Grades[1]

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INTRODUCTION

The evaluation of student performance is an integral part of the American system of education, and higher education is no exception. In most cases this evaluation is ultimately expressed in the forms of grades, either letters (A through E), with or without pluses and minus, or numbers (0.0 to 4.0). Indeed, institutions that eschew these particular codes for lengthier narrative evaluations[2] are notable in their rarity. This reliance on grades is ironic in that faculty dislike the requirement to assign grades and students dislike receiving grades. Nonetheless, the process continues, for some good reasons.

At the University of Washington, the grades assigned for most classes are expressed as numbers ranging from 0.0 to 4.0, with a 0.0 denoting flunking and a 4.0 being equivalent to an A. All scale points are available down to tenth except 0.1 to 0.6. A small subset of classes are graded dichotomously (pass/fail, satisfactory/unsatisfactory, or credit/no credit). This system has been in effect since 1976, when it was changed from the letter grades of A, B, C, D, and E. A major motivation for this change was to try to control the perceived grade inflation of that time. (Average GPA's had risen from 2.31 to 2.91 from 1964 to 1974!) By grade inflation, we simply mean an increase in the average grade given with no commensurate increase in the quality of student learning. The former can be measured directly and easily; the latter less so and is most often indexed by faculty opinion, with echoes of the good old days.

During the 1994-95 academic year the Faculty Senate Council on Academic Standards took up the question of grading and the perceived continuation of grade inflation on the UW campus. In brief, their overriding concern was whether the grading system is broken and needs to be fixed. This interest led the Office of Educational Assessment to undertake a survey of faculty focused totally on grading matters, and to include questions on grading in the annual survey of seniors. The faculty survey was done via Email in the spring of 1995 and has been reported elsewhere.[3] The senior survey was done via mail also during spring of 1995 and has not been reported in its entirety to date. This report will include some of the results of these two surveys. In addition, data will be presented from the UW Registrar's Office on trends in average grades over time, and from the UW Office of Institutional Studies on average grades given in various academic units. The purpose of the report is to bring data from these various sources to bear on a series of questions relating to grades and grading standards.

Have average grades increased over time?

In Figure 1, the average fall quarter GPA of undergraduate students is presented from 1975 through 1993.[4] This graph shows that average GPA's rose steadily from 1973 (2.88) to 1987 (3.08). However, from 1987 to 1993, the average has stayed fairly level, between 3.07 and 3.10.

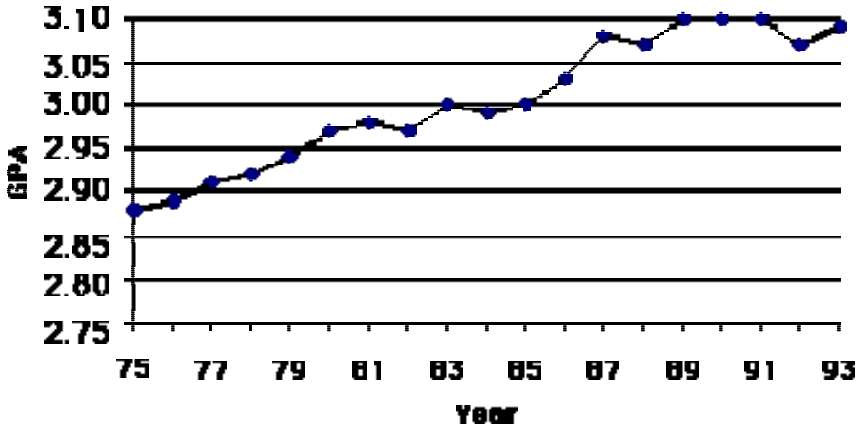

Figure 1. Average fall quarter undergraduate grade point averages from 1975 to 1993.

Do faculty perceive that grade inflation is a problem?

In the survey of faculty, 90.7% of the respondents felt that grade inflation is a problem at the University of Washington. In terms of taking action, 33.8% felt that strong measures should be taken to lower average grades, 49.4% felt some measures should be taken, and 7.5% felt little could be done about it.

