

DOCUMENT RESUME

ED 077 472

HE 004 310

AUTHOR Otto, David J.
TITLE A Study of the Pass/Fail Grading System.
INSTITUTION Alberta Univ., Edmonton. Office of Institutional Research and Planning.
PUB DATE [72]
NOTE 17p.
EDRS PRICE MF-\$0.65 HC-\$3.29
DESCRIPTORS *Grades (Scholastic); *Grading; *Higher Education; International Education; *Pass Fail Grading; *Student Evaluation
IDENTIFIERS University of Alberta

ABSTRACT

Experience with the pass/fail system at the University of Alberta and a review of the literature has shown that (1) pass/fail does not seem to motivate the student to learn; (2) students do not use it as a vehicle to explore outside their major; and (3) students do fewer of the assigned readings and attend fewer classes in courses elected under pass-fail than they do with courses elected under the conventional grading system. Despite conclusive evidence, the author is reluctant to recommend abandoning nontraditional grading. The two reasons advanced are: it is too early in the innovational development to measure the real impact on the student, and nontraditional grading may do more to foster a lifetime of learning attitude. (Author/HS)

ED 077472

A Study of the Pass/Fail Grading System

David J. Otto, Ph. D.
The University of Alberta

ABSTRACT

Experience with the Pass/Fail system at the University of Alberta and a review of the literature has shown that (1) Pass/Fail does not seem to motivate the student to learn, (2) students do not use it as a vehicle to explore outside their major, and (3) they do fewer of the assigned readings and attend fewer classes in courses elected under Pass/Fail than they do with courses elected under the conventional grading system.

Despite conclusive evidence, the author is reluctant to recommend abandoning non-traditional grading. The two reasons advanced are: it is too early in the innovational development to measure the real impact on the student and non-traditional grading may do more to foster a 'lifetime of learning' attitude.

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION
THIS DOCUMENT HAS BEEN REPRO-
DUCED EXACTLY AS RECEIVED FROM
THE PERSON OR ORGANIZATION ORIGIN-
ATING IT. POINTS OF VIEW OR OPINIONS
STATED DO NOT NECESSARILY REPRESENT
OFFICIAL NATIONAL INSTITUTE OF
EDUCATION POSITION OR POLICY

004 3/0

A Study of the Pass/Fail Grading System

David Otto, Ph. D.
Office of Institutional Research and Planning
University of Alberta

INTRODUCTION

Non-traditional grading systems, Oliver (1971) reports, are increasing in popularity amongst today's undergraduate students. Over sixty percent of the 1,278 registrars and admissions officers who responded to Oliver's survey indicated that their institutions engaged in some mixture of traditional and Pass/Fail grading.

Five of the twenty Canadian registrars and admissions officers in Oliver's survey said they were using the Pass/Fail system as part of the undergraduate's record. The University of Alberta was one of these.

In March of 1970, David Leadbeater, then President of the Students' Union, wrote the Executive Committee of the General Faculties Council formally asking that the University of Alberta seriously consider Pass/Fail as an alternative grading system. The Executive Committee charged another GFC Committee, the Committee to Investigate Teaching, with the responsibility of examining the implications of using Pass/Fail grades.

THE STUDY

The Committee to Investigate Teaching first determined if the Registrar had the means to record letter as well as number grades. (The University of Alberta is currently under a nine-

A Study of the Pass/Fail Grading System

point grade scheme, where 1 is failing and 9 is excellent). The Committee then promulgated a set of guidelines¹ and interested instructors were invited to offer their students a Pass or Fail grade as an alternative to the nine-point system. Information from these volunteered classes was obtained, in questionnaire form² by the Office of Institutional Research and Planning. Other information was obtained from an extensive literature search.³ The questionnaires returned from the 1971-72 academic year and the literature review are the basis of this paper.

