



# Student Scores

Based on Various Reasons



# Introduction

This presentation explores the analysis of students' scores based on various factors. Through a series of graphs, we will examine how different reasons and influences impact academic performance. This data-driven approach aims to uncover patterns and insights that can inform strategies to improve educational outcomes.





# Gender Distribution

Gender Distribution of Students: This chart shows the gender distribution among the students, with 15,424 females and 15,217 males. The nearly equal representation provides a balanced perspective in the analysis of academic performance across different genders.

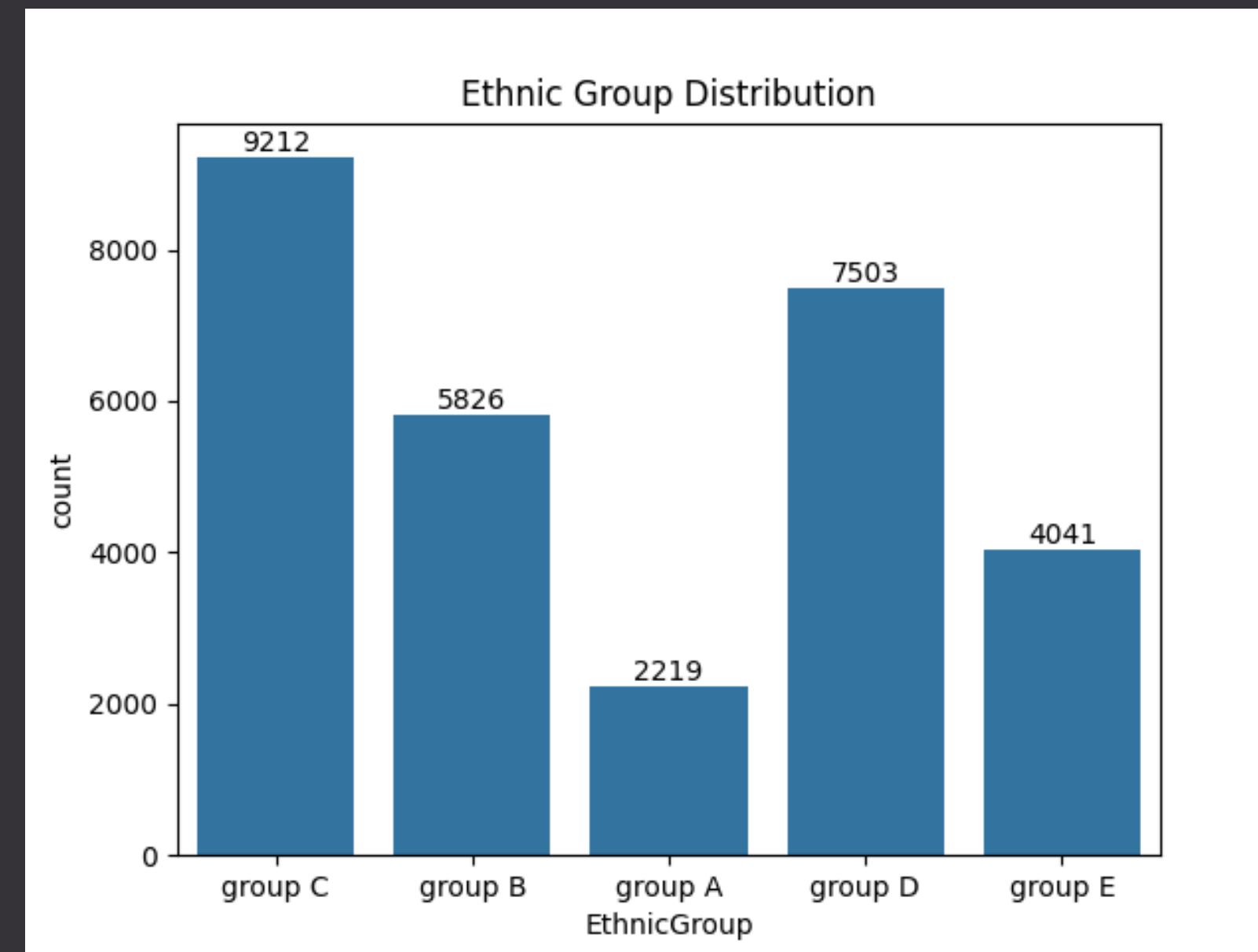
# Ethnic Distribution



Ethnic Group Distribution: This bar chart represents the distribution of students across different ethnic groups.

