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NOTES

* There will be a meeting for all candidates for UAP, UAVP, the Executive Committee of the Undergraduate Association, and all class offices Tuesday night (Feb. 15) at 7:30 in the Undergraduate Association office (4th floor of the Student Center).

* General meeting for all premedical students to discuss the Premedical Advisory Program on Tuesday, February 15, at 5:00 p.m. in 10-250.

* A lecture-concert on Navajo Indian music and dance, given by Douglas Mitchell of Wesleyan University will be held Tuesday, Feb. 15, 8:00 pm, in the Sala de Puerto Rico.

* Alpha Phi Omega will hold an open meeting for students interested in learning about our chapter and its service program. Refreshments served after the meeting. Wednesday, Feb. 23 at 7:30 pm in the Mezzanine Lounge of the Student Center.

* Help build MIT support for MASS PIRG (Public Interest Research Group) EAST, a Nader-type, fulltime, professional staff representing, sponsored and directed by, and working with college students throughout Eastern Massachusetts. MASS PIRG EAST will engage in research, lobbying, public education, and supervision of student/faculty projects concerning public interest problems such as job discrimination and safety, consumer products, law, government, and the environment. Organizers are needed NOW to interact with students, faculty, administrators, staff, and representatives of other area schools to assure a significant role for MIT in the formation of Mass PIRG East. Meeting: Wednesday, Feb. 16, 3 pm in the Bush Room (10-105), or call Greg Williams, x2212 (leave your name and number if I'm not in).

* Applications for the Urban Legal Services Program (ULSP) Planning Board are available in the Urban Action office, W20-473, and are due Wednesday, Feb. 16. Call x2894 if you have any questions.

* Meeting for everyone interested in growing plants. We will discuss the formation of a plant club, and the organization of plant-related activities at MIT. Wednesday, Feb. 16, 7:30 pm in Student Center room 491. If you are interested but cannot attend, call Howard Hutchins, dl. 8-755 or x3261.

* There will be a meeting of anyone interested in Kaleidoscope, Thursday, 2/17/72, at 7:30 pm in room 400 of the Student Center. Students, faculty, staff, and employees welcome.

* CJAC open meeting Feb. 17, 7:30 pm in the Bush Room: discussion of Northgate and agenda for remainder of the year.

* Spaces are now available in Group I (9-12, MWF, Westgate) of the Technology Nursery School. For information please call Jessie Davies, 491-3634.

UROP

The bio-medical engineers at Boston University Medical Center would like to talk to students about possible projects. Currently this group is tackling: computer monitoring of the critically ill in a fail-safe manner, signal processing of clinically oriented data, telemetry and on-line signal processing by mini-computer, and interactive programming development for diagnosis and retrieval. For more information, please call or visit D. Burmaster, x4849, 20C-231.

Students interested in a research opportunity at the MIT Research Reactor in nuclear reactor engineering and physics, environmental problems of electrical power production, and/or fluid mechanics, should contact Professor Michael W. Golay, Room NW13-222, x5824.

The MIT Press has an IMLAC Computer and display system similar to those within the Cambridge Project and the Architecture Machine Group. Students interested in joining a possible research project there should contact Prof. Nicholas Negroponte, Room 9-518, x5960.

On the basic question of grading

By Lee Giguere

The discussion of the continuation of Freshman Pass/Fail, and the initiation of a Pass/No-Record grading system, slated for tomorrow's faculty meeting, may well be overshadowed by the subsidiary issue of "unofficial" grades. Yet, while the problem posed by demands for "unofficial" grades from freshman subjects is grave, it is important that it not be allowed to overshadow discussion of the merits (as well as the other problems) of Pass/Fail.

In spite of the fact that the demands of medical schools for grades seems to jeopardize the integrity of Pass/Fail, this question is only part of the whole range of concerns that the Pass/Fail and Pass/No-Record proposals raise. What the Committee on Evaluation of Freshman Performance is trying to deal with, it seems, is more than the question of the role of Pass/Fail in easing the adjustment of incoming freshmen to MIT. The heart of their arguments is that the grading system must be made to reflect, ever more accurately, the reality of the educational system it serves. The underlying pressure for the proposal of a No-Record system appears to flow from this desire to reflect, in a more accurate way, the reality of how MIT students conduct themselves.

