

Socioeconomic Characteristics Of College Of Business and Economics

Students and The Effect Of These Characteristics On Students Performance

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Socioeconomic Characteristics of College of Business and Economics Students and the Effect of These Characteristics on Students' Performance

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Determinants of students' performance have been the subject of ongoing debate among educators, academics, and policy makers. There have been many studies that sought to examine this issue, and their findings point out to hard work, previous schooling, parents' education, family income, and self-motivation as factors that have a significant effect on students' GPAs. Those studies have focused on students in the US and Europe. However, since cultural differences may play a role in shaping the factors that affect this performance, it is important to examine those factors relevant to UAE society. The aim of this research is to examine the relationship between the socioeconomic characteristics of students at the College of Business and Economics (CBE) at United Arab Emirates University (UAEU) and their academic performance, taking into account variables pertaining to UAE society. Using a sample of 864 CBE students, the preliminary results show that CBE female students outperform their male counterparts with the exception of students from Dubai. Besides gender, some of the other factors that seem to affect students' performance are: major in high school, student's competence in English, studying hours, family size, parents' education, private schooling, and nationality. 1

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1. Introduction

Determinants of students' performance have been the subject of ongoing debate among educators, academics, and policy makers. There have been many studies that sought to examine this issue, and the findings of these studies point to hard work, discipline, previous schooling, parents' education, family income and self-motivation as factors that can explain differences in students' grades.

For example, Siegfried and Fels (1979) concluded that the student's aptitude is the most important determinant of his/her learning. In a study of high school students who were in an economics class and wanted to take another economics course, Beron (1990) found that there is a link between the perceived usefulness of an additional course in economics and the performance of the students in a current economics course. Romer (1993) found that class attendance reflected significantly on the students' GPA. Anderson and Benjamin (1994) found that the most important factors that affect students' performance in a university introductory economics course were the overall achievement level and taking a course in calculus. With regard to gender, they found that male students outperform their female counterparts. Kennedy and Tay (1994) concluded in their survey article that the research on the factors affecting students' performance in economics points to student's aptitude as the most important determinant of learning. It was also determined that study effort, age of the student, and a good match between a student's learning style and the instructor's teaching style have a positive effect on the student's performance. Cohn et al (1995) found that memory and notetaking affect learning in the introductory courses in economics. Devadoss and Foltz (1996) studied the effects of previous GPA, class attendance, and financial status on the performance of students of some agriculture economics-related courses. They concluded that previous GPA and motivation affect positively the current GPA. They also found that students who support themselves financially are likely to have better performance. Zimmer and Fuller (1996), in their survey article of the factors affecting students' performance in statistics, found that statistics anxiety and attitude, and computer experience are linked to students' performance in statistics courses. Ellis et al (1998), in their study on the factors affecting student performance in principles of economics, found that the likelihood of a student making an A or B significantly decreases as the number of absences increases, when the student is a member of fraternity or sorority,

and as the number of credit hours carried by the student during the semester increases. On the other hand, the chance of a student making an A or B in the course significantly increases with having taken a calculus course, a higher GPA, and higher SAT scores. Karemera (2003) found that students' performance is significantly correlated with satisfaction with academic environment and service received. He also found that the existence of professional development programs and internship opportunities are associated with better academic performance. With regard to background variables, he found a positive effect of high school performance and school achievement while there was no statistical evidence of significant association between family income level and academic performance. Lane and Porch (2002) studied the factors affecting students' performance on an introductory undergraduate financial accounting course and found that age and students' attitudes toward accounting have significant effect on students' performance. Williams et al (1992) found no evidence to support the hypothesis that significant and consistent gender differences exist in college students' performance on economic exams.

As it can be seen from the above literature review, most of the previous studies have focused on students' performance in the US and Europe. However, since there are cultural differences between Western societies and traditional Middle Eastern societies—the United Arab Emirates (UAE) in the present case—and since such differences may play a role in shaping the factors that affect this performance, this study examines those factors relevant to UAE society and in particular to the United Arab Emirates University (UAEU) student population.

The aim of this research is to examine determinants of students' performance in the College of Business and Economics (CBE) at UAEU, taking into account variables pertaining to UAE society. Besides the conventional factors, this study investigates the effect of gender on students' performance, especially since UAEU has different campuses for male and female students. Another factor to be investigated is whether living on campus has any role in determining students' performance. This factor interacts with gender since there exist very restrict rules on the female campus, especially with regard to their movement in and out of the campus. Another factor that may affect students' performance is family size, which differs significantly among different ethnic and economic sub-groups. On the other hand, since the language of instruction at the CBE is English, students'

competence in English is included in our list of variables affecting students' performance.