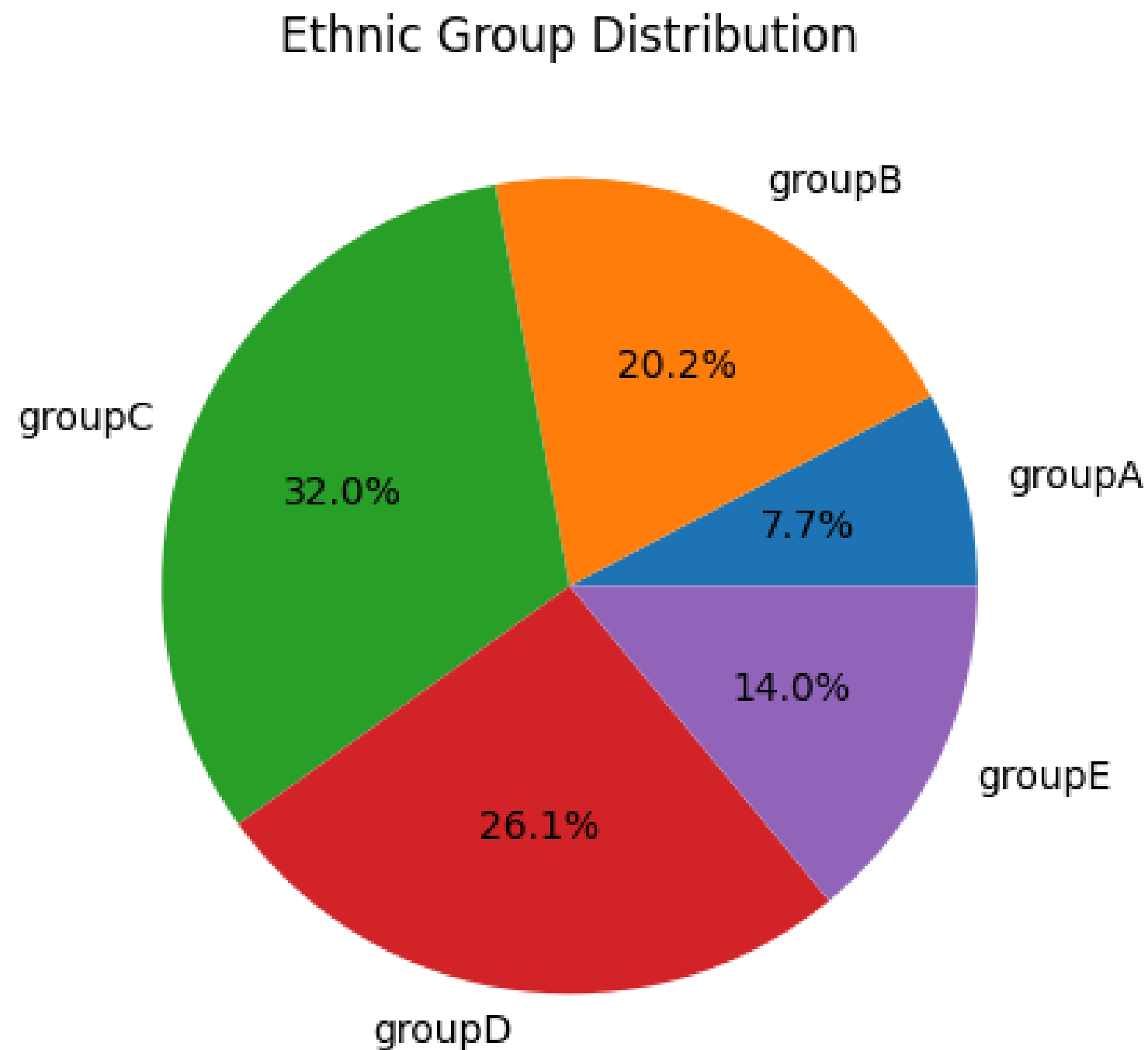
Group C has the highest representation with 9,212 students, followed by Group D with 7,503 students.

Group B and Group E have 5,826 and 4,041 students, respectively, while Group A has the smallest representation with 2,219 students. This diversity highlights the varied backgrounds of the student population considered in the analysis.