Proponents of non-traditional forms of grading, (e.g., written evaluations, Pass/Fail, contract grading schemes, etc.), claim the newer systems offer a number of advantages over the older, more conventional system. The first advantage is that the non-traditional grading system shifts the wellspring of motivation to learn from an external, competitive source (grades) to an internal, self-satisfying location (interest in the subject for its own sake). In place of the student working for a grade, they argue, he works to master the subject. A second advantage of a non-traditional grading system such as Pass/fail is that it allows the student to explore subjects outside his required list of courses without fear of unduly lowering his Grade-Point Average (GPA). Finally, Pass/Fail relieves the student of the obligation to achieve perfection in

¹ See Appendix A.

² See Appendix B.

³ Otto, "Pass/Fail Grading System: a Literature review, forthcoming.

A Study of the Pass/Fail Grading System

every subject he is required to take. The advocates of Pass/Fail argue that students have varying talents; and that students have been known to excel in some subjects while stumbling in others. Further, each student's profile of talents and interests differs. Pass/Fail, therefore, allows the student to tailor his academic demands to his idiosyncrasies.

In response to the first advantage, proponents of the traditional grading system cite a number of studies, such as Karlins, et al. 1969; Von Wittich, 1972; Quann, 1972; Gold, et al. 1971; Stallings and Smock, 1971; Suslow, 1967; Morishima & Micek, 1970; and Tragesser, et al. 1968; all of which indicated that a student who elected a course under Pass/Fail would have received a significantly lower traditional grade than the grade which his classmate who chose to remain with the conventional grading system had received. An undeniable phenomenon emerges from many of these studies. The proportion of failing grades is higher amongst students under Pass/Fail than amongst students under the conventional grading system. One concludes that students were simply not working very hard. A few studies, such as Karlins, et al. (1968) and Morishima & Micek (1970) illustrated this phenomenon when they sampled the opinions of the students and reported that a majority of those who took a course under Pass/Fail did less of the required reading, attended fewer classes and spent less time studying for that (Pass/Fail) course than they did for their traditionally graded courses.

A Study of the Pass/Fail Grading System

Students at the University of Alberta appear to be no different than the students in the studies cited above. I need only select some of the written comments from our own questionnaire as evidence.

Area A Student: "A pass/fail system would in large part eliminate competition among students. I believe in competition for better marks and enjoy it. Without it I would probably get lower marks if left to my own studies."

Area B Student: "Pardon my cynism, (sic) but grades are the only motivation I have, I guess P/F is OK for those in other fields but I have no doubt they'll reduce the amount of work done in these courses."

Area C Student: "I have grown up in a highly competitive type of school system and have always been able to do fairly well. In other words, the only grading system I have known has been one which involved reaching for a higher point. As a result, this has always been a strong motivating factor for me -- and because I have frequently managed to achieve fairly good grades, it has been rewarding."

Data from the University of Alberta (Table I. on the next page) corroborates the observation that students under Pass/Fail would have received a lower regular grade than their counterparts who remained under the conventional system. Initially 368 students registered in seven courses taught by members in four departments responded to the one-page Pass/Fail questionnaire (see Appendix B). The Office of Institutional Research and Planning removed fifty-six of the responses from Table I., either because they were from students who were majoring in that subject (see Restrictions A(5) in Appendix A), or because they were from students enrolled in the Faculty of Graduate Studies. This reduced the number of responses to 312.

A Study of the Pass/Fail Grading System

Ninety-six more responses were eliminated for one or more of the following reasons: 1) the student failed to identify himself on the questionnaire (hence no grade could be ascertained); 2) the student neglected to answer question thirteen (his choice of grading system in this course); or 3) as was the case in one course, none of the students had elected Pass/Fail.

Table I.

THE UNIVERSITY OF ALBERTA EXPERIENCE WITH PASS/FAIL

216 students who were in courses where the Pass/Fail (P/F) option was offered during the 1971-72 academic year and who actually had the option because the course was not in their major. Courses are identified by subject area pseudonyms.

