American Grade Inflation Demeaning Overseas Good Students: "Experience at the American University of Beirut"

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Abstract

Admission decisions to Graduate Programs at US universities take into consideration the student undergraduate Grade Point Average (GPA) as one major component in measuring the student potential for future success in his/her field of study. The number of students graduating from US universities with 3.9-4.0 cumulative GPA is growing steadily. Overseas schools may have educational philosophies, values, and assumptions attached to grades different than most American schools. Grades communicate the level of student's achievement in comparison to other students in the program, and the mastered skills in a given subject. There is so much emphasis in discriminating distinguished excellent students in grades that are recorded numerically rather than via letter grades. At the American University of Beirut (AUB), few students in the class get a cumulative GPA above 85 in a scale of 100. Typically, the class GPA is about 76 in a scale of 100. When these grades are translated into letter grades; virtually half the class is a C+ level or 2.5 GPA in a 4.0 system. The chances of any student being admitted to graduate programs in leading US universities are reduced. Students are placing pressure on faculty members to raise class averages. The objective of this paper is to bring to light the problems faced by international students due to grade inflation in US Universities.

I. Introduction

The Faculty of Engineering and Agriculture (FEA) at the American University of Beirut is a leading professional school in the Middle East that offers American-style educational programs. Many FEA graduates pursue higher education in the US and enjoy the easy transition in culture and style. However, in recent years our students are finding it tougher to get admitted to graduate programs in leading schools in the US, and when some inquired, they got responses that link their rejection to their low GPA. All faculty agree that grades provide information on how well students are learning[1]. Grades also serve other functions that include the value of the work accomplished, the encouragement of good work by students and for selection of people for reward or continued education[2]. To serve such functions, grades have to be accurate and discriminatory of the students' levels

of achievement, and grade inflation would make the process of evaluation for graduate work much harder.

An article in the New York Times (Wed. Feb. 18th, 1998) discussed grade inflation in the US referring to a recent Princeton University study[3]: 'The Princeton University report, a comprehensive review of undergraduates' grades over 24 years, showed 83 percent of the grades given between 1992 and 1997 fell between A-plus and B-minus, compared with 69 percent between 1973 and 1977. More telling, said Dean Malkiel, is the drop in C-pluses, which fell from 5.8 percent to 3.7 percent in the period, and C's, dropping from 6.1 percent to 3.6 percent. The median GPA for the class of 1997, the report said, was 3.42, compared with 3.08 for the class of 1973.' The current interest in outcome-based learning represents a major shift in attitudes about evaluating education. Professors accumulate a lot of data about individual student performance. These data are used in improving individual courses when they are detailed enough to indicate why students are failing to meet minimum requirements. The tendency is to develop performance-based assessment tools that require students to perform different tasks rather than simply answer questions. The multiplicity of tasks has allowed more flexibility in the grading and evaluation means leading to higher grades earned by students in US universities, but not abroad where academic rules prevent grade inflation from occurring. Grade inflation may have resulted also from the global shift to client-oriented service, where students as customers are buying their education and want an educational system that matches their expectations and skills[4]. Student evaluation of teaching, whenever used as a measure of teaching performance[5-7], may be another factor that contributes to grade inflation.

In the remainder of this article, the SAT I scores of students admitted to FEA over the past five years are first presented. This is followed by the rules on how averages for engineering courses are calculated. Then grade statistics for the University in general and for FEA in specific are provided and compared with equivalent GPA's in US Universities.

II. SAT-I Scores of Entering First Year Students:

Approximately 1200 students apply yearly to the various engineering programs in the FEA out of which roughly 300 students are admitted. Students come mainly from Lebanon and the Region. The admissions is based on a combined score that takes into account the SAT I results and the student performance in the last two years of high school. The competition is high among students and the entering class has a lot of potential for success in their selected major. The students still need to satisfy the English requirements of attaining a minimum score of 575 in the TOFEL exam. Table 1A shows the number of admitted students by major, while Tables 1B and IC show the range of SAT I scores of admitted students in mathematical and verbal skills for the past 5 years, respectively.

These scores are presented to stress the strong academic background and high aptitude of students admitted to FEA. By comparison with average SAT I scores for American schools as reported in the College Entrance Examination Board National Report (1996)[8], the average SAT I scores of students admitted to FEA in all majors are well above average in Mathematical skills and slightly above average in Verbal skills. In 1995, the average

SAT I scores were highest for white Americans at 448 Verbal and 498 Mathematical for the high school graduating class that participated in the exam. The SAT I results, reported in 23 states and the District of Colombia with a participation rate equal or higher than 49%, showed the highest average Math score as 528 in the State of Washington for the year 2000[(9)]. This is well below the average Math score of students admitted to FEA and is a clear indicator of the high potential of these students.