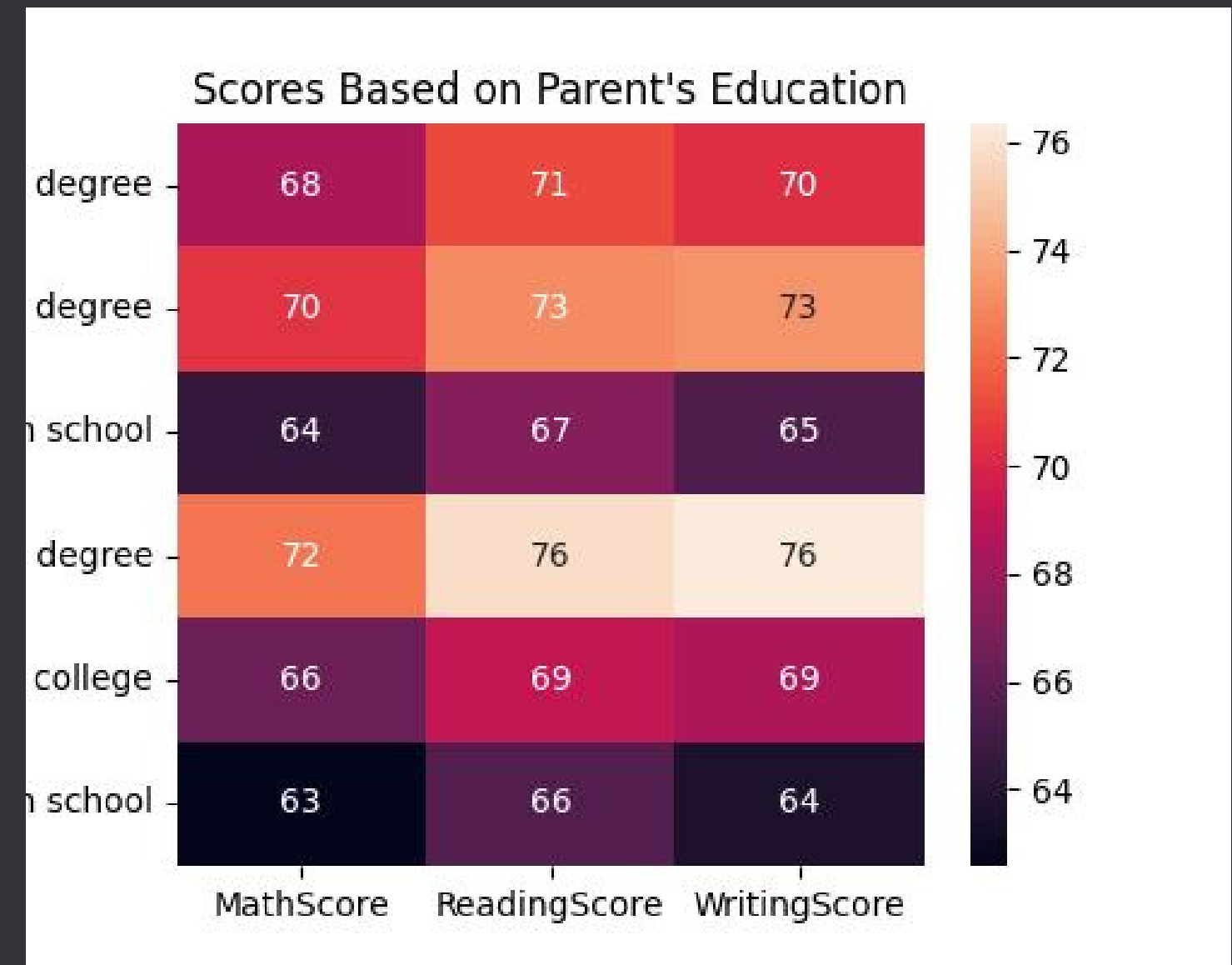
# Ethnic Group Distribution %

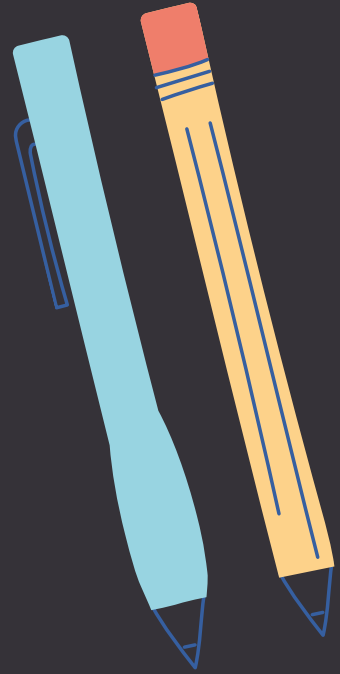
Ethnic Group Distribution: This pie chart illustrates the percentage representation of students across various ethnic groups. Group C constitutes the largest portion at 32.0%, followed by Group D at 26.1%. Group B and Group E account for 20.2% and 14.0% respectively, while Group A represents the smallest share at 7.7%. This visual highlights the diversity within the student population.