NUMBER GRADE	AREA A		AREA E		AREA C		AREA D		TOTAL	
	P/F ¹	NUM ²								
Low 1.	2	0							2	0
2.	11	2							11	2
3.	11	1	1	0					12	1
4.	10	2	4	7					14	9
5.	11	9	2	4	2	0	3	6	18	19
6.	6	8	7	14	5	1	1	9	19	32
7.	3	9	7	12	5	1	0	11	15	33
8.	1	2	0	4	2	1	0	8	3	15
High 9.	0	3	0	2	2	0	1	3	3	8
TOTAL	55	36	21	43	16	3	5	37	97	119
	$\chi^2 =$	25.88		5.18		1.45		7.20		37.13
	df =	8		6		4		4		8
	p <	.001		.52		.835		.126		.001

¹ The final nine-point grade that the students who elected Pass/Fail (P/F) would have received.

² The final grades of the students who had the choice, but opted for the nine-point grade.

The second reason advanced for the adoption of Pass/Fail by its supporters is that it allows the student to explore subjects outside his major area of interest. Due to the experimental

A Study of the Pass/Fail Grading System

design, this concept could not be examined at the U of A. The University of Alberta student did not have the option to choose Pass/Fail at the time of registration. Instead, it was the instructor who made the decision. Consequently the student's only opportunity to elect Pass/Fail was left to pure chance. Studies done elsewhere (Bain, et al. 1971; Quann, 1972, and Smith, 1971) clearly indicate that few students actually used Pass/Fail to explore what was, to them, uncharted academic territory.

The third issue, permitting the student a chance to maximize his intellectual strengths, appears to have some merit. At the University of Alberta every undergraduate student faces five or more courses a year varying, for him at least, in difficulty and personal interest. While a student may wish to emphasize one subject over another, he is compelled by the present form of grading to spend roughly equal amounts of time studying for each course. If he wishes to spend more time pursuing a stimulating subject or is forced to do so by its intellectual impenetrability, he must steal scarce study time from his other subjects. As Raimi (1967) put it:

"We scholars don't behave that way. [equal distribution of time amongst all our obligations] We sometimes resign from committees in order to write a book, or abandon a research problem for a year to fill in as Department Chairman, or turn totally from one branch of studies to build our competence in another. And if we fall ill for two weeks, do we petition for a make-up examination?" p. 312

A Study of the Pass/Fail Grading System

This is precisely the point which comes to mind when examining the students in Area A of Table I. It is interesting to note that students registered in subjects in Area A who chose Pass/Fail were the only ones who demonstrated a significantly lower final grade distribution than those who did not choose Pass/Fail; and that the high number of students enrolled in this area (N=91) is a large portion of all students involved in the University of Alberta study. The majority of students who elected Pass/Fail in the subjects taught in Area A were from one faculty taking required introductory courses in another. This particular teaching unit has the reputation of being one of the strictest grading departments of all departments offering undergraduate courses at the University of Alberta.⁴ I feel sure that the student who elected Pass/Fail in one of Area A's courses knew that prospects of a high grade were dim, and that extra effort in this course would bring him less reward than extra effort in his other courses.⁵

This brings to mind two other problems associated with the use of Pass/Fail. When more than one kind of evaluative symbol appears on the students' transcripts, graduate and professional school admissions committees become uneasy (see Perry, 1968; Hanlon, 1964; Hofeller, 1971; Rossmann, 1970; Oberteulier, 1970;

⁴ This is easily corroborated by the McLean report (1971), which showed the grades awarded by department A to have one of the highest failure rates and lowest overall average grade of all introductory courses offered during the academic year 1969-70.

⁵ See Becker, *et al.*, 1968, for a description of student attitudes toward expected grades.

A Study of the Pass/Fail Grading System

and Oliver, 1971). As Hanlon said:

"Knowledge of the comparative standing is a necessity in evaluating the academic attainment of students from the few schools that do not report in terms of any of the usual grading systems.... In my experience with some of these unusual methods of reporting academic standings, there is frequently so much uncertainty about a student's academic ability that he simply cannot be considered for admission." p. 95

Hoteller expressed the same feeling when she said:

"The outstanding student, whose credentials include exceptional test scores, an academically prestigious college, and outstanding recommendations, may suffer little jeopardy from a choice of non-traditional grades. However, a well qualified, but not noticeably unique, applicant who opts for Pass-Fail grades may well be discriminated against in favor of his potentially less able but more traditional peer. Although this trend might alter drastically, its present direction is of immediate concern to contemporary students." p. 11

Thus today's undergraduate runs the risk of weakening his chances at the graduate or professional school of his choice when he exercises his Pass/Fail option.