The importance of this study is twofold:

- 1. It focuses on factors that affect students' performance at UAEU.
- 2. It should help policy makers in the UAE in general and at UAEU in particular to design and implement policies to improve students' performance as well as improve the efficiency of education.

This paper is organized as follows: Section 2 presents a general description of the population of the College of Business and Economics at UAEU and the methodology used in conducting this research. Section 3 comprises a general description of the sample. A thorough analysis of the factors affecting the students' performance is provided in section 4, and with conclusions in section 5.

2. Methodology

The UAE is composed of seven emirates: Abu Dhabi (AD), Dubai, Sharjah, Ajman, Um Al Quwayn (UAQ), Fujairah and Ras Al Khaymah (RAK). UAEU is located in Al-Ain city in AD emirate. The College of Business and Economics (CBE) at UAEU offers seven majors: accounting (ACC), economics (ECON), finance (FIN), management (MAN), marketing (MAR), management information system (MIS), and statistics (STAT). In late February 2004, CBE consisted of 2,207 students, with a majority (63.2 percent) of female students. The higher female representation in the student population can be explained by the fact that many UAE male high school (HS) graduates prefer to enter the highly paid public service, especially the army and the police, instead of attending college. Among those who decide to pursue college education, some choose to go to Europe or the US.

The non-national student population represents about 20 percent of the overall population. Most of these non-national students are Arabs who live with their families as residents in the UAE. The remaining non-Arab students are mostly from some African countries and from some of the republics of the former Soviet Union.

A survey questionnaire was distributed to the students. It included a comprehensive list of questions relating to different arrays of variables that were identified by Wisconsin Education Association Council. In general, the

Wisconsin Education Association Council groups the variables that affect student achievement into four categories:

- 1. School variables, such as tracking, retention, class size, school size, and best practice
- Family and individual variables, such as parent involvement and personal responsibility, which includes studying hours, hours of television viewing, and excessive work during the school year.
- 3. Social incentives, such as expected income and whether working hard in school will make a difference in students' lives
- 4. Socioeconomic conditions such as income, family size, and parent education.

The present research also included some questions specifically related to the UAEU student population in general and to CBE students in particular, such as English language performance, house size, family size, and some proxies for cultural openness.

The questionnaire included three sets of questions: the first set addressed individual student background information, the second set addressed the socioeconomic characteristics of the student's family, and the third set of questions covered student perceptions of the university environment. A comprehensive list of variables used in the survey is found in Appendix A.

A sample of 864 CBE students was selected. Many incomplete questionnaires were not rejected in order to keep as many observations as possible. The reader should expect to see some discrepancies among the number of observations associated with different variables. For instance, many students did not report their family income, the total number of credit hours, or their major in college. Since this information is irrelevant when comparing the GPA by gender, there is no point in rejecting those observations.

3. Sample Overview

Table 1 represents some general characteristics of the sample. The sample is very representative of the CBE student population, as 78 percent of the surveyed students are nationals, 19 percent are Arabs, and 3 percent are non-Arabs. Female students represented 64 percent of the sample. It is interesting to note that male national students represent only 25 percent of the total sample while their female

counterparts represent 53 percent. The high female presence in the sample is due to a majority of national female students.

Table 1 shows the students' performance by gender and nationality. Two main observations are evident: the first is that female students outperformed male students whether they were nationals or not. Their average GPA in the sample was 2.61 while the male students' average GPA was 2.53. The other observation is that non-nationals had higher GPAs than nationals. Among non-nationals, non-Arab students had higher GPA than Arabs. Hence, the best- performing students were non-Arab females, while the least performing were the national males. This difference in performance can be explained by the fact that UAEU and CBE admission standards are higher for non-national students. Moreover, most non-national students, especially non-Arabs, are on student scholarships.

