**Question for the Dataset for Python Final Project**  Dec 05, 2023

Did the students really understand the course contents?

Were they satisfied with the course?

**Refined Questions**

**Students Self Evaluation Report:**

**Are students' responses relating to understanding of the course positive?**

1. **Did the students feel challenged and performed well in the course? (Pie or Line)**

**feel challenged and moderate performance level**

1. **Did the students give effort, and consistent preparation for the course? (Line or Bar)**

**Gave effort which is followed by consistent preparation for class.**

**We could see a good amount of effort and consistent preparation in the class.**

1. **Is it true that students study consistently? (x*Scatterplot*)/(Line Graph)** (correlation between actual study hours and their preparation for class) (Are there any outliers or anomalies in the reported number of hours spent on the course per week? How do these outliers affect the mean value of the study hours?)

There is a positive correlation between study hours and the preparation for the course.

1. **How do study hours and preparedness for the class differ according to the students’ reason for choosing the course? (2 Bar Graphs - Study Hours and Preparedness)**

We saw an anomaly in study hours and preparation of the students with the reason of ‘take opportunity’.

1. **Did they perform well as much as they did consistent preparation?** **(Boxplot) - take out the people who choose 4 and 5 in consistent preparation and check if they actually performed well (Performance Level)** (positive correlation between study hours, effort for the course, preparation for class, performance)

The performance level is normal and moderate with their given effort and preparation. (average - all-inclusive)

1. **How much study hours do students usually spend on this course?**

**Instructor's Effectiveness:**

Could the instructor effectively teach the class?

1. **Are the students’ responses positive on teachers’ effectiveness of the teaching? (Pie)** (value count the responses)

(Describe the students’ responses on teachers’ clear and organized teachings, the ability to stimulate student interest, and effective use of class time.)

1. **Does the instructor's effectiveness for the class correlate to an increased interest in the data science field among the students? (5 scatterplots for each feature)** (positive correlation) (can we add one more feature?)
2. **What are the percentages of students’ confidence and increased interest? (Histogram)**
3. **Were the students satisfied with the course? Even when they are performing badly, will they recommend the course to their friends? - Correlation between Performance level and Recommendation (2 boxplots and histogram or pie) Bar?**
4. How many of the students answered that the course **increased their interest** except for students with the reason 'Interest'? (Which graph not decided)

Did the instructor's effectiveness correlate with the students' confidence in tackling more advanced work in the subject? (correlation)

**Does the instructor's effectiveness for the class correlate to an increased interest in the data science field among the students? (5 scatterplots for each feature)** (positive correlation) (can we add one more feature?)

Teaching\_Effectiveness[...] Increased\_Interest Confidence

Teaching\_Effectiveness 1.000000 0.422319

Increased\_Interest 0.422319 1.000000

1. Did students really understand the course contents?

(Out of the three reasons, students with which reason spent more than the average studying hours? (Will students, whose reason to choose this course is not out of “interest”, study longer?)

1. Were the students satisfied with the course? Even when they are performing badly, will they recommend the course to their friends?
2. How did the perceived level of challenge within the course correlate with the amount of time spent on course-related work?
3. Does gender correlate to course performance level?
4. Is there a difference in the number of hours spent on the course based on gender?
5. How does attendance correlate with the number of hours spent on the course on average per week?

satisfaction - teacher

satisfaction - students' self evaluation

reason - satisfaction

course structure - satisfaction

**Reason Effort\_Course Preparedness\_Class**

**degree requirement 3.500000**

**Interest 4.333333**

**to take opportunity 3.666667**

**Relationship between Preparedness\_Class and Study\_Hours\_Per\_Week**

Relationship between **Effort\_Course, Preparedness\_Class, Study\_Hours\_Per\_Week and students’ Performance**

How many of the students, who “put a great effort” and “consistently prepared” for the class, answered they always performed well in the class?

Did the students really understand the course contents?

Do students who did not perform well get the confidence to study more advanced data science works?

(Relationship between Students Self Evaluated Performance and Confidence Gained from the Course)

Although there are students who answered they did not perform well or were neutral about it, what percentage of those students answered they “Strongly agree” or “Agree”,“this course gave me confidence to do more advanced work in the subject”? Or how many of them are “neutral” or disagree or strongly disagree with the statement?

**Skill and Responsiveness of the Instructor**

How did the instructor's effective time use for the class contribute to an increased interest in the data science field among the students? (positive correlation)

Teaching\_Effectiveness Increased\_Interest

Teaching\_Effectiveness 1.000000 0.422319

Increased\_Interest 0.422319 1.000000

How many of the students have increased their interests (those who answered “Strongly agree” and “Agree”) in data science fields?

How many of the students answered that the instructor (those who answered “Strongly Agree” and “Agree”) stimulated their interest? - 11 students

How many of the students answered that the instructor (those who answered “Strongly Agree” and “Agree”) **stimulated their interest** except for students with the reason 'Interest'? (Ma lote tet)

What is the average satisfaction level of students with respective reasons about the teaching of the instructor?

The percentage of the students who took the course because of “Interest”, “Degree requirement”, and “To take opportunities”. -

**Course Structure**

***How many of the students whose initial reason to choose this course, not out of “Interest”, contribute to those who are saying their interests in data science fields increase?***

What is the percentage of the students who answered “Strongly agree” and “Agree”, this course gives them confidence to do more advanced data science work?

Difference between the students who believes

Recommendation

Even when they are performing badly, will they recommend the course to their friends?

Can the students follow the course? (Correlation between Performance Level and Course Challenge)

What is the information about the satisfaction of students with the course?

Is the average study hour enough for the course to pass the course?

Who are the students? What frequent demographic background do they hold? (For example, Mostly Myanmar Students?)

Is it a popular course with a full limit of students? Are the students likely to recommend this course to their friends?

1. **What Is the role of the reason to join the course to challenge** **expectations,** **students’ effort, preparation, and performance level?**
2. **What is the correlation between their performance and their reason to join the course?**

What is the correlation between study hours, effort for the course, preparation for class, performance and the reason for choosing the course? (‘Take opportunity’ column)

OR

Which kinds of reasons have the maximum average study hours, the maximum average effort, and the maximum average preparation?