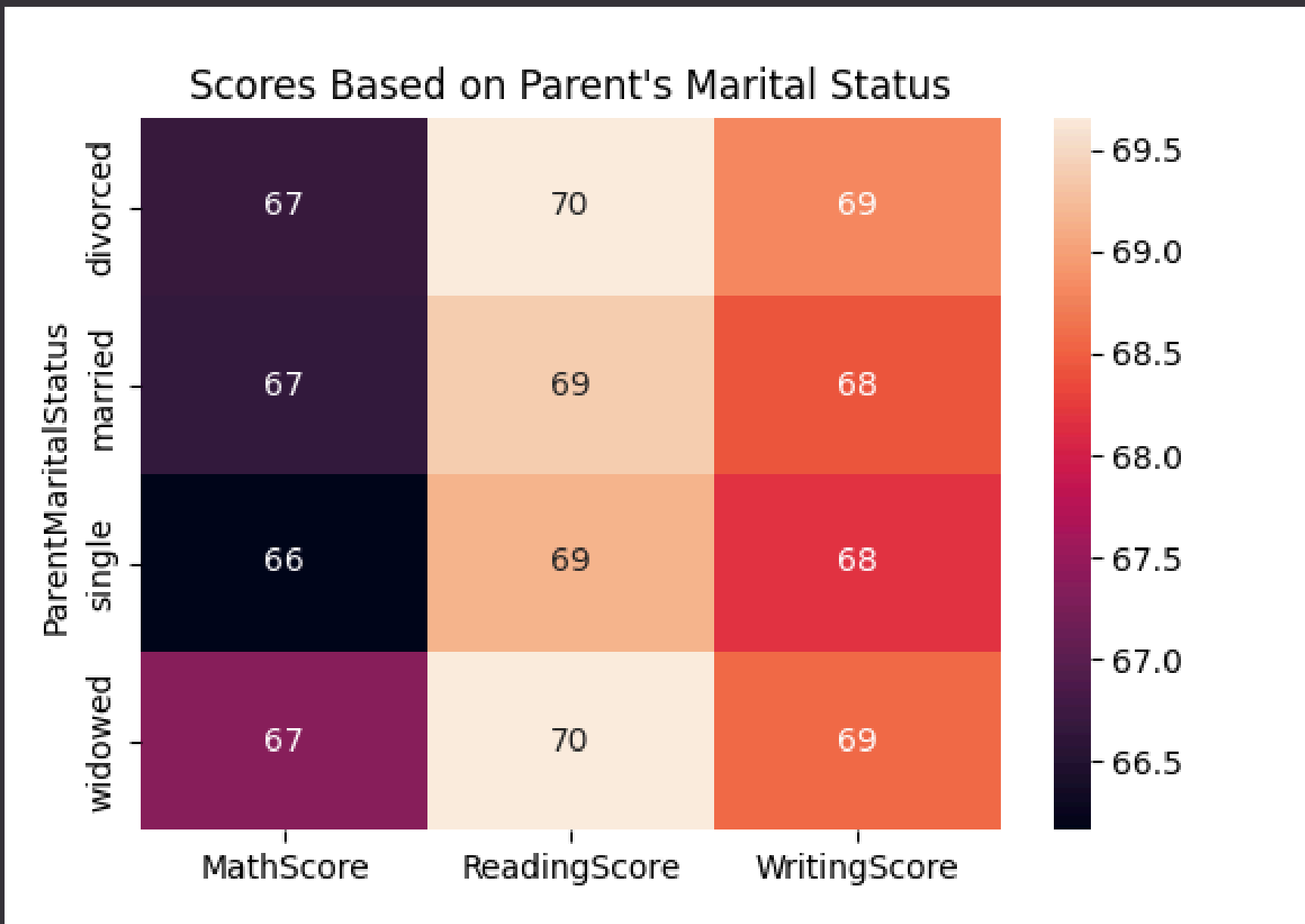
# Parent's Education

The heatmap shows that students with more educated parents generally score higher in math, reading, and writing. This highlights the significant influence of parental education on student performance, emphasizing the role of family background in academic success.





