Question 1: - Does the number of hours students study impact their grades?

Method (Hypothetical)

We surveyed schools of Bangalore North Taluk to understand the impact of the number of hours of study on student final scores. Student's parents were interviewed during parent-teacher meetings (PTA) to collect data on the number of hours the child. Further from the school records, we collected overall final grades.

To assess the impact of study time on the overall grades, we fitted a linear regression model (ADD THE INLINE EQUATION) with the number of hours as the independent variable.

All analyses were performed in R statistical software ADD VERSION details.

Result

A total of INSERTstudent records was collected, with the number of courses students were enrolled in ranging between ADD RANGE. Based on parents' interviews, on average, students studied for RANGE hours per day (ranging from ADD RANGE per day). Further, the average mark scored was ADD MEAN out of 60, ranging from ADD RANGE.

In our model, the number of courses (ADD F STAT) and study times (ADD F STAT) were significant in explaining the student's grades in the final examination (Table 1). Overall, our model was able to explain ADD R-sq \*100 % of the variation in the marks of students. With the increase in each course, the student average grades improved by ADD ESTIMATE value. Similarly, each extra hour of study will increase the score by a factor of ADD ESTIMATE (Table 2, Fig1)

ADD TABLE 1: ANOVA of model.

ADD TABLE 2: SUMMARY STATS

ADD FIGURE WITH SCATTER PLOT AND LINE MODEL

1. Our study aligns with the words of the elder that with more study we can get good grades.
2. It was surprising that several courses also increased the overall mark. This may be due to the following reasons.
   1. Generally, people who study more take more courses.
   2. The average of many subjects compensates for a few bad results.