

Egypt University of Informatics

Computer and Information Systems

Data Analysis Course

The Analysis of the Performance of Data Analysis Students

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# Introduction

# This report aims to investigate the potential correlation between study habits and students' C-GPA. By examining various study habits and their effects on academic performance, we seek to determine whether there exists a significant relationship between the two variables or if other factors are more influential. Through this analysis, we aim to provide insights into the importance of effective study strategies in achieving academic success.

# Research Question

The survey is designed to gather insights into the relationship between study habits, academic performance, and demographic factors among students. Participants are asked to provide information regarding their gender, faculty, and current C-GPA. Additionally, they are queried about their study habits, including whether they tend to study last minute or plan, as well as the frequency of procrastination in their study routines. Through this structured approach, the research aims to uncover patterns and correlations that may exist between study behaviours and academic outcomes, shedding light on the significance of effective study strategies in educational settings.

# Hypothesis

We postulate that there is a strong relationship between students' study habits and their C-GPA, which represents their academic achievement. It is anticipated that those who regularly schedule and manage their study periods will perform better academically than those who put off or study at the last minute. This hypothesis is founded on our collective awareness that good study practices, such planning ahead and finishing assignments on time, are likely to have a favorable impact on students' grasp of the course material and their performance on subsequent examinations. By examining this theory, we hope to maximize academic performance for both teachers and students by confirming the significance of proactive study habits and offering practical advice.

# Population of Interest:

EUI students

# Sampling Method:

We send the survey link to a public group of EUI students so it could be a Random Sampling or Convenience sampling.

# Bias Identification:

There could be a bias because there is a possibility that some students in EUI are not in the public group and maybe who took the survey tended to be in the group at the same time we sent the survey.

# Survey Questions:

Gender

Faculty

What's your current C-GPA?

When it comes to preparing for exams or completing assignments, do you tend to study last minute or plan your study sessions well in advance?

How often do you procrastinate when it comes to studying?

Online survey link: [LINK](https://docs.google.com/forms/d/e/1FAIpQLSeXuThZ-6x7bq0jmiHFoxkPojfORJjc88_nP4t5BuJ-ykrI1g/viewform?usp=sf_link)

Number of samples collected: 34.

# Analysis:

To analyze the data collected from this survey, we will calculate basic descriptive statistics such as the mean, median, and mode.

***We got it just for C-GPA as it’s the only quantitative variable. (Max GPA is 4.0)***

A number and equation on a white background

Description automatically generated

We will also create visual representations of the data using charts and graphs to help identify any trends or patterns.

Gender Graph:

A graph with a bar chart

Description automatically generated with medium confidence

The bar-plot indicates that the survey was done mostly by males rather than females, where more that 25 were males and less than 10 are females.

Faculty Dis:

A graph of a number of students

Description automatically generated with medium confidence

Regarding the faculty distribution, most of the student majors in engineering around 23 students, 7 CIS, 3 from DA and 1 from BI.

A graph with blue squares

Description automatically generated

The figure above stats that most students, more than 20 study in advance where around 11 study last minute for exams and quizzes.

A graph with blue squares

Description automatically generated with medium confidence

For the procrastination distribution, we can conclude that most students procrastinate either often or always, totalling to more than 20, where only 7 procrastinate sometimes and 2 never or rarely.

A graph of a number of green bars

Description automatically generated with medium confidence

Regarding the C-GPA histogram, we observed a skewness to the 4.0 mark, where 10 students claim to have perfect C-GPAs, followed by 7 students with C-GPAs around 2.4.

A graph with lines and a rectangle

Description automatically generated

The box plot shows that most C-GPAs are around 2.4 to 3.8 and a mean of 3.0.

Outlier are C-GPAs close to 4.0 and around 1.5.

A graph with blue dots

Description automatically generated

The scatter plot can make us deduct that there a medium positive correlation between the C-GPA and the preparation level before exams.

Where we calculated the correlation equal to 0.48.

A graph with blue dots

Description automatically generated

The scatter plot can make us deduce that there is no observable correlation between the C-GPA and the procrastination level.

Where we calculated the correlation equal to 0.024.

# Conclusion

We can conclude that there is a relevant correlation between the preparation level before exams and the GPA, but no correlation between the procrastination level and the GPA. However we have to put in mind that the data recorded have majority of males and engineering students.

# Any potential issues

Issues encountered were that we transformed some categorical data to quantitative so we can better understand the correlations between the variables and the C-GPA. And also, the bias was clear to see that most of who took the survey is in Engineering faculty.