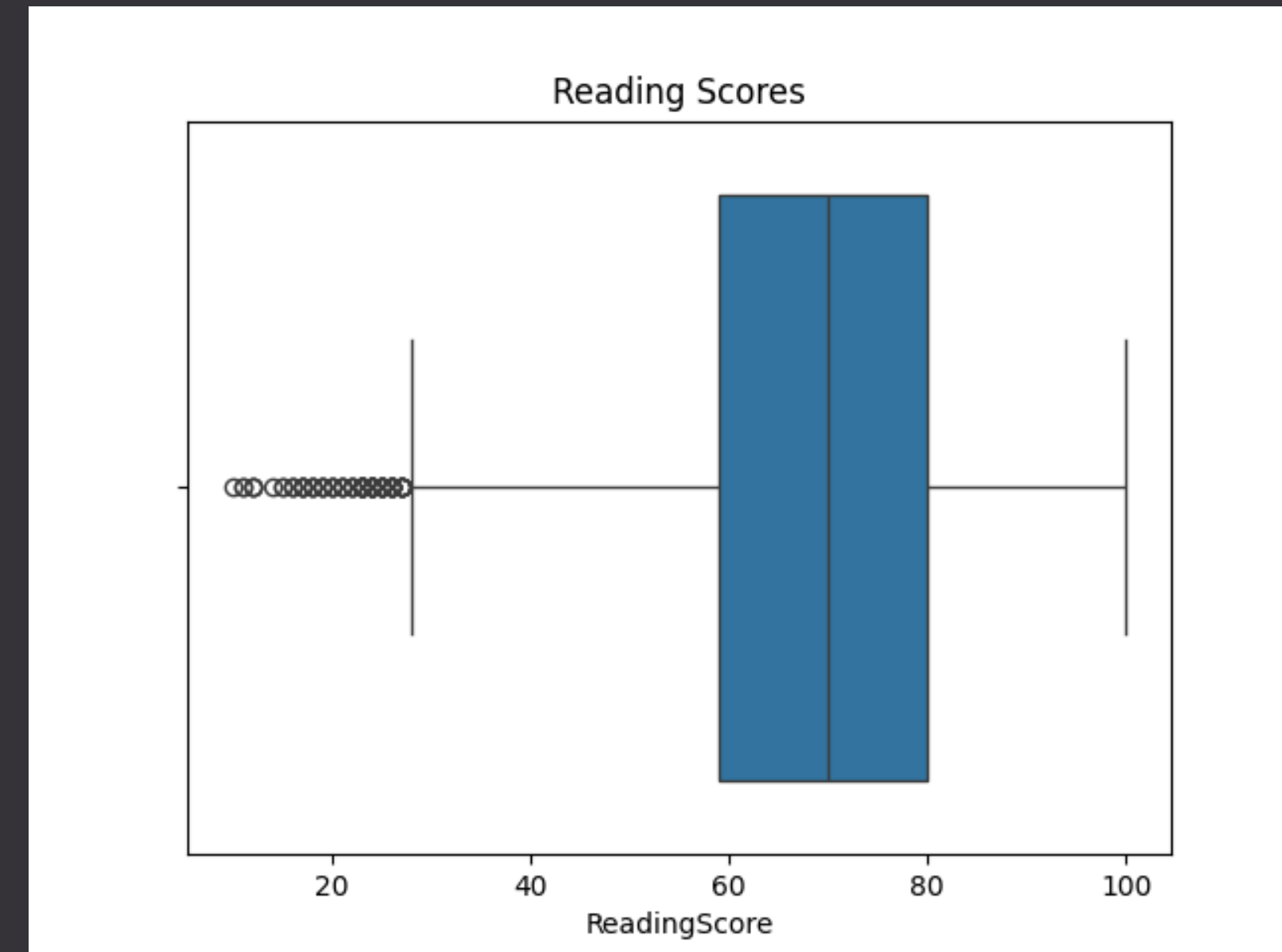
# Parent's Marital Status



The heatmap shows that students' scores in math, reading, and writing vary based on their parents' marital status. Generally, students from two-parent households tend to score higher, highlighting the influence of family structure on academic performance.