The second problem arises from the University of Alberta's present grading system. In reality, the nine-point system can be divided into three broad categories: Pass (grades '4' through '9'); Conditional Failure, with provision for writing supplemental examinations (a '3' gives the student a second chance in many faculties); and an Irrevocable Failure ('1' or

A Study of the Pass/Fail Grading System

'2'). A student who fails a course under the present Pass/Fail system is not entitled to a second chance. According to their teachers, eleven students in Area A and one student in Area B would have received a Provisional Failure, a '3'. An examination of the records reveals that eight of these dozen students were given a Pass (P). This suggests that the responsibility for a final decision, in doubtful cases, falls upon the teacher, for no longer can he issue a '3' and suggest that the student write a supplemental examination. Indeed, the records show that two students who had received a 'F' repeated the course the following term, this time earning conventional grades (a '5' and a '6').

CONCLUSION

A year ago this writer had looked upon non-traditional grading schemes as a beneficial educational innovation for both institutional and student. Experience with the Pass/Fail system at the University of Alberta and a review of the literature has sobered my attitude. Pass/Fail does not seem to motivate the student to learn. Students do not seem to use this form of grading as a vehicle for exploring subjects outside their major.

⁶ "The grade of 3 may offer some problems, since it is a conditional grade, falling between a pass and a failure. Since a student's entitlement to graduate with a grade of 3 in one or more courses may not be apparent until his final year grades are available, a supplemental examination should normally be recommended in any course in which a student has received a grade of 3" (source: University of Alberta, FOLIO, January 18, 1968).

A Study of the Pass/Fail Grading System

Kallins, et al. (1968) have shown that students taking courses for Pass/Fail at Princeton reported that they did fewer of the assigned readings and attended fewer class sessions than they had done for their other, conventionally graded, courses.

While these conclusions soundly condemn the Pass/Fail grading system, I am reluctant to suggest that all future use of non-traditional grading cease. Here are my reasons. It is true that students under the Pass/Fail system, by and large, do let up on their studies, but this phenomenon might easily be due to an extended period of conditioning in which the student has internalized his need to work for a grade. (See the student comments above).

A second reason is that today's colleges and universities do an excellent job preparing the student for the competitive world, but perhaps these same institutions are failing to prepare the student for a lifetime of learning. Our conditioning has made the youngster dependent upon the instructor, who tells him what to learn when. A sudden release from the impelling force of 'grade grubbing' may leave the student in limbo. If the student were to have a series of non-traditionally graded courses, he might develop the independent study frame of mind.

A third reason deals with the students' workload. One must keep in mind that, contrary to popular opinion, students are human beings, and as rational men and women working towards certain educational and vocational goals, they naturally will employ every legitimate means of 1) improving their grades, 2)

A Study of the Pass/Fail Grading System

graduating and 3) securing either a berth in some graduate or professional faculty, or a job. Modern society has increased the tempo of learning and the pressure to excel without a corresponding increase in the student's curricular autonomy.

Non-traditional grading systems such as Pass/Fail may or may not be the answer to motivation, lifelong learning, and a redistribution of academic pressure. I would recommend that every instructor and administrator in higher education seriously reflect on the implied contribution of a newer form of grading relative to the educational objectives of his students and his institution.

A Study of the Pass/Fail Grading System

BIBLIOGRAPHY

Fain, P. T.; Hales, L. W. & Lang, L. P. "Does Pass-Fail Encourage Exploitation?". College and University v. 47 (Fall, 1971) pp. 17 - 18.