Table 1: Student Performance by Nationality and Gender

		Sample	Nationals	Non- nationals	Arabs	Non- Arabs
	Students	864	673	188	163	23
All	% of the sample	100%	78%	22%	19%	3%
	GPA	2.58	2.47	2.95	2.93	3.17
-	Students	550	460	88	81	7
Female	% of the sample	64%	53%	10%	9%	0.8%
	GPA	2.61	2.51	3.16	3.14	3.33
	Students	314	213	100	82	16
Male	% of the sample	36%	25%	12%	9%	2%
	GPA	2.53	2.41	2.77	2.72	3.11

Table 2 represents the distribution of the national students in the sample by emirate. A majority (59 percent) of national students come from Abu Dhabi emirate. Among them, 46 percent of the total national students come from Al Ain city, which is much smaller than Abu Dhabi city. Unlike students who come from other cities or emirates, Al Ain city students have the privilege of living with their families, not on campus. They do not have to make the trip back home every weekend as students from other emirates do.

The relatively low representation of other emirates such as Ajman and UAQ can be explained by their small population. Also, many parents are reluctant to have their daughters travel to Al Ain (even with the university transportation) and spend five days away from home each week. Moreover, there are competing universities in other cities, such as Zayed University in Abu Dhabi, Sharjah University and American University in Sharjah, Zayed University and Higher Colleges of Technology in Abu Dhabi, Dubai, Fujairah, and Ras Al Khaymah.

Table 2: Distribution of National Students By Emirate

		Total	AD	Al Ain	Dubai	Sharjah	Ajman	UAQ	RAK	FUJ
	GPA	2.47	2.51	2.51	2.45	2.38	2.52	2.11	2.42	2.47
ALL	Students	673	399	308	30	46	17	2	102	49
	%	100%	59%	46%	4.4%	7%	3%	0.3%	15%	7%
	GPA	2.51	2.54	2.54	2.44	2.38	2.57	2.3	2.52	2.45
Female	Students	460	266	225	15	29	10	1	82	38
	%	100%	58%	51%	3%	6%	2%	0.2%	18%	8%
	GPA	2.41	2.44	2.44	2.47	2.38	2.4	1.92	2.27	2.33
Male	Students	213	133	84	15	17	7	1	20	11
	%	100%	62%	39%	7%	8%	3%	0.5%	9%	5%

It can be seen from table 2 that, at the emirate level, female students outperform male students with the exception of Dubai students. The best performing students were Ajman female students, while the least performing students were RAK's male students. UAQ students were not considered because there was only one male and one female observation.

4. Data analysis

Table 3 represents the distribution and main characteristics of the students in different majors at CBE. It reveals that the average GPA of MIS students was the highest (2.95) compared to all other majors. This is expected since a high GPA (above 2.5) is a condition for admission into this major. It can also be seen from the table that MIS had the highest proportion of students with a high school

diploma in science (74 percent). It also had the highest proportion of students who attended a private school (20 percent), the highest average in English in their high school (85/100) and in the University General Requirement Unit (UGRU) (83/100), the highest proportion of students who passed the English Challenge Exam (15 percent), the least-crowded households (1.09 persons per room), and were only second to finance in terms of high parental education. Surprisingly, those students were the most likely to miss lectures and were the least likely to appreciate their professors.

Table 3: Students' Characteristics By Major

	ACC	ECON	FINAN	MAN	MARK	MIS	STAT	UND
Number of students	149	39	78	125	36	78	78	281
%	17%	4%	9%	14%	4%	9%	9%	32%
GPA	2.56	2.32	2.56	2.4	2.29	2.95	2.49	2.67
Studying hrs /weekday	2.9	2.7	3	3	3	2.8	3.2	3.3
Studying hrs /weekend	2.6	2.3	2.7	2.2	2.4	2.3	2.6	2.5
Science major in high school	70%	50%	41%	53%	30%	74%	73%	57%
Literature major in high school	28%	50%	59%	44%	66%	26%	24%	42%
Students with private schooling	8%	10%	15%	7%	11%	20%	2%	12%
Grade in English in high school	79	77 .	84	80	83	85	79	82
Grade in English in UGRU	79	77	80	78	79	83	75	80
Passed Challenge exam	8%	3%	15%	10%	11%	15%	4%	10%
Crowding of household	1.27	1.36	1.30	1.35	1.43	1.09	1.28	1.33
Number of missed lectures/ courses	1.7	1.8	1.5	1.7	1.5	1.8	1.75	1.98
Students with UAEU positive attitude	43%	38%	29%	50%	64%	41%	40%	21%
Students with UAEU negative attitude	28%	49%	42%	15%	14%	28%	22%	56%
Attitude towards professors	2.3	2.4	2.41	2.4	2.5	2.08	2.23	2.37
Father's education	1.8	1.42	2.44	1.3	1.47	1.97	1.2	1.5
Mother's education	1.1	0.9	1.96	0.8	0.94	1.29	1.04	1,1
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On the other hand, the least performing students (economics, marketing, management) were found to have a larger proportion of students with literature high school diplomas, lower English scores, more crowded households, and less-educated parents. However, the undecided students showed a better performance. Their average GPA was 2.67, which was well above the sample GPA (2.58). They reported studying more hours and had good English skills. This suggests that new students are becoming better prepared to study at CBE.