# Reading Scores

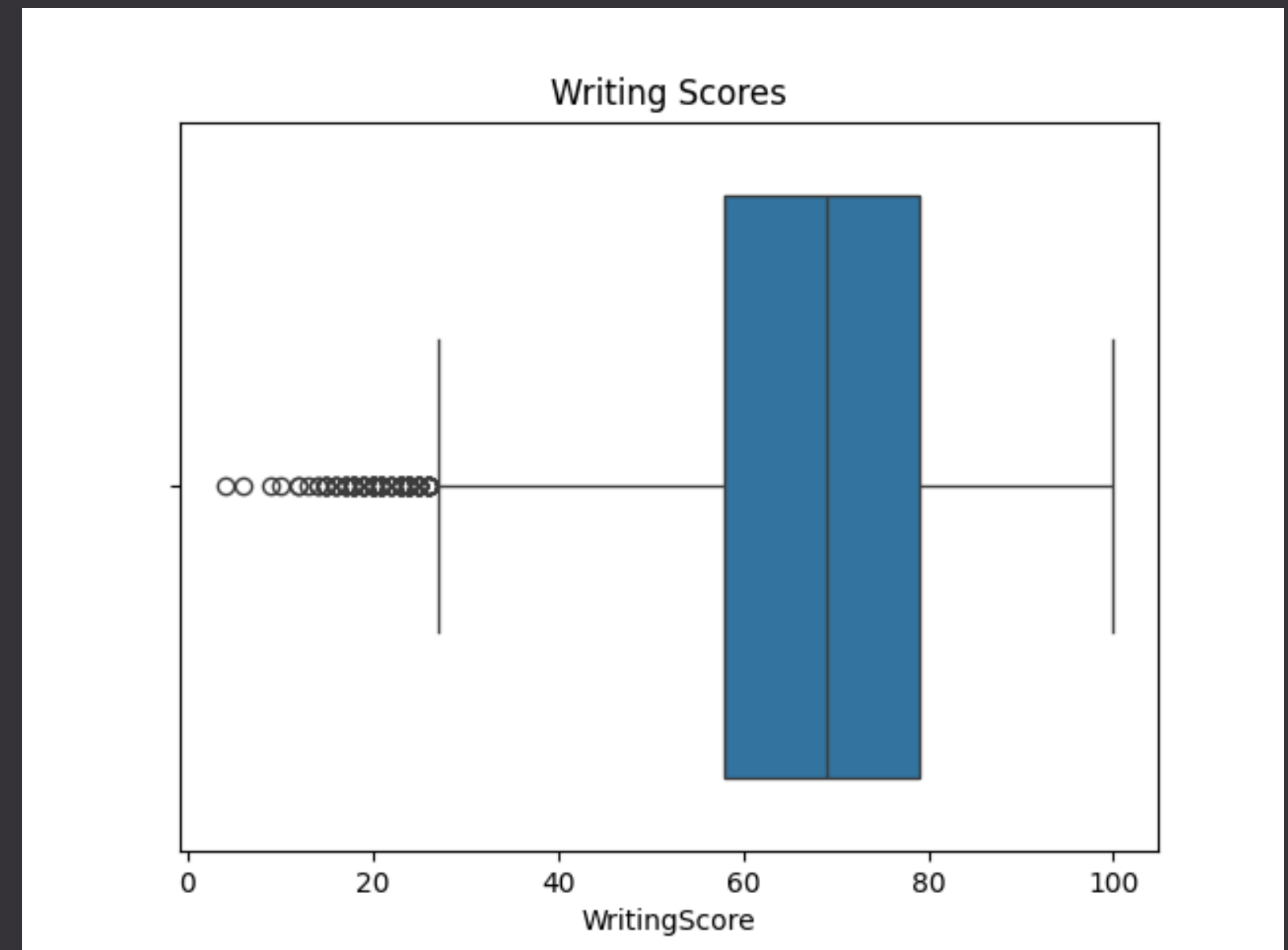
The box plot illustrates the distribution of reading scores among students, showing the median, quartiles, and outliers. This helps in understanding the spread and central tendency of the scores, providing insights into overall reading performance.