Table 1A :The number of admitted students by major to FEA

Major	96-97	97-98	98-99	99-00	00-01
Computer & Comm. Eng.	60	70	72	82	109
Civil Eng.	76	124	95	135	140
Electrical Eng.	74	136	77	80	104
Mechanical Eng.	81	142	78	101	92

Table 1B: SAT I scores of admitted engineering students in mathematical skills

Major	Min. Mathematical Score					Max. Mathematical Score					Average Math Score				
	96	97	98	99	00	96	97	98	99	00	96	97	98	99	00
Computer & Comm. Eng.	570	630	630	670	650	800	800	800	800	800	**707**	**724**	**740**	**733**	**705**
Civil Eng.	550	540	600	590	570	800	790	800	800	800	**670**	**672**	**698**	**684**	**668**
Electrical Eng.	510	580	610	620	600	740	790	800	800	800	**666**	**663**	**703**	**705**	**692**
Mechanical Eng.	490	550	610	590	590	800	800	800	800	800	**672**	**667**	**702**	**690**	**688**

Table 1C: SAT I scores of admitted engineering students in verbal/reading skills

Major	Min. Verbal Score					Max. Verbal Score					Average Verbal Score				
	96	97	98	99	00	96	97	98	99	00	96	97	98	99	00
Computer & Comm. Eng.	350	390	360	370	400	780	730	740	700	740	**510**	**526**	**532**	**540**	**508**
Civil Eng.	360	300	290	330	260	610	640	650	800	660	**470**	**464**	**474**	**476**	**443**
Electrical Eng.	320	260	260	310	370	610	680	680	660	670	**461**	**444**	**475**	**484**	**493**
Mechanical Eng.	310	290	290	330	300	610	660	670	660	640	**447**	**438**	**465**	**478**	**456**

III. Impact of Grading Guidelines on FEA Students' Grades

Grading is a selective system of the university or college with major impact on students. Beyond determining who earns an academic degree, grades decide academic honors and strongly influence undergraduate's future in either job opportunities or graduate school admissions. AUB does not adopt the Letter Grade-Grade Point Average (GPA) grading

system that is widely used in the states[10]. Instead, AUB uses an accurate numerical evaluation of 100 points classical scale.

The Faculty of Engineering and Architecture (FEA) at AUB developed guidelines on averages and standard deviations of course grades that were observed for the past 10 years. The guidelines suggest that the class average of didactic courses of the first and second year level should be between 70 and 75 in a scale of 100. The didactic courses of the third and forth year level should have averages between 75 and 80 in a scale of 100. Design and Lab courses are suggested to have class averages between 75 and 85 for undergraduate courses, and 80 to 90 for graduate courses, in a scale of 100. In didactic courses, the standard deviation is suggested to be between 5 and 12, while in laboratory or design courses it is around 5. With a grading system as above, the overall average of a graduating class is not expected to exceed 79 at best, which, if converted to the grade letter system, is a C+. Table 2 shows a general summary statistics of the distribution of grades and their percentile from the Fall Term of 1992 to the Spring Term of 1997 for all faculties at AUB. Table 3 shows the general grade distribution for the spring term of 1997 in the Faculty of Engineering and Architecture (FEA).

Table 2: Semester Average Distribution for all levels. AUB Registrar (1992-1997)

Value Label	All Faculties (AUB)		Engineering & Architecture	
	Frequency	Percent (%)	Frequency	Percent (%)
A: 90-100	447	1.6	158	2.2
B: 80-89	6504	23.3	1713	23.8
C: 70-79	14572	52.2	3869	53.8
D: 60-69	5538	19.8	1316	18.3
F: 40-59	860	3.1	136	1.9
Total	27921	100	7192	100
Mean Grade	74.36		75	
Standard Dev.	7.62		7	

Table 3: Semester Average Distribution, Faculty of Engineering and Architecture (Spring1997: CCE: Computer and Communication Engineering, EE: Electrical Engineering, CE: Civil Engineering & ME: Mechanical Engineering)