Table 4 represents the same students' characteristics classified by gender and nationality. When compared to national students, non-national students had higher GPAs. They attended private schools more frequently. A larger proportion of them had a scientific high school diploma and had passed successfully the English Challenge Exam at UGRU. They had high scores in English language. It is also quite clear that the non-national students surveyed had highly educated parents, were more appreciative of the university and their professors, and participated more in the class discussions. However, they missed more classes than their national counterparts. It is clear that the nationals surveyed had less crowded² houses than non- nationals. One would expect that a crowded house provides a less favorable studying environment as shown in table 3. However, it seems that this was not the case where students from less affluent families work hard in order to do well after graduation.

If these factors sound reasonable and can explain GPA differences between national and non-national students, they do not, however, explain why female students outperformed their counterpart males. For instance, table 4 shows that male national students were more likely to attend private schools, to hold a scientific high school diploma, to successfully pass the English Challenge Exam, and to have more highly educated parents. So, why did those male students have lower performance compared to female students? Some factors may play a crucial role in a student's performance. It can be seen from the table that the female students surveyed devoted more time to study than males, either on weekdays or weekends, were less likely to hold a driving license, and were less likely to have a job. They had less family responsibility (since most local households hire maids for such domestic responsibility such as cleaning, cooking, raising kids, etc.).

^{2.} See appendix for definition.

This gives a female student a certain "advantage" of more studying hours even if she is married. As for the males, maids cannot reduce their responsibilities, which are, in general, related to social activities and customs (such as attending funerals, receiving guests, visiting friends and relatives). On top of that, many male students hold a full-time job, which reduces considerably studying time. Moreover, there is another factor that lowers the male students' studying hours, which is found in the last two rows of table 4 where we can clearly observe that male students put more time in leisure activities such as watching movies and going to shopping malls.

We have stated above that factors such as private schooling, competence in English, science background, parents' education, participation in class discussions, studying hours, and leisure have significant effects on grade. In the next subsection, we discuss whether these factors can explain the GPA difference among national students themselves.

Table 5 represents the same variables in table 4, but within the national students' framework. We have classified each gender into four categories with increasing average GPA, and it can be seen that the factors associated with higher GPA are private schooling, better English skills, parents' education, class participation, studying hours, less family responsibility, and less crowded households. This means that the origins of better performance of females were the same whether they are national students or not.

From the last four rows in table 5 it seems that national students, especially female students have lower performance. Male students can go out to a quiet place such as the library, a quiet friend's place or any other convenient place where female do not have this privilege.

