Case 9: Evaluating the Effectiveness of Study Techniques on Quiz Performance

A university's educational research team is interested in assessing how different study techniques impact student quiz performance. 20 students are randomly selected from a pool of volunteers to ensure a diverse mix of academic abilities. Those participants vary in age, gender, and previous academic performance, although these factors are not explicitly analyzed in this study. Determine whether there are significant differences in quiz scores between the three techniques. (download data)

Case:

Initial Questions

1. What are the research objectives?

2. What are the statistical questions?

3. What is the response variable, and what is the data type of the response variable?

4. What are the explanatory variables of interest?

5. Are there covariates?

6. What is the population of interest?

7. What is the subject, and what is the number of distinct subjects?

8. Are there subject-level data?

9. Are response variables dependent (repeated measures / clustered subjects)?

10. Are the subjects selected randomly?

11. Are the subjects randomly assigned to different groups?

Initial Thoughts

