EPRS 8530 Richard Clendenning
Educational Statistics I: Computer Assignment #1 October 16, 2003

Relationship Between Attendance, Homework, and Student Performance in CCSU Internet Technologies Class

Description

This study investigates the relationship between student attendance, homework average, and final average performance for a class at Clayton College & State University. The study was performed during the spring 2003 semester, and involved two sections of INET 2160 Internet Technologies. A total of 37 students were involved in the study.

Methods

The class met weekly, and attendance was taken on days on which tests were not given (a total of 11 class periods). There were a total of 7 homework assignments for the term. The final average was calculated from a weighted average of the tests, homework assignments, and the final exam (attendance was not a factor calculated into the final average). Homework assignments counted as 20% of the final average (the remainder consisted of test scores and final exam score).

Results

The descriptive statistics and the correlations are shown in the tables below:

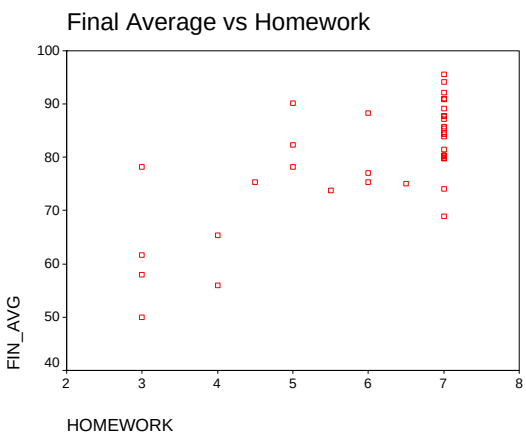
Descriptive Statistics

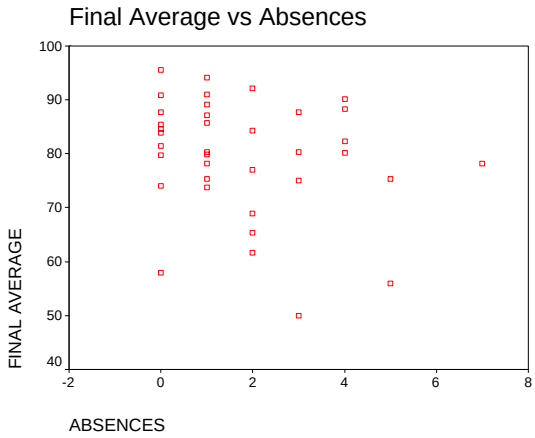
	Mean	Std. Deviation	N
FIN_AVG	79.708	10.7710	37
ABSENCES	1.81	1.761	37
HOMEWORK	6.041	1.4112	37

Correlations

		FIN_AVG	ABSENCES	HOMEWORK
FIN_AVG	Pearson Correlation	1	-.234	.724**
	Sig. (2-tailed)	.	.163	.000
	N	37	37	37
ABSENCES	Pearson Correlation	-.234	1	-.438**
	Sig. (2-tailed)	.163	.	.007
	N	37	37	37
HOMEWORK	Pearson Correlation	.724**	-.438**	1
	Sig. (2-tailed)	.000	.007	.
	N	37	37	37

**. Correlation is significant at the 0.01 level (2-tailed).





Discussion/Conclusions

The most significant correlation was between the homework average and the final average (r = +.724). Some of this correlation can be expected due to the fact that the homework average made up 20% of the final average. The most natural explanation to explain more of the correlation is that conscientious students will tend to have high homework averages and also to do well on exams. Another explanation is that students who consistently completed their homework learned concepts and gained practice that enabled them to score well on the exams and thus achieve a high final average.

A second significant correlation was observed between homework and absences (r = -0.438). Again, this can be explained because conscientious students will tend to have fewer absences and complete their homework more often, while students who are less attentive to their studies will tend to have more absences and will not always complete their assignments.

There was a small negative correlation (r = -.234) between absences and final average. Given the reasoning above (essentially, that good students have good attendance, regularly do their homework, and have a high average while poor students do not), this correlation between absences and final average might be expected to be higher. However, at least two factors were observed that seem to explain this relatively low correlation. First, several more advanced students had a relaxed attitude towards attendance, knowing that it did not count towards the final average and that they expected to do well on the tests without attending class. Second, it was observed that some students with perfect or near perfect attendance did not pay attention during class, preferring to be engaged with the Internet or with other endeavors. While this lack of attention could partly be attributed to lack of motivation, some students have difficulty following lectures and simply give up. It is this author's opinion that more study is needed in the area of active learning strategies that may draw these students more into the learning process and ultimately improve their performance.

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October 16, 2003
Raw Data

Final Average	Absences	Homework
75.3	1	4.5
84.3	2	7
90.9	0	7
78.2	7	3
80.2	4	7
80.4	1	7
75.3	5	6
85.8	1	7
68.9	2	7
79.9	1	7
94.1	1	7
84.6	0	7
75.1	3	6.5
73.8	1	5.5
80.4	3	7
88.3	4	6
74.0	0	7
65.3	2	4
61.7	2	3
87.7	3	7
77.0	2	6
58.0	0	3
91.0	1	7
85.4	0	7
89.1	1	7
87.7	0	7
82.3	4	5
87.2	1	7
92.2	2	7
78.2	1	5
90.2	4	5
79.8	0	7
55.9	5	4
83.9	0	7
95.6	0	7
81.5	0	7
50.0	3	3