if you feel unreal that night, go see *Wait Until Dark*, 7:30 p.m. in Fine Arts, Room B-1; \$1.

THEATRE

Performances of *Medal of Honor Rag*, directed by and starring Jose Ferrer, continue through October 10. For information and tickets, call the Annenberg Center box office, Ext. 6791.

Mime's the word in the Wilma Theatre Project's October festival. Dan Kamin, the first of four professional mimes in the program, performs September 30 through October 3 at the Christian Association; 8 p.m.; \$2.50. Classes open to the public are scheduled at 1 p.m. on October 2 and 3; tuition for all four classes is \$99, for one weekend \$30.

INVITATION FROM STOUTER HOUSE

Dr. Fred Karush, faculty master of Stout College House, wishes to advise the faculty that the House would be pleased to act as a co-sponsor for scholars visiting for a short period, by providing a guest room and weekday dinners in the Stout Dining Commons for stays of one or two weeks. The opportunity for the House residents to share an evening with the visitor would be gratefully appreciated. Contact Dr. or Mrs. Karush at the microbiology department (Med), Ext. 8739.

ALMANAC: 515 Franklin Building (I6) Ext. 5274

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