Year		**Mean Grade**	St. Dev.	F: <60	D: 60-69	C: 70-79	B: 80-89	A:90-100
First Year	CCE	**76**	7	1.4%	15%	50.4%	31.2%	2.1%
	CE & ME	**72**	7	4.5%	30.6%	51.1%	12.8%	0.9%
Second Year	CCE	**76**	8	1.3%	15.4%	49.4%	31.3%	2.6%
	CE & ME	**74**	7	2.2%	23.7%	53.3%	18.7%	2.0%
Third Year	CCE	**79**	6	0%	5.5%	46.5%	42.7%	5.3%
	EE	**78**	6	0.4%	5.3%	59.9%	29.4%	5.0%
	CE	**77**	7	0%	10.4%	53.7%	32.5%	3.5%
	ME	**78**	6	0%	5.1%	56.2%	32.8%	5.8%
Fourth Year	CCE	**81**	6	0%	4.2%	35.4%	55.6%	4.9%
	EE	**79**	6	0%	3.8%	48.7%	41.0%	6.4%
	CE	**81**	7	1.6%	3.1%	31.3%	57.8%	6.3%
	ME	**80**	6	0%	0.0%	51.5%	39.2%	9.3%

In the first two years of study, less than 3 % of the students get term averages that are 90 or higher in a scale of 100. When this is integrated with the cumulative average of all the years, it improves only very little to reach at most 5% of the class. It can also be observed that around 50% of the class falls in the category of C grade between 70 and 79 in a scale of 100. This is in contrast with US universities where 26% of students receive grades of A^- or higher according to Levine and Cureton[11] and A's and B's still account for about 80% of the grades at Stanford[2]. AUB has a rigorous system of grading. This becomes clear when one compares the grades attained by our graduates in top US or European universities and their grades at AUB. It becomes also clear when one compares the distribution of grades at AUB with those of US Universities. Many US universities publish statistics of their grades on the web and we will be using here Ohio University letter grades for the year 1993 to compare with AUB statistics of letter grade percentages presented in Table 2 for all the university and for the engineering faculty[12]. Figure 1 shows the bar charts of the whole-letter grade percentages for fall 1993 of Ohio University (OU) and their AUB Counterparts for (a) all faculties and (b) for engineering faculties. The AUB letter grade average is in the C range, while OU letter-grade average is between A and B.

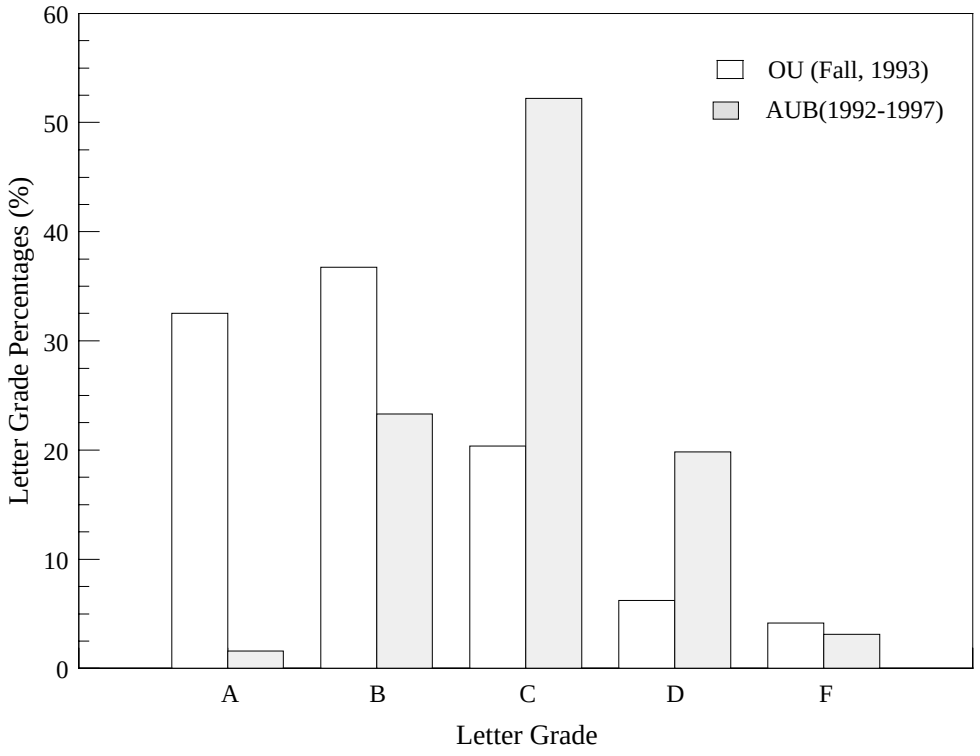

Figure 1a: Comparison of whole letter-grade percentages of AUB and OU.