Becker, Howard; Greer, Blanche & Hughes, Everett. Making the Grade: The Academic Side of College Life. New York: John Wiley and Sons, 1968.

Gold, Richard M.; Reilly, Anne; Silberman, Robert & Lehr, Robert. "Academic Achievement Declines Under Pass-Fail Grading." Journal of Experimental Education. v. 39, #3 (Spring, 1971) pp. 17 - 21.

Hanlon, Lawrence W. "College Grades and Admission to Medical School." Journal of Higher Education v. 35 (February, 1964) pp. 93 - 96.

Hofeller, Margaret A. "A Survey of Graduate School Attitudes Toward Non-Traditional Grading Systems: Preliminary Report." Hempstead, Long Island: Hofstra University Center for the Study of Higher Education, 1972. (also ERIC # ED 056 677)

Karlins, Marvin; Kaplan, Martin & Stuart, William. "Academic Attitudes and Performance as a Function of Differential Grading System: an Evaluation of Princeton's Pass-Fail System." Journal of Experimental Education v. 37, #3 (Spring, 1969) pp. 38 - 50.

McLean, R. Alan. "Student Marks Analysis: A Report on the Distribution of Students' Marks for the Year 1969-70." Edmonton, Alberta: Office of Institutional Research and Planning, January 27, 1971.

Morishima, James K & Nicok, Sidney S. "Pass-Fail Evaluation: Phase I: Grade Distribution Analysis; Phase II: Questionnaire Analysis; and Phase III: Summary" (Reports # IEE-132-1, 2, & 3) Seattle, Washington: The University of Washington, Office of Institutional Educational Research, 1970 (mimeograph)

Oberteuffer, Margaret. "College Reactions to a Pass/Fail Threat." National Association of College Admissions Counsellors Journal (National ACAC Journal). v. 15, #1 (May, 1970) pp. 8 - 9.

Oliver, E. E. (Chairman). The AACRAO Survey of Grading Policies in Member Institutions. Washington, D. C.: American Association of Collegiate Registrars and Admissions Officers, 1971.

Ferry, Louis B. "College Grading: A Case Study and its Aftermath." Educational Record. v. 49, #1 (Winter, 1968) pp. 78 - 84.

A Study of the Pass/Fail Grading System

Quann, Charles James. "Pass/Fail Grading: Panacea or Placebo?" National Association of College Admissions Counsellors Journal (National ACAC Journal). v. 16, #4 (February, 1972) pp. 11 - 13.

Raimi, Ralph A. "Examinations and Grades in College." AAP Bulletin. v. 53, #3 (September, 1967) pp. 309 - 317.

Rossmann, Jack C. "Graduate School Attitudes to S-U Grades." Educational Research. v. 51 (Summer, 1970) pp. 310 - 313.

Smith, Kirker. "Pass-Fail: Were Your Hypotheses Valid?" College and University. v. 46 (Summer, 1971) pp. 549 - 555.

Stallings, William M. & Smock, H. Richard. "The Pass-Fail Grading Option at a State University: a Five Semester Evaluation." Journal of Educational Measurement. v. 8, #3 (Fall, 1971) pp. 153 - 160.

Suslow, Sidney. "Undergraduate Pass/Not-Pass Grading At the University of California, Berkeley." Berkeley, California: University of California (Berkeley) Office of Institutional Research, May, 1967. (mimeograph)

Tragesser, E. F. "Are New Developments in Achievement Testing an Adequate Answer to P/F Systems?" College and University. v. 43 (Summer, 1968) pp. 565 - 567.

Von Wittich, Barbara. "The Impact of the Pass-Fail System upon Achievement of College Students." Journal of Higher Education. v. 43, #6 (June, 1972) pp. 499 - 508.

