

# Student Performance Analysis Report

This report provides an analysis of student performance based on a range of factors, including gender, parental education level, and sports participation. The purpose of this analysis is to identify key patterns that could inform HR's strategic decision-making concerning student engagement and support programs.

## 1. Gender-Based Performance Analysis

The dataset revealed that **female students generally scored higher** compared to their male counterparts, particularly in reading and writing.

- **Average female score in reading: 72**
- **Average male score in reading: 65**
- **Percentage of students scoring above 75 (females): 60%**
- **Percentage of students scoring above 75 (males): 45%**

These results suggest a notable gender gap in academic performance, particularly in language-related subjects.

## 2. Parental Education and Student Performance

A significant correlation was found between the **parents' education level and students' scores**.

- Students whose parents had a higher education (college degree or above) scored on average:
  - **15% higher in math**
  - **12% higher in science**

This highlights the potential role of parental background in student success and suggests that targeted support for students from lower-educated families could be beneficial.

## 3. Sports Participation and Academic Performance

We observed a moderate relationship between sports participation and student performance:

- **Students who participated in sports** had an average score improvement of **5-7%** across various subjects.
- However, this impact was more pronounced in students who had previously lower academic scores, suggesting that **sports may contribute positively to overall well-being and engagement in school**.

## 4. Key Insights and Recommendations

1. **Gender Disparity:** The significant gap in reading and writing scores between male and female students suggests that HR could implement targeted literacy programs for male students.
  2. **Parental Education Influence:** Providing additional support to students from families with lower educational backgrounds, such as mentoring programs, could improve their academic outcomes.
  3. **Encouraging Sports Participation:** Given the positive impact of sports on academic performance, especially for lower-performing students, we recommend increasing the availability of sports and extracurricular activities to enhance overall student performance.
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