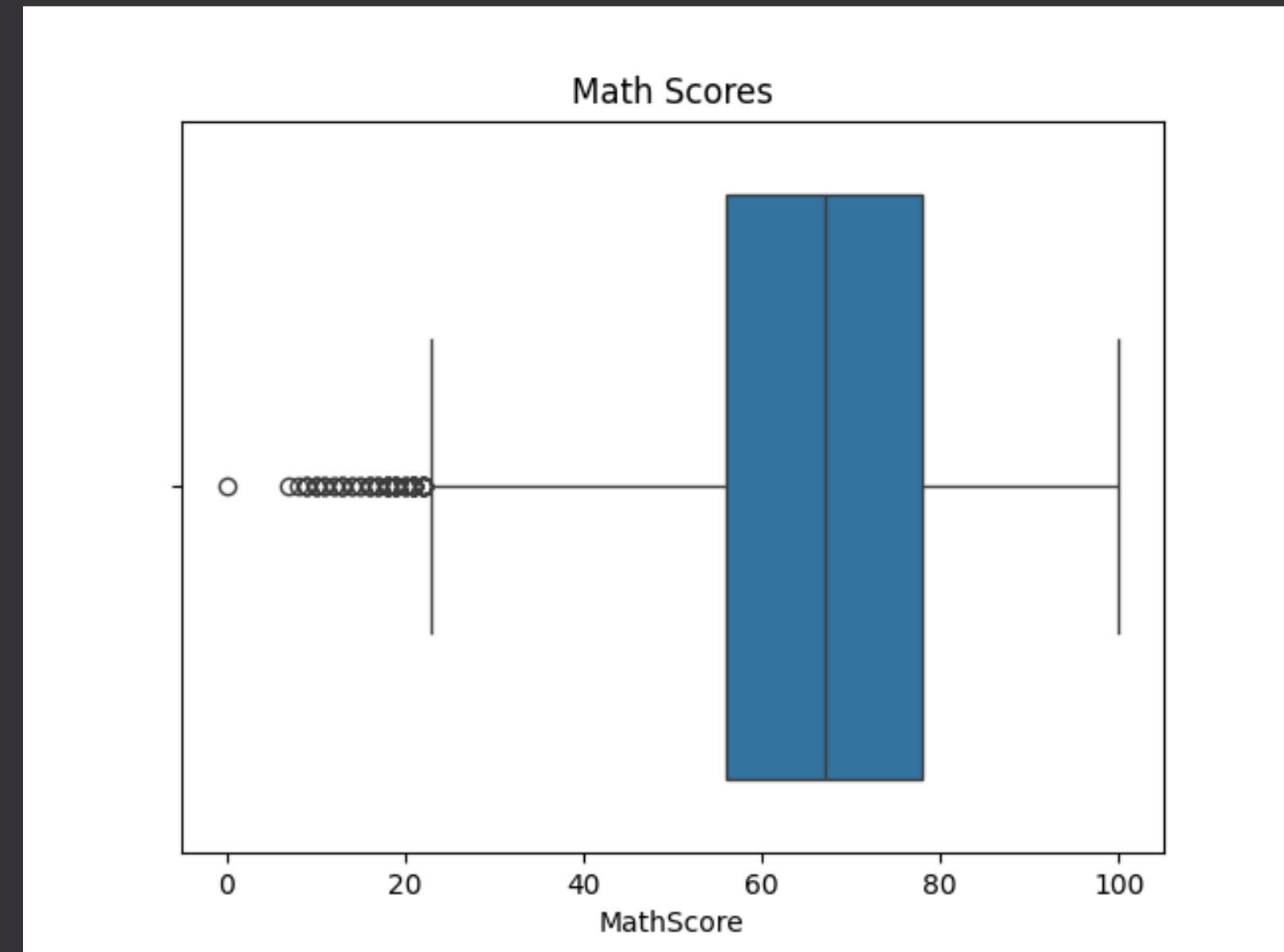
# Writing Scores

The box plot illustrates the distribution of writing scores among students, showing the median, quartiles, and outliers. It highlights the central tendency and variability in the scores, providing a clear visual summary of student performance in writing. This helps in identifying patterns and potential areas for improvement.



# Maths Scores

The box plot shows the distribution of math scores among students, highlighting the median, quartiles, and outliers. This visual summary helps in understanding the spread and central tendency of the math scores, providing insights into overall student performance in mathematics.



# Conclusion

In conclusion, our analysis shows that parental education and marital status significantly impact student achievement. Students with more educated parents and those from two-parent households generally perform better in math, reading, and writing. These insights can help educators and policymakers develop strategies to support student success.