Table 4: Students Characteristics by Gender and Nationality

		Ali			Female	_	Male		
	National	Non- National	Both	National	Non- National	Both	Nat	Non- National	Both
Surveyed	673	188	864	460	88	550	213	100	314
GPA	2.47	2.95	2.58	2.51	3.16	2.61	2.41	2.77	2.53
Students with private schooling	38 (6%)	57 (30%)	95 (11%)	15 (3%)	26 (30%)	41 (7%)	23 (11%)	31 (31%)	54 (17%)
Science major in high school	380 (56%)	142 (76%)	524 (61%)	254 (55%)	66 (75%)	322 (59%)	126 (59%)	76 (76%)	202 (64%)
Grade in English in high school	663 (99%)	165 (88%)	831 (96%)	455 (99%)	80 (91%)	53 <i>7</i> (98%)	208 (98%)	85 (85%)	294 (94%)
Grade in English in UGRU	77.7	83.8	79	78.0	85.7	79.3	77	82.1	78.4
Passed Challenge Exam	48 (7%)	49 (26%)	97 (11%)	21 (5%)	21 (24%)	42 (8%)	27 (13%)	28 (28%)	55 (18%)
Employed students	71 (11%)	13 (7%)	84 (10%)	13 (3%)	5 (6%)	18 (3%)	58 (27%)	8 (8%)	66 (21%)
Students living with their family	338 (50%)	79 (42%)	419 (48%)	236 (51%)	37 (42%)	274 (50%)	102 (48%)	42 (42%)	145 (46%)
Students living on campus	278 (41%)	100 (53%)	379 (44%)	207 (45%)	50 (57%)	258 (47%)	71 (33%)	50 (50%)	121 (38%)
Father's education	1.15	3.21	1.6	0.95	3.14	1.3	1.57	3.28	2.12
Mother's education	0.74	2.45	1.11	0.67	2.34	0.94	0.9	2.55	1.42
Students with UAEU positive attitude	267 (40%)	99 (53%)	368 (43%)	169 (37%)	41 (47%)	211 (38%)	98 (46%)	58 (58%)	157 (50%)
Attitude towards professors	2.29	2.54	2.34	2.27	2.57	2.32	2.32	2.52	2.39
Participation in class discussion	354 (53%)	116 (62%)	473 (55%)	225 (49%)	55 (62%)	282 (51%)	129 (61%)	61 (61%)	191 (61%)
Number of missed lectures/ courses	1.74	2.05	1.8	1.73	2.08	1.78	1.75	2	1.83
Crowding of household	1.27	1.35	1.29	1.26	1.32	1.28	1.29	1.37	1.32
Married students	11%	3%	9%	11%	4%	10%	10%	1%	7%
Studying hrs /weekday	2.93	2.80	2.90	3.14	3.17	3.14	2.57	2.49	2.54
Studying hrs /weekend	2.26	2.35	2.28	2.55	2.68	2.57	1.75	2.08	1.86
Students with driving license	227 (33.7%)	80 (42.6%)	307 (35.5%)	32 (7%)	26 (29.5%)	58 (10.5%)	195 (91.5%)	54 (54%)	249 (79.3%
Hours for family responsibilities	7.91	5.75	7.43	6.75	5.45	6.54	10.4	6.02	8.99
Number of maids	2.55	0.48	1.88	2.29	0.43	1.99	2.18	0.53	1.68
Students go to movies with friends	23%	59%	31%	6%	49%	13%	60%	68%	62%
Students go to shopping malls with friends	23%	62%	31%	10%	53%	17%	51%	69%	56%

It is also evident that those female students with a driving license performed better. To hold a driving license gives some indications that a female student comes from more liberal environment, which may help in developing creativity and problem-solving skills. This may not be the case for male students, where holding a driving license may indicate more family responsibilities.

Another proxy for cultural differences is how frequently female students go out to movies or malls. In the last two rows of table 5, it seems that, to some extent, there exists a positive correlation between female performance and trips to movies or malls. Going out excessively has negative effect on performance. As for the male students, they already go out to movies and have a constantly negative relationship between performance and leisure. From early ages, they enjoy a freer and therefore richer environment and are less subject to tradition. The marginal benefit of going out to movies and to malls is lower than that of the females and is even negative as it appears in the table.

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Table 5: National students' characteristics in relation to their performance

		Fen	nale		Male					
	GPA < 2	2 <= GPA < 2.5	2.5 <= GPA < 3	3 <= GPA	GPA < 2	2 <= GPA < 2.5	2.5 <= GPA < 3	3 <= GPA		
# of students	58 (13%)	183 (41%)	120 (27%)	82 (18%)	37 (18%)	91 (44%)	57 (27%)	24 (11%)		
GPA	1.82	2.23	2.68	3.36	1.78	2.22	2.73	3.32		
Married students	24%	10%	8%	10%	14%	5%	12%	17%		
Students with private schooling	0 (0%)	4 (2.2%)	5 (4.2%)	6 (7%)	3 (8%)	7 (8%)	7 (12%)	6 (25%)		
Science major in high school	22 (38%)	110 (60%)	73 (61%)	40 (49%)	15 (40%)	62 (68%)	37 (65%)	11 (48%)		
Grade in English in UGRU	73	76	78	85	69	77	78	86		
Passed challenge exam	0 (0%)	6 (3%)	(3.3%)	10 (12%)	(3%)	11 (12%)	9 (16%)	(25%)		
Employed students	0 (0%)	(3%)	5 (4%)	(3.6%)	(30%)	24 (12%)	(30%)	(21%)		
Students living with their family	31 (53%)	90 (49%)	(53%)	(53%)	19 (51%)	37 (41%)	29 (51%)	(58%)		
Students living on campus	25 (43%)	86 (47%)	51 (42%)	35 (43%)_	12 (32%)	38 (42%)	14 (2 <u>4%)</u>	7 (29%)		
Father's education	0.4	1.01	1.05	1.07	1.67	1.44	1.59	1.78		
Mother's education Students with	0.33	0.62	0.92	0.67	0.57	0.85	1.1	1.17		
UAEU positive attitude	25 (43%)	62 (34%)	49 (41%)	37 (45%)	14 (38%)	43 (47%)	25 (44%)	14 (58%)		
Attitude towards professors	2.21	2.23	2.34	2.29	2.57	2.23	2.16	2.62		
Participation in class discussion	27 (47%)	89 (49%)	52 (43%)	49 (60%)	25 (68%)	46 (51%)	36 (63%)	19 (79%)		
Number of missed lectures/ courses	1.57	1.82	1.76	1.56	1.87	1.85	1.48	1.73		
Studying hrs /weekday	3.32	3.14	3.60	3.36	2.61	2.55	2.60	2.5		
Studying hrs /weekend	2.66	2.7	2.73	3.64	1.42	1.81	1.85	2.17		
Hours for family responsibilities	6.92	6.90	6.12	7.23	10.8	10.25	10.67	9.3		
Crowding of household	1.42	1.34	1.21	1.14	1.30	1.43	1.17	1.09		
Students with driving license	2 (3%)	11 (6%)	13 (11%)	6 (7%)	36 (97%)	85 (93%)	52 (91%)	22 (92%		
Students go to movies with friends	3%	5%	9%	6%	68%	60%	58%	54%		
Students go to shopping malls with friends	8%	11%	12%	8%	57%	54%	46%	46%		