APPENDIX A

Guidelines for Experimentation with Pass/Fail Grading Systems in Undergraduate Courses:

A - Restrictions

- 1) Student participation must be voluntary, i.e., each student must indicate his option for the pass/fail system or the present grading system, preferably at the beginning of the course.
- 2) Faculty participation must be voluntary.
- 3) Junior (200-level) courses are excluded.
- 4) Courses in any student's major area are, for the time being, excluded.
- 5) No more than one full or two semester courses may be taken on a pass/fail basis by any student in any one year.
- 6) For the time being, pass/fail appears to be the only alternative to the nine-point system we can handle. Pass/fail with comments, or honours/pass/fail systems cannot easily be considered at this time.

B - Requirements

- 1) The Department Chairman and/or Faculty Dean must be informed of courses which the faculty intend to offer with a pass/fail option.
- 2) The Registrar's Office must be apprised of courses offering the pass/fail option to students.
- 3) Normal grading procedures, as given by University and Faculty and Department policies, must be observed, at least during the initial experimental phase (i.e., 1971-72). Full records must be kept for all students, and made available to C.I.T. or Institutional Research for statistical analyses.
- 4) Questionnaires, supplied by the Committee to Investigate Teaching or worked out in conjunction with its members, must be filled out by all students in the class, including those not opting for a pass/fail grade.
- 5) A similar questionnaire must be completed by the instructor wishing to experiment with pass/fail grading.

C - Objectives

- 1) To gather measurable information about:
 - a) student achievement;
 - b) student satisfaction;
 - c) faculty satisfaction with pass/fail grading systems.
- 2) Coincidentally, but independently, to gather information about the utility of University grades as predictors.
- 3) To encourage experimentation with new methods of teaching made possible by the introduction on pass/fail grading options.

NAME _____ ID # _____ COURSE _____

A Pass/Fail grading system has been introduced on an experimental basis at the University of Alberta, originally at the instigation of Student's Union, who felt that such a system would offer more opportunity for students to take courses outside their major areas, without having to compete for grades with other, better trained students who were majoring in that area. At present the Pass/Fail system is a) voluntary; b) not open to students in the area in which the course is given; c) not open to junior courses unless special permission has been given; and d) limited to one full or two semester courses per year per student. Students electing the P/F option are graded in that course but their final mark is reported to the Registrar and Dean only as "Pass" or "Fail", and their grade point average for that year is computed only on the four remaining courses.

In order to assess this program we must have feedback from the people involved. We've tried to keep the questionnaire below as short as possible. Please answer all questions by circling the most applicable alternative (usually "Agree", "Disagree", or "Neutral"). Please use the back of the sheet for any further comments you may want to make: they will be read and appreciated. Thank you.

Agree Neutral Disagree

- | | | | |
|--|---|-----|----|
| 1. P/F grading allows students to do less work to pass a course. | A | N | D |
| 2. Grades are more than just a way of evaluating students; often they're the only feedback students get as to what they're learning | A | N | D |
| 3. As pressure (exams, papers, labs) increases in their graded courses, students will do less work in their P/F courses. | A | N | D |
| 4. Students select optional courses in large part on the basis of the grades they think they will get for them. | A | N | D |
| 5. P/F grading allows student to concentrate on that part of the course material which is relevant and valuable <u>for them</u> , without forcing them to memorize a lot of stuff just to get a grade. | A | N | D |
| 6. P/F may be appropriate for Arts-type courses, but in "hard" disciplines like medicine, engineering, or science, numerical grades are needed. | A | N | D |
| 7. P/F students do less work for their P/F courses than their other courses. | A | N | D |
| 8. Other people (employer, graduate schools) may interpret a "Pass" grade as the equivalent of a 4. | A | N | D |
| 9. P/F reduces classroom pressure and anxiety, and leads to an overall improvement in the class atmosphere, even for people not on P/F. | A | N | D |
| 10. The presence of some P/F students in a class tends to lower the level of achievement of the class as a whole, and thus interfere with optimum learning conditions. | A | N | D |
| 11. The suitability of P/F for a class depends more upon the nature of the course than the desires of the student. | A | N | D |
| 12. P/F should be expanded maintained eliminated | | | |
| 13. I elected the P/F option in this course. | | Yes | No |
| 14. I would like to take the P/F option in another course, if eligible. | | Yes | No |

