

## An Investigation of the Influence of Education Backgrounds on Mathematics Achievements: An Example of Chinese High School

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**Abstract :** This paper analyses how different educational backgrounds affect the mathematics performance of middle and high school students in terms of three dimensions: parental involvement, school teaching ability, and demographic variables and personal attributes of the student. Based on the analysis of Beijing High School Mathematics Competition in 2022, it was found that students from high level schools won significantly more awards than those from low level schools. In addition, a significant positive correlation ( $p < 0.05$ ) was identified between school level and students' mathematics performance. This study also confirms that parents' education level and family environment show a significant impact on the next generation's mathematics learning performance. The findings suggest that interest and student's habits, the family environment and the quality of teaching and learning at school are the main factors affecting the mathematics performance of middle and high school students.

**Keywords :** educational background, academic performance, middle and high school education, teenager

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