

Quantitative Research with Hypothesis

Title

The Effect of Study Time on Student Exam Performance

Abstract

This study investigates whether the number of hours a student spends studying has a direct impact on their exam performance. Data was collected from 200 high school students, recording their weekly study hours and corresponding exam scores. Statistical analysis was used to test the hypothesis that increased study time leads to higher academic performance.

Introduction

Many students believe that studying longer results in better grades. This research aims to test whether study time significantly affects academic performance and whether there is an optimal number of study hours for maximum effectiveness.

Hypothesis

Null Hypothesis (H_0): There is no significant relationship between study time and student exam performance.

Alternative Hypothesis (H_1): Increased study time leads to higher exam performance.

Literature Review

Previous studies suggest that effective study strategies play a crucial role in academic success. However, the impact of raw study hours on performance has

shown mixed results, with some research indicating that quality matters more than quantity.

Methodology

A total of 200 high school students participated in the study. They recorded their study hours weekly for one semester. Their final exam scores were collected and analyzed using correlation and regression analysis to determine the relationship between study time and performance.

Results

The analysis showed a moderate positive correlation ($r=0.65$), indicating that students who studied more tended to score higher. However, beyond 20 hours per week, additional study time provided diminishing returns.

Discussion

The findings support the alternative hypothesis that increased study time improves exam performance. However, excessive studying without breaks did not yield significantly better results. Students who balanced study time with effective techniques performed the best.

Conclusion

Study time positively affects academic performance, but efficiency matters as well. Students should focus on both the quantity and quality of their study methods. Future research could explore the impact of different study techniques on learning outcomes.

References

All sources used in the research, formatted according to academic citation standards.