For example, the CEFP points out that most students are now able to circumvent failing grades by dropping troublesome subjects late in the term — No-Record would simply recognize this, while making the administrative procedures less cumbersome for the student. At the same time, they defend the present procedures for dropping subjects, noting: "We recognize the advantages of having administrative records reflect reality as nearly as possible." The signs that they are concerned with the relationship of grading systems to the overall educational reality is clear.

Further, the CEFP's frequent statement that the freshman year should be treated as something special is only half of the argument for Freshman Pass/Fail. What is implied is the connection that since the year is different, the grading system should reflect the reality of this difference.

The fundamental question that seems to be most on the minds of CEFP members is: "Do grades really reflect learning?" While the question is not raised in their report, which tries to justify its proposals largely with pragmatic arguments, it seems that it is fundamental to the whole question of Pass/Fail vs. ABCDF grading.

The critical, validating assumption behind a quantitative grading system is that learning can be quantized, and that the rate of absorption of these quanta by students can be, so to speak, measured. If knowledge cannot be broken down into discrete, transmittable units, the system breaks down. Further, if there is no really accurate way of measuring the knowledge that students are acquiring, the system breaks down. In either case, of course, grades become meaningless because they are separated from reality.

In what sense is knowledge quantifiable? Traditionally, a course syllabus consisted of a series of well-defined ideas that the instructor chose to transmit to his students. In an engineering or science course these might be formulae describing physical events, in philosophy they might be certain rules of logic, and in history they might be a series of dates and events.

But even in the sciences, the trend seems to be away from the transmission of certain facts towards the acquisition by the pupil of certain techniques. Techniques, however, cannot be memorized the way facts can; to be really useful, they must be assimilated. The student, in effect, must take up the techniques and make them uniquely "his," internalizing them so that they can be used quickly and easily. This means that teaching is no longer simply a matter of transmitting a well-defined body of information; it becomes a much harder task: to encourage the student to think and reason productively for himself.

However, once learning takes on this form, it becomes much harder to determine whether the student has "learned" it. If teaching is viewed simply as the transmission of a body of information, it is a simple matter to determine whether

the student has memorized that body of material. But if teaching is looked on as the inculcation of a body of technique or skills, there is no way of determining, with certainty, whether these skills have been internalized. Questions that test the application of techniques to a body of data, whether the data is physical or historical, for example, are much harder to construct than questions which determine the mere acquisition of the same data. For example, if the data used for "test" are too similar to those used in examples, the test no longer measures the acquisition of general techniques but of very specific ones. The problem is complicated by the fact that if techniques are really general, for example, if they attempt to explain the effects of mass transportation on a city, they may not, even if properly acquired, always lead to the same conclusions. Testing becomes nearly impossible task.

The result of this is, of course, that quantitative grades are separated from quantitative reality. In order to make them work, artificial systems are devised. But often enough, what happens is that the grades measure, not any real learning, but the ability to deal with the artificial grade-assigning system. The grades no longer reflect anything real.

Freshman Pass/Fail, with its denial of quantified evaluations, is an attempt to make the grading system more meaningful by making it represent an evaluation of real learning rather than facility with an artificial system. Meaningful evaluations between students and teachers seem to be better encouraged by the qualitative measures that the CEFP's proposal promotes. Quantitative grades reflect not the internal reality of the educational system, but demands imposed on it by outside agencies (like medical schools, for example) who need a way of ranking people easily but are not necessarily concerned with determining what they've internalized.

If grades are to reflect the educational system they serve (and presumably that means the system they are part of), the merits of Pass/No-Record seem to far outweigh those of a quantified ABCDF system.

