Good afternoon members of the Cambium Education Board. Today, I am here to present a comprehensive analysis of student performance data. The purpose of this analysis is to identify key factors that influence academic success and to provide data-driven recommendations for improving student outcomes.

**Section 1: Correlation Analysis**

We will begin by exploring the relationships between several critical variables: weekly study time, absences, tutoring, and GPA.

* **Key Findings:**
  + **Absences and GPA**: A significant negative correlation was found between absences and GPA. This indicates that students who miss more classes tend to have lower GPAs.
  + **Study Time and GPA**: A positive correlation between study time and GPA was observed, suggesting that students who dedicate more time to studying generally achieve higher academic performance.
  + **Tutoring and GPA**: The correlation between tutoring and GPA suggests that additional academic support through tutoring positively impacts student grades.

***Recommendation****:* Focus on improving attendance rates and encouraging structured study programs, especially for students who exhibit high absenteeism or lower study times.

**Section 2: Analysis by Demographic Groups**

To gain deeper insights, we will analyze the data by key demographic groups: **Gender**, **Ethnicity**, and **Grade Level**.

* **Gender Analysis:**
  + The analysis revealed differences in GPA between genders. Understanding these disparities can help in designing gender-specific educational interventions.
* **Ethnicity Analysis:**
  + Differences in GPA across ethnic groups were observed, suggesting that certain groups may face unique challenges that affect their academic performance.
* **Grade Level Analysis:**
  + I examined GPA trends across grade levels, revealing potential declines in performance as students’ progress through school. This emphasizes the need for sustained academic support, particularly in higher grades.

***Recommendation****:* Tailored educational programs should be developed to address the specific needs of different demographic groups and grade levels, ensuring equitable academic opportunities for all students.

**Section 3: Additional Insights**

Three additional analyses were conducted to further understand the impact of various factors on student performance:

1. **Impact of Tutoring on GPA Across Grade Levels:**
   * Tutoring had a varying impact on GPA across different grades. Notably, younger students appeared to benefit more from tutoring compared to their older peers.
2. **Effect of Absences on GPA by Ethnicity:**
   * The relationship between absences and GPA varied by ethnicity, with some groups showing a stronger negative correlation. This suggests that absenteeism may disproportionately affect certain ethnic groups, further contributing to academic disparities.
3. **Study Time and GPA by Gender:**
   * The analysis of study time and GPA by gender showed that one gender may benefit more from increased study time than the other. This insight is valuable for designing study programs that address gender-specific learning needs.

***Recommendatio****n:* Expand access to tutoring services, especially for younger students. Additionally, targeted interventions should be developed to improve attendance among ethnic groups that are most affected by absenteeism. Study programs should be tailored to optimize study time effectiveness across genders.

**Conclusion**

In summary, the analysis highlights the significant impact of attendance, study habits, and tutoring on student performance. Additionally, demographic factors such as gender, ethnicity, and grade level play crucial roles in shaping academic outcomes. By implementing the recommendations derived from this data, we can create a more supportive and equitable learning environment for all students.

Thank you for your attention. I am happy to answer any questions you may have.