Are students and faculty satisfied with the current grading system?

Faculty were explicitly asked if they were satisfied with the 4.0 decimal grading system. Overall, 50.1%, a tiny majority, indicated satisfaction. Larger proportions of Full and Associate Professors indicated satisfaction than Assistant professors. Both faculty and students were asked whether they preferred:

- the 4.0 decimal system as now currently used at UW
- letter system with pluses an minuses
- straight letter grades
- no preference

The results for both groups are presented in Figure 2.[5]

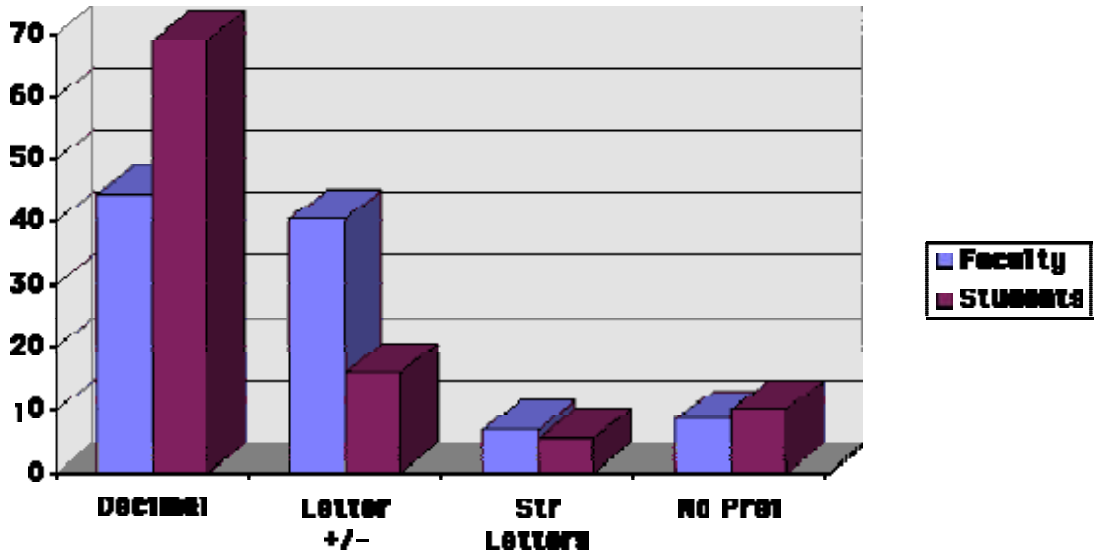

Figure 2. Grading system preferences

For both groups, the most popular grading system was the current one at the University of Washington. Students' preference for this system was considerably stronger than faculty preference. Nearly as many of the latter preferred grades with pluses and minuses as preferred the decimal system.

What should the average grade be?

The average undergraduate GPA at UW is about 3.12. But what should it be? This question was posed of both faculty and students. The mean of the ideal average GPAs was 2.68 as specified by faculty and was 2.84 as specified by students. The student's ideal was somewhat higher than faculty's ideal but still considerably below current reality. 88% of the student respondents and 96% of the faculty respondents felt that the ideal average GPA should be lower than 3.12. Incidentally, faculty respondents perceived that the ideal average grade given should increase with course level, from 2.58 for 100-level course to 2.93 for 400-level classes. They also felt that the ideal GPA for graduate students should be 3.28. It is in reality about 3.66. Students were asked neither of these latter questions.

Do students feel they are receiving grades that are higher than they deserve?

If students feel the ideal is lower than the reality, it follows that they must think that they themselves are receiving higher grades than they deserve. Not necessarily so. In response to the question: Considering your own view of how you have performed, do you think the grades you have received in courses within your major have tended to be:

- much higher than you should have received?
- a little higher than you should have received?
- about what you should have received?
- a little lower than you should have received?
- much lower than you should have received?

Students were asked the same question for courses outside their major. The percentage of responses in each category is shown in Figure 3.