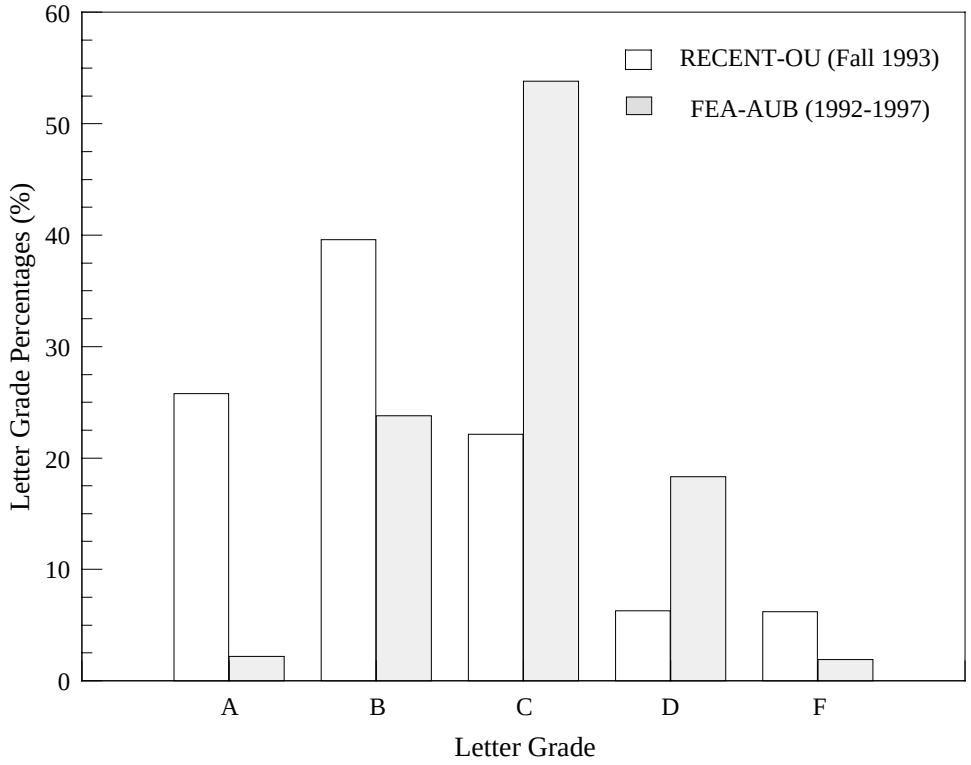

Figure 1b: Comparison of whole letter-grade percentages of engineering schools at AUB and OU.

In year 1999/2000, only 3 students from the mechanical engineering major were able to get acceptances to US universities; two of which had it arranged through their professors' contacts. One computer and communications engineering (CCE) student with a cumulative average of 93.3 has been rejected last year from one of the US universities that ranked within the top 30 leading schools. The students wrote back to the university inquiring about the reasons for his rejection and the answer he got was that all their admitted graduate students in that year had 4.0 GPA, while his average was 3.7 GPA. The increasing number of applicants with high GPA to graduate schools will make decisions about potential for successful graduate work much more difficult. Universities may have to rely on entrance exams or standard test results. When we write recommendation letters for our students who are applying to graduate programs in the US, we emphasize the student ranking and the grading policy of FEA to try to go around the grade bias. The recommendations of faculty and instructors about the student academic standing may have some indication. From experience with our own graduate program, we hardly receive any negative recommendation letters on students' performance, even when the grades are low. We just have to interpret recommendations to look for clues that show student talent or look for the very strong ones. Recommendations usually come from instructors who are

already satisfied with the student performance and this may show only part of the whole picture. The Faculty of Engineering and Architecture at AUB has proposed a conversion matrix to the GPA 4.0 point system as given in Table 4, but that matrix is not adopted by the AUB Registrar and hence is not official.

Table 4. Conversion Table of Numerical Grade Average to GPA

AVERAGE	GPA	AVERAGE	GPA
70	2.05	81	3.35
71	2.20	82	3.45
72	2.35	83	3.55
73	2.45	84	3.60
74	2.60	85	3.70
75	2.70	86	3.75
76	2.85	87	3.85
77	2.95	88	3.90
78	3.05	89	3.95
79	3.15	90-100	4.00
80	3.25		

IV. Recommendation and Conclusion

The display of the SAT I scores of students admitted to the faculty of engineering at AUB, has clearly demonstrated their high caliber. Moreover, the presentation of the subsequent graduation averages shows that FEA graduates have class averages between 75 and 80 in a scale of 100, which are well below the averages attained by their counterparts in similar programs in US universities. There is pressure from the student body to raise averages and make them compatible with US averages. Faculty feels that raising averages may encourage leniency in the system and encourage non-performers to get grades that do not represent their actual level of learning. Since we can do nothing about grades in US universities, it is recommended that AUB Registrar display on the student transcript of record the student course grade and the class average to ease the evaluation process of student potential and capabilities for graduate work relative to his/her class and to include a conversion matrix to GPA similar to the one presented in Table 4.

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