5. Conclusion

We have studied a set of characteristics of the students at the CBE-UAEU that affect their performance. The paper made it obvious throughout the above presentations that factors such as English skills, science background, parents' education, studying hours, and family and work responsibilities are all important factors in determining student achievement whether the student is a national or non-national, female or male. The difference we observe on campus between different groups can, at least partially, be explained by difference in those factors.

These factors need to be subject to more investigation through regression analyses to answer further questions. Particularly, we would be interested to understand whether the marginal returns of any of the factors shown above have different impact on different groups (national versus non-nationals, female versus male) and whether their effect is significant •

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Appendix A

The following is a list of the variables used in the survey.

CAMPUS = 1 if the student lives on campus, 0 otherwise.

CHALLENGE = 1 if the student has successfully passed the English Challenge Exam at UGRU.

CROWDING = the ratio of the number of people who live in the student's household divided by number of rooms in his/her house.

DRIVING = 1 if the student holds a driving license, 0 otherwise.

EDUF = the education level of the father, EDUF = 0 if he has no formal education, = 1 if he has less than high school diploma, =2 if he has high school diploma, =3 if he has junior college, = 4 if he has college degree, and =5 if she has more than college degree (5)

EDUM = the education level of the mother, EDUF = 0 if she has no formal education, = 1 if she has less than high school diploma, =2 if she has high school diploma, =3 if she has junior college, = 4 if she has college degree, and =5 if she has more than college degree (5)

FAMILY = 1 if the student lives with his/her family, 0 otherwise.

GPA = the Grade Point Average.

GRA_HS = the student's grade in English language at high school.

GRA_UG = the student's grade in English at UGRU.

JOB = 1 if the student holds a job, 0 otherwise.

LITERATURE = 1 if the student holds a literature diploma in high school, 0 otherwise.

MAIDS = the number of maids in the student's house.

MARRIED = 1 if the student is married, 0 otherwise.

MISSING = number of missed lectures per course.

MOVIES =1 if the student go to movies with friends, 0 otherwise.

NEGATIVE = 1 if the students has a negative feelings towards UAEU, 0 otherwise.

PARTICIP =1 if the student participates in class discussions, 0 otherwise.

POSITIVE = 1 if the student has a positive feelings towards UAEU, 0 otherwise.

PRIVATE = 1 if the students had ever attended a private school, 0 otherwise.

PROF = how the student perceives and appreciates his/her professors at the UAEU = 0 if very poor, = 1 if poor, = 2 if good, = 3 if very good, = 4 if excellent.

RESP = the number of hours the student spends every week on family responsibilities.

SCIENCE = 1 if the student holds a scientific diploma in high school, 0 otherwise.

SHOPPING = 1 if the student go to shopping malls with friends, 0 otherwise.

UAEUF = 1 if the students have positive feelings towards UAE University, 0 otherwise.

UGRU = the University General Requirement Unit where the students prepare their freshman courses.

WEEKDAYS = the average number of hours that the students put into homework every weekday.

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WEEKENDS = the average number of hours that the students put into homework every weekend.