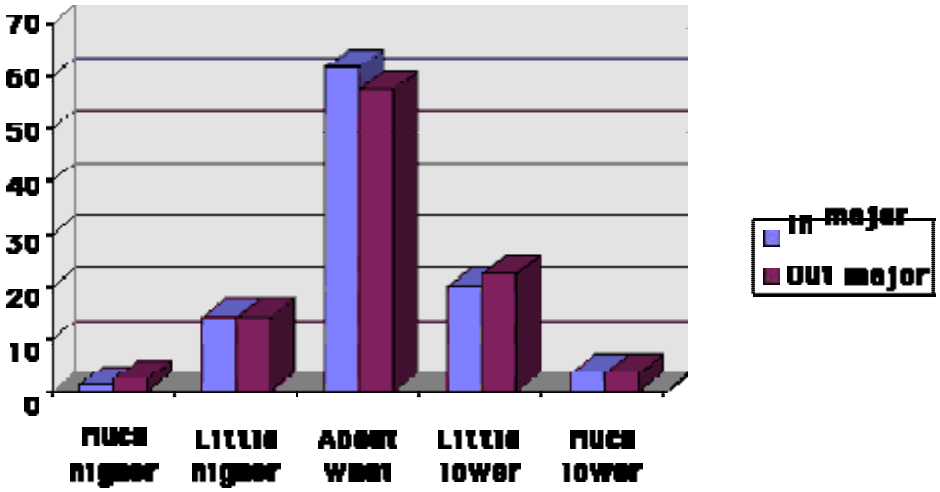

Figure 3. Grades relative to what should have been received

One can see that, in fact, the majority thought they deserved what they got, and slightly more thought their grade was lower than it should have been than felt the opposite. Thus, students tend to feel that their grades are not contributing to grade inflation.

Do students know the grades of other students?

In the 1995 senior survey, students were asked the following: Generally, how well do you know what grades are given to other students:

- in the same classes as you?
- in the same major as you?
- across the entire university?

Response possibilities given students were "Very well", "Some", and "Not at all".

One can see that only a very small proportion of students feel they know the grades of other students "very well", even in the classes they are taking. There is little knowledge of grades across the university, generally, more knowledge in the major, and most knowledge of grades in their own courses. But even in the latter, 71% of the students claim only "some" knowledge.

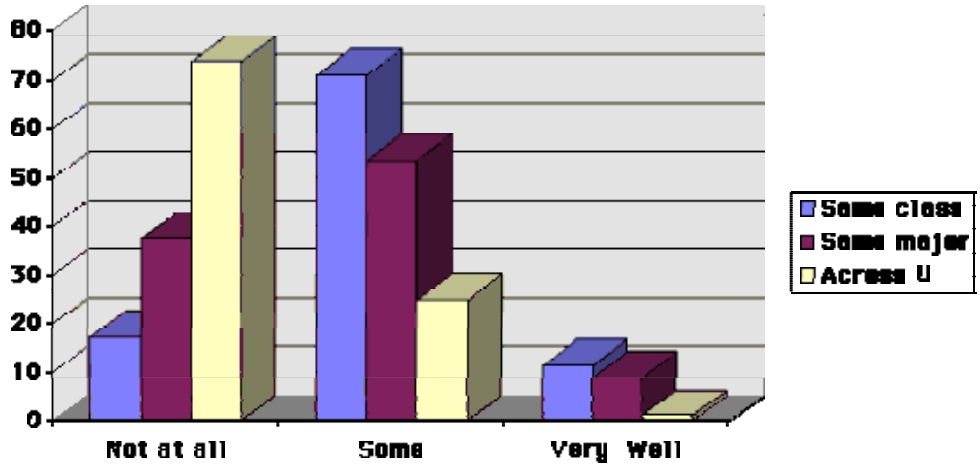

Figure 4. Student knowledge of grades of other students

Are there differences in grades given by academic unit?