Letters to The Tech

To the Editor:

Sandra Cohen's report of the February 7 meeting of CEFP (*The Tech*, Feb. 8) has evoked fears among many students; among many preparing to enter medical school — fears that the suppression of "hidden grades" could impair their chances for admission — and fears among the advocates of true pass/fail that the mere existence of hidden grades, and unquestionably their use, would undermine such a system.

The Preprofessional Advising Office, with which I have been working closely, has been preparing a manual to serve as an aid to the medical school applicant, and also as a guide to the Premedical Advisory Council, composed of 24 faculty, administrative and medical people. As soon as we became aware of the report of the CEFP we began to work closely with them in an effort to include in the manual a plan that would, insofar as possible and until a better plan becomes available, allay both fears. Its logistics are as yet to be worked out. Until official action dictates a modification we propose to include the following statement in the manual:

Pass/Fail

Freshman year at MIT is all pass/fail. Some medical schools prefer letter grades or instructors' evaluations to pass/fail grades in specific medical school entrance requirements — particularly in biology and chemistry. You are advised to arrange for some kind of evaluation of your pass/fail. The instructors' comments on the Freshman Evaluation Forms are often inadequate. Ask your instructor to make his evaluation at the end of the semester in which you took the course — when he is best able to do it rather than two or three years later at which time he may have forgotten you or have left the Institute. You should be aware that some subjects may not be organized or taught in a way that provides the instructors with sufficient information to supply a

letter grade, and that the instructor may feel, further, that the supplying of a letter grade is incompatible with the pass/fail spirit of the course.

Inform your premedical advisor about your first year experience at MIT. Arrange for the Preprofessional Advising Office or other designated center to provide him with any evaluations that may have been supplied by instructors. Show him your Freshman Evaluation forms so that he can incorporate pertinent comments in pass/fail graded courses in the letter of reference that he will write for the committee to be sent on to medical schools to which you apply.

Bernard S. Gould
Chairman, Premedical
Advisory Council

An open letter to Benson Snyder:

We are writing to you because we are concerned about the employee grievance procedures of M.I.T., both in general and in the specific case of Valda Maeda. We have read the outline of these procedures given in the *Tech Talk* of January 19 and we have talked to Reay Freve, Valda Maeda, Henry Millon, Larry Susskind, and others, about the Maeda Case. This has led us to the opinions we express here. We note that the policies described in the *Tech Talk* refer only to grievances involving claims of racial or sexual discrimination but we feel any such policy must also cover political discrimination. We understand that the library directors also recognize the lack of any such procedures for their professional personnel.

Our main general concern is that such grievance procedures should contain possibilities of an open hearing for the employee involved, if the employee so wishes. We believe no policy is fair, nor can be considered to have any objectivity, which does not permit this. It is essential that the employee be able to answer accusations and to confront his or her accusers. The present M.I.T. policy, as

outlined in *Tech Talk*, fails to do this. It only involves shifting the case from one administrator to another. Since administrators naturally tend to support each other and all are in the employ of M.I.T. this seems obviously unfair to the employee. We recognize many possible difficulties with an open hearings procedure but none as important as the unfairness of the present system. In this system the jury and the prosecutor are really one and the same.

In the case of Valda Maeda we specifically urge such a hearing. We ask this both for the general principles stated above and because of our state of mind after speaking about the case with the people mentioned above. There are various intertwining strands to this case and each conversation brings up points that require going back to a previous informant. We see no way that we personally can be satisfied that justice is being done without bringing together all the information, and doing it openly.

There is one further point we must make about the Maeda case. The summary firing of her seems unjustified, and seems to have been done vengefully in a moment of anger. We plead that she be paid her salary to her termination date in July, regardless of the outcome. But saying this we do not mean to imply that this alone would be a satisfactory solution. Terminating her contract in July seems unjustified until the case against her has been demonstrated openly.

We urge you to take action quickly on this matter. In fact, we are so concerned about it that we are considering raising it at the next faculty meeting. We would also appreciate knowing your response to our suggestions.

Warren Ambrose
William Watson

(The preceding letter to Dean Snyder, dated January 26, 1972, was given to *The Tech* by Professors Ambrose and Watson — Editor)