Group 5: Proposal

Project Proposal: The Impact of Time Allocation on Academic Performance

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1. Background

At York University, students constantly strive to balance academics, social life, and extracurricular activities. One of the common questions that we as students hear is: "How can I improve my grades?".

As young adults, our time is split between multiple daily activities such as socializing, studying, sports, and more. By understanding the relationships between these activities and GPA, students can make informed decisions about managing their time effectively.

2. Overview

Goal: To analyze how students allocate their time across various activities and determine the impact of these allocations on academic performance, measured through GPA.

By examining how different activity levels impact academic success, we can identify trends and potential recommendations for students looking to optimize their schedules and grades.

3. Objectives

The primary objectives of this survey are to:

1. Investigate how time spent on studying, socializing, and sports correlates with GPA.
2. Determine which activity has the strongest correlation with academic performance.
3. Compare the academic performance of students with different time allocation patterns.
4. Assess the precision of different sampling methods (Simple Random Sampling vs. Stratified Sampling).

4. Research Method

Target Population & Sampling Method

- The study will survey **100 York University students** across various faculties and years of study.
- We will use **stratified sampling**, with strata based on time distribution across activities.
- Each student will self-report their **GPA** and categorize their weekly time spent in predefined ranges (e.g., 0-5 hrs, 6-10 hrs, etc.) for studying, socializing, and sports.

Data Collection & Analysis

- **Survey Format**: Conducted in person.
- **Data Analysis**: Responses will be inputted into **Excel** (.csv file) and analyzed in **R**.
- **Estimation & Precision Comparison**: We will estimate the population mean GPA using **Simple Random Sampling (SRS)** and **Stratified Sampling**, comparing their precision.
- **Correlation Analysis**: We will analyze which time allocation factor has the strongest correlation with GPA within each stratum.

5. Impact of Research

1. The study will help identify how students can manage their time to yield higher academic success.
2. Findings may assist students in making data - driven decisions on how to balance study, social life, and extracurricular activities.
3. The research will provide insights into the effectiveness of stratified sampling for student-related surveys.