Table 1 presents average grades given by departments in two ways.[6] First, average grades, unweighted by course credits, are given by class level across the 1994-95 academic year. By these calculations, one can see that across the entire university the average grade increases as the class level increases, from 3.01 for 100 level courses to 3.66 for graduate classes. One can also see that the average grade given varies across departments. Average grades in Arts and Sciences arts departments, for example, tend to be considerably higher than average grades in Arts and Sciences science departments. The highest grades across all levels appear to be given in Nursing (above 3.71 for all levels), the lowest in Mathematics (below 2.98 for all undergraduate levels). In interpreting these data, one needs to keep in mind that students in various curricula may differ in ability and courses may vary in difficulty; i.e., not all differences are the result of different grading standards.

The second way in which grade data are presented is in terms of the average GPA of students who have declared majors.[7] As within the students' majors are averaged across courses *within* their declared majors and are averaged across courses *outside* of their declared majors. One can see that across all majors, the average GPA of students within courses within their major was 3.26, in contrast to 3.18 in courses outside of their majors.[8] This result matches intuition-- one might expect students to do better in courses in their major than outside of their major.

Viewing the averages across units, differences in the magnitude and direction of the discrepancies are readily evident. Mathematics, followed by Biology and Civil Engineering, exhibited the largest negative differences (-.39 and -.30, respectively). In these and other units, students tend to receive higher grades in courses outside their major than in their major. On the other side, the largest positive discrepancies were in Environmental Health (.65), Dance (.61), Music Applied (.60), and American Ethnic Studies (.58). In interpreting these differences, one need keep in mind that the non-major courses selected by students are not independent of the major they have declared.

What can we conclude from these data?

Average grades rose from 1975 to 1987, and then leveled off. Whether this rise was associated with an equivalent rise in student ability is hard to assess. Even though grades appear to be no longer increasing, faculty almost unanimously think grades are too high now. Inferring from what students think the average grade should be, they too think grades are too high, though not to the extent of faculty. This perception is ironic from the faculty side in that it is they who assign grades, though many recognize this and share in the blame. It is also ironic from the student side in that they tend to think the grades they, themselves, have received are deserved. In their partial defense, students do not tend to have much knowledge about grades received by other students.

There is no evidence of a ground swell of interest in changing the 4.0 grading system from the faculty and especially from the students. However, over 80% of the faculty felt that some measures or strong measures should be taken to reduce average grades. Several such measures were suggested.[9] In particular, 48% of the faculty would welcome guidelines and another 41% would find guidelines useful.

Finally, the conclusion that grading standards differ across academic units is unmistakable. The harder question is whether any or all of these differences are justifiable. Certainly, differences exist in the ability of students attracted to various majors and in the restrictiveness of admission to various majors. Nursing, for example, has very high admissions standards to go with their very high grades. Differences also exist in departmental cultures regarding the meaning of grades, in general, and the meaning of low grades, in particular. Finally, one can argue that courses in some departments may be more difficult than in others. However, this latter assertion begs the question of whether these differences need be or should be the case and whether "harder" courses necessarily imply stiffer grades. These arguments not withstanding, it would appear that efforts to lower grades will need to address departmental differences in standards.

[1] Data in Table 1 have been subsequently updated in **OEA Research Note.** N-98-1.

[2] The example closest to home is The Evergreen State College which uses a combination of instructor-written and student-self evaluations for each course.

[3] Taggart, T. *Faculty Views of the Grading System and "Grade Inflation" at the University of Washington*.**OEA Reports**, 95-4, 1995.

[4] Data provided by the UW Registrar's Office.

[5] Faculty respondents had an additional category -- Other -- which was chosen by 9.7% of the respondents. For purposes of comparison, this category was eliminated from the graph and percentages were based on the remaining responses.

[6] The data in Table 1 were provided by the Office of Institutional Studies.

[7] Note that for these calculations, grades are weighted by the associated number of course credits. Note also that students who are premajors are not included in the calculations.

[8] No data for within and outside are found for general engineering because it is not a major. No data for within and outside are found for Business because it is a major, but courses are taken in departments under the School of Business. No data for outside in Nursing are found because once a major has been declared, essentially all courses are taken within Nursing.

[9] Taggart, T. *Faculty Views of the Grading System and "Grade Inflation" at the University of Washington*. **OEA Reports**, 95-4, 1995, pp. 17-21.